

AD-A159 156

ALTERNATIVE STRATEGIC ENVIRONMENTS 1994-2004(U)
INSTITUTE FOR DEFENSE ANALYSES ALEXANDRIA VA
B M BLECHMAN JAN 85 IDA-P-1785 IDA/HQ-84-28746

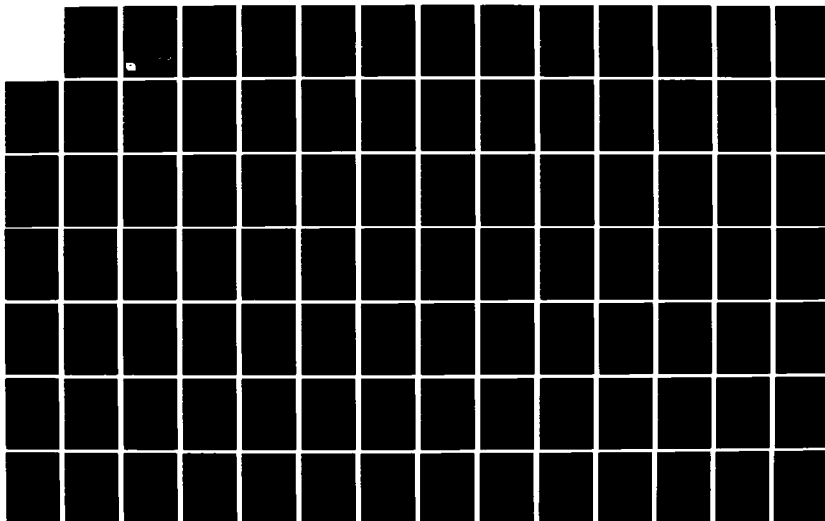
1/3

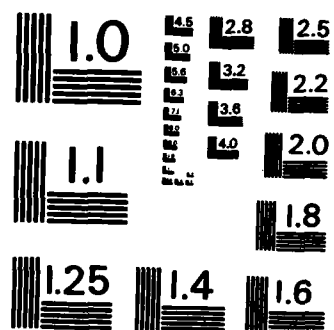
UNCLASSIFIED

MDA903-84-C-0031

F/G 15/7

NL





2

Copy 91 of 102 copies

AD-A159 156

IDA PAPER P-1785

ALTERNATIVE STRATEGIC ENVIRONMENTS,
1994-2004

Barry M. Blechman

January 1985

Prepared for
Joint Chiefs of Staff

DTIC FILE COPY

DTIC
ELECTE
SEP 12 1985
S A D

This document has been approved
for public release and sale; its
distribution is unlimited.



INSTITUTE FOR DEFENSE ANALYSES
1801 N. Beauregard Street, Alexandria, Virginia 22311

85 9 10 090

IDA Log No. HQ 84-28746

The work reported in this document was conducted under contract MDA 903 84 C 0031 for the Department of Defense. The publication of this IDA Paper does not indicate endorsement by the Department of Defense, nor should the contents be construed as reflecting the official position of that agency.

This Paper has been reviewed by IDA to assure that it meets high standards of thoroughness, objectivity, and sound analytical methodology and that the conclusions stem from the methodology.

This Paper does not necessarily represent the views of the Joint Chiefs of Staff for whom it was prepared and to whom it is forwarded as independent advice and opinion.

Approved for public release, distribution unlimited.

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

A159136

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER	2. GOVT ACCESSION NO.	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) Alternative Strategic Environments--1994-2004		5. TYPE OF REPORT & PERIOD COVERED FINAL
		6. PERFORMING ORG. REPORT NUMBER IDA Paper P-1785
7. AUTHOR(s) Barry M. Blechman		8. CONTRACT OR GRANT NUMBER(s) MDA 903 84 C 0031
9. PERFORMING ORGANIZATION NAME AND ADDRESS Institute for Defense Analyses 1801 North Beauregard Street Alexandria, Virginia 22311		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS T-4-216
11. CONTROLLING OFFICE NAME AND ADDRESS Joint Chiefs of Staff (J-5) The Pentagon Washington, D.C. 20301		12. REPORT DATE January 1985
		13. NUMBER OF PAGES 202
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office) OUSDRE, DoD-IDA Management Office 1801 North Beauregard Street Alexandria, Virginia 22311		15. SECURITY CLASS. (of this report) UNCLASSIFIED
		15a. DECLASSIFICATION/DOWNGRADING SCHEDULE N/A
16. DISTRIBUTION STATEMENT (of this Report) APPROVED FOR PUBLIC RELEASE, DISTRIBUTED UNLIMITED.		
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)		
18. SUPPLEMENTARY NOTES		
19. KEY WORDS (Continue on reverse side if necessary and identify by block number) Demographic trends; Economic trends; Foreign policy; Futurology; International politics; Long-range planning; Military requirements; National interests; Nuclear proliferation; Political-military relations; Public opinion; Regional developments; Social values; Strategic planning; Technological forecast; U.S. interest		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) The political military environment in which the U.S. armed forces will operate in ten to twenty years will be determined by a great number of factors including demographic trends, technological developments, patterns of economic growth, evolving societal attitudes and values, and trends in political relations among nations. The study identifies the most (continued)		

FORM

DD 1 JAN 73 1473 EDITION OF 1 NOV 65 IS OBSOLETE

UNCLASSIFIED
SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

Item 20 (continued)

important of these factors and projects their likely condition around the turn of the century. The consequences of these projections for political/military relations within the several regions of the globe, and between key nations in each of those regions and the United States are then analyzed. Based on these functional and regional building blocks, five composite, alternative strategic environments are then described--and the implications of each for U.S. military planning are derived. The five alternative environments illustrate the plausible range of possible conditions with which the U.S. armed forces may have to contend at the end of the century.

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

IDA PAPER P-1785

ALTERNATIVE STRATEGIC ENVIRONMENTS, 1994-2004

Barry M. Blechman

January 1985

Approved For	
NSA/CSSA&I	☒
NSA/CSSAB	☐
Unannounced	☐
Classification	
Distribution/	
Availability Codes	
Special and/or	
Special	
AI	



INSTITUTE FOR DEFENSE ANALYSES

Contract MDA 903 84 C 0031
Task T-4-216



PREFACE

That future patterns of political/military relations are difficult to forecast is well known, of course, and is one consideration which discourages serious attention to long-range strategic planning. Given the considerable lead-times associated with the development and acquisition of contemporary weapon systems, however, deficiencies in long-range planning can have serious, adverse impact on the nation's security. This study seeks to strengthen U.S. long-range military planning by identifying the major factors that will determine the strategic environment in ten to twenty years, projecting their impact on relations in particular regions and between those regions and the United States, and combining these possible developments on a regional basis into alternative composite, strategic environments. The study was prepared by the Institute for Defense Analyses for the Office of the Joint Chiefs of Staff, under Contract MDA 903-84-C-0031, Task Order T-4-216.

The author is grateful to his IDA colleagues--Phillip Gould, Robin Pirie, Paul Richanbach, William Schultis, Victor Utgoff, and Harry Williams and to reviewers--James Edgar, David Jones, Thomas Moorer and George Quester--for helpful advice and guidance. He also would like to thank the nearly 100 experts listed in the report who contributed to the several parts of the analysis. The writer alone, of course, bears full responsibility for the final content of the report.

CONTENTS

	<u>Page</u>
PREFACE.	iii
EXECUTIVE SUMMARY.	S-1
I. PLANNING FOR THE YEAR 2000.	I-1
II. U.S. CAPABILITIES AND CONSTRAINTS	II-1
A. Military Technologies	II-2
1. General Observations.	II-3
2. Broad Technological Advances.	II-6
3. Specific Applications	II-11
B. Economic Strength and Economic Dependence	II-16
1. Economic Strength	II-17
2. Economic Projections.	II-19
3. Implications of U.S. Economic Strength.	II-20
4. Global Political Economy.	II-49
C. Nuclear Proliferation	II-52
Findings.	II-55
D. Public Attitudes Towards Foreign Policy	II-57
1. Military Strength	II-58
2. Involvement Abroad.	II-60
III. REGIONAL FORECASTS.	III-1
A. Europe.	III-3
B. The Soviet Union.	III-12
1. "Surprise-Free" Forecast.	III-13
2. Break-Out From Systemic Limitations	III-19
3. Serious Internal Disorders.	III-20
C. East and South Asia	III-21
D. The Middle East	III-29
1. Arab-Israeli Conflict	III-32
2. Iran-Iraq Conflict.	III-33
3. Other Gulf States.	III-34

E.	Africa, South of the Sahara.	III-36
F.	Latin America.	III-43
1.	Central America.	III-44
2.	Key Uncertainties.	III-47
3.	South America.	III-48
4.	Key Uncertainties.	III-50
IV.	ALTERNATIVE COMPOSITE FUTURES.	IV-1
A.	Alternative One: An Extrapolation From Present Trends.	IV-4
	Implications for U.S. Military Planning. . . .	IV-12
B.	Alternative Two: Disorder in the Third World	IV-16
	Implications for U.S. Military Planning. . . .	IV-20
C.	Alternative Three: The USSR Resurgent	IV-24
	Implications for U.S. Military Planning. . . .	IV-31
D.	Alternative Four: An Anarchic Environment . .	IV-35
	Implications for U.S. Military Planning. . . .	IV-38
E.	Alternative Five: An Optimistic Environment .	IV-41
	Implications for U.S. Military Planning. . . .	IV-44
V.	CONCLUSIONS.	V-1
Appendix A	DELPHI PANELS FOR TECHNOLOGICAL AND PROLIFERATION FORECASTS	A-1
Appendix B	EXPERTS INTERVIEWED FOR REGIONAL FORECASTS	B-1

FIGURES

II-1.	Range of Projected GNP-U.S. and USSR	II-21
II-2.	Range of Projected GNP-NATO Plus Japan and Warsaw Pact	II-21
II-3.	Range of Projected Military Expenditures - U.S. and USSR.	II-27
II-4.	Range of Projected Military Expenditures - NATO Plus Japan and Warsaw Pact	II-28
II-5.	Percentage of U.S. Energy Demand Met by Oil and by Oil Imports.	II-36
II-6.	Estimated International Crude Oil and Natural Gas Proved Reserves, December 31, 1983	II-38
II-7.	U.S. Imports of Petroleum by Country of Origin	II-40
II-8.	The Role of Middle Eastern and African Oil in Total Western European Petroleum Consumption.	II-41
II-9.	The Role of Middle Eastern and African Oil in Total Japanese Petroleum Consumption	II-41
II-10.	Oil as a Percentage of Western European and Japanese Energy Consumption	II-43
II-11.	Net Import Reliance as a Percent of Apparent Consumption	II-47

TABLES

II-1.	Trade as a Percent of GNP	II-30
II-2.	Destinations of U.S. Exports, 1970-82.	II-32
II-3.	Sources of U.S. Imports.	II-33
IV-1.	Alternative Strategic Environments	IV-3

ALTERNATIVE STRATEGIC ENVIRONMENTS: 1994-2004

Executive Summary

The political/military environment in which the U.S. armed forces will operate in ten to twenty years will be determined by a great number of factors, some of which are evident today, others which will not emerge until later in the century. Among these factors are included demographic trends, the appearance of new civilian and military technologies and their dissemination around the globe, patterns of economic growth and development, and evolving attitudes and values in national societies; these will shape both the challenges posed to American security and the relative capabilities which this nation will bring to bear in defense of its interests. Some factors will impact directly on the strategic environment. The proliferation of nuclear and advanced conventional armaments, for example, could have major consequences for the relative flexibility with which the United States will be able to employ military power. The consequences of other factors, however, will be seen largely in their impact on the relationships between the United States and other nations. Economic developments will be expressed largely in this way, as will the effects of changing societal values.

The purposes of this study are to identify the most important factors that will shape the international environment in ten to twenty years, and to describe the directions in which those trends appear to be heading. The consequences of these forecasts for political/military relationships within the several regions of the globe, and between each of those regions and the United States, are then described. Based on these functional and regional building blocks, the study then describes five composite alternative strategic environments. Table S-1 illustrates the five environments and those variables (factors) which will impact the regions

TABLE S-1. ALTERNATIVE STRATEGIC ENVIRONMENTS

Variable Case	U.S. Policy	Europe	USSR	East and South Asia	Middle East	Africa	Latin America
Extrapolation	Activist	Surprise-Free	Surprise-Free	Surprise-Free	Surprise-Free	Surprise-Free	Surprise-Free
Third World in Disarray	Activist	Surprise-Free	Surprise-Free	• Disintegration on Rim	• Fundamentalist Resurgence	• Upheaval in South	• Breakdown in South
USSR Resurgent	Activist	• Germany Neutralized	• Break-Out	• China Destabilized	• Arab-Israeli Regression	• Upheaval in South	• Cuban Breakthrough
Anarchic	Isolationist	• Violence in East • West European Defense Entity	• Domestic Disorder	• China Destabilized • Japan Assertive • Disintegration on Rim	• Fundamentalist Resurgence • Arab-Israeli Regression	• Upheaval in South	• Breakdown in South • Cuban Breakthrough
Optimistic	Activist	• Violence in East	Surprise-Free	Surprise-Free+	Surprise-Free	Surprise-Free	• Rollback in Central America

Additional constraints and opportunities: Technology, resource dependencies, U.S. economic performance, defense spending, nuclear proliferation.

considered. The five composites are intended to illustrate the plausible range of possible conditions with which the U.S. armed forces may have to contend at the end of the century.

The study has relied primarily on the expertise of specialists and experienced officials to derive these several types of forecasts. Delphi panels were organized to forecast technological developments that could influence the political/military environment and to assess the prospects for nuclear proliferation. Structured interviews with nearly 60 senior officials and scholars were conducted to derive forecasts of developments in specific regions.

Although one composite environment represents an extrapolation of trends currently evident as concerns each of the contributing variables, neither this "surprise-free" forecast nor any of the other four environments are intended to predict the most likely scenario. The specific composite environments that are described (see Table S-1) were chosen because they differ markedly in their implications for U.S. military planning; thus they illustrate the range of conditions against which American planners must hedge in considering force structure and deployment issues.

The analyses presented in this report suggest a relatively optimistic future for the United States. This results primarily from two factors:

First, the strength and vitality of the American economy provides a great deal of leverage to this nation when dealing with other countries. All else being equal, most nations prefer to maintain stable and cooperative relations with the United States so that they can gain access to the U.S. market, attract American investors and know-how, and secure American sensitivity to the consequences of its own economic policies on their economic future. Stable relations encourage the American private sector to look to the nation in question for investment and trade opportunities. Cooperative relations encourage the U.S. Government to take various

actions which can add further impetus to this private sector activity, as well as to provide, in some cases, direct economic assistance bilaterally or through multilateral lending institutions. The absence of hostile relations means avoidance of U.S. Governmental restrictions on the ability of the private sector to conclude economic arrangements. Obviously, all else often is not equal, and some nations (Cuba, for example) prefer adversarial relations with the U.S. on political or ideological grounds, no matter how costly it may be in economic terms. Still, such cases are exceptions; most often, the American economy is a tremendous asset in the United States' dealings with other nations.

The second major source of relative optimism for the United States are the very serious problems of the Soviet Union. The USSR's economic prospects appear to be lagging badly, not only behind those of the major Western industrial nations, but also behind those of some countries in Eastern Europe and the third world. These problems seem to stem from systemic deficiencies of the USSR's economy which appear unlikely to be corrected anytime soon. Moreover, the inability of the Soviet leadership to correct the problems of the Soviet economy, despite their persistence over a protracted period of time, suggests serious weaknesses within the Soviet political system. Failure to deal with recurrent problems of nationalism in Eastern Europe, and even within the European portions of the USSR itself, is additional evidence of the Soviet Union's severe political problems.

For these reasons and others, the study concludes that in the "surprise-free" scenario the USSR will face difficulties in playing an aggressive role in world politics, and will be in an increasingly disadvantageous position vis-a-vis the United States in the struggle for influence in the third world. The relatively much greater strength and vitality of its economy also provide advantages to the United States in terms of the continuing competition in military technology and defense investments,

notwithstanding the USSR's greater ability to sustain a heavy burden of defense spending politically.

The study assumes that in the "surprise-free" forecast Europe will remain divided between East and West. It expects NATO to continue to experience difficulties in reconciling the competitive economic (and sometimes political) interests of its members, as well as in mounting an adequate defense within the constraints imposed by the anti-nuclear movement and financial limitations, both of which are projected to continue. Even so, NATO is expected to continue as a viable alliance in the "surprise-free" forecast and to make adjustments permitting the withdrawal of some American forces.

In Eastern Europe, the "surprise-free" forecast envisions continued manifestations of nationalistic discontent and impatience with Soviet control. The possibility of an overt Soviet intervention is expected to remain high. Because of its own problems, however, it is expected that the USSR will tolerate greater divergences in economic and other domestic policies among the nations of the Eastern Bloc than would have been likely not very many years ago.

The "surprise-free" forecast for South and East Asia is the most optimistic of the regional snapshots. It is expected that the rapid economic growth which has characterized this region in recent years will continue in most nations, and that undue political turmoil will be avoided. This forecast is most uncertain as concerns China, where the risk of a renewal of domestic conflict and negative economic growth may be substantial following the death of Deng Xiaoping, but the weight of evidence suggests otherwise -- continued growth and relative political tranquility.

In the Middle East, the study points to a fine balance at present in several nations between forces advocating moderate, secular, pragmatic policies intended to foster gradual improvements in the economic situations of the masses of people and slow

movement towards political systems involving greater popular participation, on the one hand, and those who advocate radical policies, sometimes based on religious belief systems, that promise instant relief from perceived economic difficulties and political or social injustices, on the other. Egypt is perhaps the most important of the countries in which such contending forces are counterposed. In the "surprise-free" forecast, it is expected that the pragmatic approach will dominate future developments, leading to the gradual amelioration of conflicts in the region (particularly a de facto settlement of the Arab-Israeli conflict), the advancement of factions and individuals that favor the West, and their gradual association in a loose alliance that can dominate events. Such a development would be particularly important for the United States and its allies, as Japan and several West European nations are projected to remain heavily dependent upon the Middle East for petroleum throughout the forecast period.

The "surprise-free" forecast is pessimistic for both Africa and Central America, where it is expected that the pressures of rapidly growing populations will overwhelm any foreseeable improvement in economic conditions, leading to continuing poverty, political strife, and opportunities for the advancement of Soviet and other anti-U.S. interests.

In Africa, there are likely to be severe internal pressures in several of the larger nations, particularly Ethiopia, Zaire, Angola, and Nigeria. A sudden eruption of far more severe conflict between the races in South Africa, and between South Africa and its neighbors, cannot be ruled out during the time period examined in the study. Any such conflicts could impose economic costs on the West because of the dependency of the United States and its allies on this region for supplies of certain strategic minerals. The Soviet Union may be able to advance its interests to a degree as a result of these problems, but its inability to

aid African nations in solving their economic problems will limit potential gains.

In Central America, with Cuba expected to continue to work actively to advance the interests of left-wing parties, it is possible that several additional Marxist-Leninist regimes might be established before the end of the century. Depending upon U.S. reactions, this could increase the military threat posed to this nation directly. Mexico, however, is not expected to experience serious domestic violence or political unrest. The outlook for South America is relatively optimistic also, assuming continued progress toward solution of the debt problem in the near future, and renewed economic growth, as there is a distinct trend toward more stable political systems in many nations of the continent.

This relatively benign "surprise-free" forecast of global relations in ten to twenty years could be upset by several developments. One would involve far greater disorder in the third world and forms the basis for the second composite strategic environment considered in the study.

The Middle East, particularly, could be the scene of large-scale conflict, particularly if fundamentalist forces gain the upper hand in several nations. Egypt and Pakistan are the potential sites of such revolutions which would have the most serious consequences. Any such development could lead to a sharp renewal of Arab-Israeli fighting and the extension of the current war between Iran and Iraq to other parts of Southwest Asia. There also could be greater disorder in other parts of Asia. As was mentioned previously, the possibility of a renewal of conflict in China is not inconsequential, a development which eventually could lead to rapprochement between the USSR and China and a much greater military threat to the United States and its allies. Other nations in Asia which might experience substantial internal violence include India, Indonesia, and the Philippines.

The risks implicit in this scenario are increased when the results of a forecast of nuclear weapons proliferation completed for the study are considered. A group of experts estimated that, in addition to the five currently declared nuclear powers, between three and fourteen nations will have acquired nuclear weapons by the end of the century. In the most likely scenario, the experts predicted that four to six additional nations would have nuclear arsenals including, in order of likelihood: Israel, India, South Africa, Pakistan, Brazil, and Argentina. The first four of these countries would be involved in conflicts in this second strategic environment.

A scenario like this almost certainly would pose incremental demands on the U.S. armed forces, which likely would be called upon to protect American nationals and economic interests, to help defend embattled, friendly regimes, or to serve other purposes. In most cases, given the forecast of continued internal weaknesses and preoccupations of the USSR, Soviet military opposition would not be anticipated. Rather, in this second alternative strategic environment, emphasis would be placed on relatively light forces that could be moved quickly and flexibly to a variety of potential trouble spots. Insofar as U.S. access to military facilities would likely be limited in a third world troubled by so much disorder, mobility forces, naval forces, and long-range strike aircraft would be valued highly.

The third strategic environment described in the study and shown in Table S-1 outlines the possible consequences should the USSR solve the economic and political problems which currently restrain its influence in world affairs. A rapid shift of power to a new generation of Soviet leaders, far-ranging reforms in the Soviet economic system, and the integration of new technologies in the Soviet civilian sector could lead to relatively rapid and sustained economic growth, an emboldened Soviet leadership, and more assertive Soviet policies around the world.

Given such domestic circumstances, the USSR would be able to deal more effectively with its problems in Eastern Europe and perhaps partially accomplish long-standing Soviet objectives in Western Europe as well. Specifically, in this environment the study postulates the emergence of a powerful movement in both the Federal Republic and East Germany, dedicated to the de-militarization, neutralization, and re-unification of Germany along the lines of the Austrian model. A newly resurgent USSR might accept such a development because it would greatly weaken NATO's military strength and political cohesion, and also facilitate Soviet access to Western capital and technology.

The study further postulates in this environment that disorders in China eventually lead to the accession of a faction in power which favors a close alliance with the USSR. In short, this scenario envisions the USSR poised to achieve its most important geo-political objective -- dominance of the Eurasian land mass. Combined with the greater disorder in the Middle East and other parts of the third world envisioned in the second environment, the third scenario would pose severe challenges to American interests and the U.S. armed forces. Given the defection of West Germany, preventing Soviet dominance of the remainder of Europe would be difficult and require substantial increases in the amount of resources devoted to NATO's defense by all the remaining members but, realistically, also requiring decisive American leadership. Accelerated development of new conventional weapons technologies described in the study could contribute measurably to solving these problems. Strengthening the U.S. position in the Pacific also would be required if Japan were to be expected to maintain close ties to the United States. In short, this environment would pose a severe test of U.S. general purpose forces and theater nuclear capabilities, requiring substantial expansion and modernization of those forces to meet a much greater Soviet political/military threat.

The fourth composite strategic environment (noted on Table S-1) also envisions a severe threat to U.S. security, but not one originating primarily with the USSR. Indeed, this scenario postulates a deterioration of the Soviet internal situation beyond that foreseen in the "surprise-free" forecast, leading to the virtual withdrawal of the USSR from world affairs. At the same time, in the fourth environment it is assumed that the Western system of alliances has broken up, with Japan and a French-led European bloc of nations each pursuing independent foreign policies relying heavily on nuclear weapons, and the United States having returned to the type of "isolationist" foreign policy it had followed generally before the Second World War. The scenario also envisions considerable disorder in several parts of the third world, as indeed might be expected in the absence of attempts by either great power to exert control.

Any such "anarchic" configuration of global relations would likely be short-lived. There would be great tension both in Europe, between the USSR and the western bloc of nations, and in East Asia, as Japan and the Soviet Union jockeyed for position vis-a-vis China. There would likely be considerable violence in the third world, particularly in the Middle East and Southern Africa. Many nations could be expected to pursue nuclear options, and the possibility of one or more nuclear wars would be relatively high. Although the U.S. would seek to remain aloof from most of these conflicts, it could be expected to act forcefully in this Hemisphere and conceivably could be drawn into military conflicts elsewhere, depending on specific circumstances.

Political and military developments like these would suggest a major re-orientation of U.S. military strategy. Demands for general purpose forces would be reduced, particularly the ground and air forces now planned for contingencies in Europe. Instead, there probably would be a crash effort to develop and deploy a full-scale missile defense system, as well as to establish effective

air defenses, even if such systems during the period of this forecast would be capable of defending only against attacks by smaller nuclear powers. Additionally, the U.S. would probably pursue a largely maritime strategy to reassert its dominance over the Western Hemisphere and to protect its tangible interests and whatever security commitments were retained abroad. Any such forces likely would depend heavily upon tactical nuclear weapons.

The fifth and final strategic environment (again, refer to Table S-1) postulates the co-incidence of trends which would greatly assist the preservation of U.S. security interests. It is assumed that the USSR continues to experience difficulties, particularly in Eastern Europe, and that U.S. alliance commitments are sustained. U.S. allies -- notably Japan -- are further assumed to make more substantial commitments to defense, while cooperating closely with U.S. policies. Events in the third world are generally assumed to proceed as in the "surprise-free" forecast, with the exception that more aggressive U.S. policies are assumed to reverse the prior trend toward the extension of Soviet/Cuban influence in Central America.

In such an optimistic environment, it would be possible to consider gradual reductions in U.S. military forces. Cuts could neither be rapid nor extensive, but assuming that the USSR's weak internal position facilitated the negotiation of favorable arms control regimes, and that U.S. allies substantially increased their contributions to alliance forces, then reductions in U.S. nuclear and conventional forces would be feasible toward the end of the forecast period.

Each of these alternative strategic environments in effect constitutes a straight-line extrapolation of alternative trends throughout the forecast period; as such, none of the five is likely to be fully realized -- reality is more complicated than such abstractions permit. Still, the forecasts are useful as aids for military planning in three ways: (a) to help planners design

force postures with the flexibility to operate effectively in the most likely set of alternative futures; (b) to identify the most likely critical variations in the pattern of political/military relations; and (c) to suggest necessary hedges against the possibility of such critical variations.

CHAPTER I

PLANNING FOR THE YEAR 2000

The standard window for long-range military planning -- ten to twenty years -- encompasses the turn of the century, a date which attracts far greater attention than most others, if only for symbolic reasons. What will the world be like as it enters the Twenty-first Century? What challenges will be posed to American security? What policies and objectives will the U.S. armed forces be asked to support? Although the turn of the century seems very far away and events uncertain, in fact we can predict some things with confidence.

Demographic trends, for example, the size and distribution of the earth's population, can be forecast with near certainty. Birth rates in particular countries may increase or, what is more likely, decrease over time and life expectancies may lengthen or shorten, but the consequences of changes like these take more than twenty years to have a significant impact and, even so, are largely predictable. The distribution of the world's economic resources is pretty well known as well; with only modest hesitancy we can forecast who will be the primary producers of energy, of critical minerals, of food. It is not that these patterns do not change, simply that the period of time required for new technologies to make possible the exploitation of resources from new locations, or to change the relative value of different types of resources, is normally very long.

According to experts consulted for this study, we also know a great deal about the structure and capabilities of the military forces likely to be operational in twenty years. This is certainly the case for such major items of equipment as warships, some of which require more than five years to build and have a life expectancy in excess of 30 years. But more broadly speaking, the

technologies that will determine the characteristics and capabilities of armed forces in twenty years are for the most part already known, and are already being developed for military applications.

In short, we can describe the physical parameters of the strategic environment at the turn of the century with a fair amount of confidence. Inevitably, however, we will be far more uncertain about events and relationships which depend primarily on human attitudes and decisions. In a way, it is the familiar intelligence problem of being able to discern capabilities but not intentions. The problem is much worse than in near-term intelligence forecasts, moreover, as over a period of twenty years capabilities themselves can be strongly influenced by intentions.

Consider the distribution of economic resources, for example. The "modest hesitancy" noted above pertains largely to uncertainties about national decisions to alter patterns of resource dependencies. It is conceivable, for example, that the Western nations in the next few years might decide to pursue a crash cooperative program to end their dependency on Middle Eastern oil by developing new energy technologies, additional means of conserving energy, and other comparable programs. Such a decision might be unlikely, and there is no guarantee that any such program would succeed, but the possibility cannot be ruled out. Similar crash programs conceivably could prove expectations about operational military technologies inaccurate.

Forecasts of the strategic environment in ten to twenty years become most difficult when we consider those elements which depend strictly upon human attitudes and decisions. Most importantly, this problem pertains to forecasts of the basic relationships among the nations of the world. Obviously, some things are very unlikely to change: One need not be bold to predict that nationalism will remain the dominant force in humanity's scheme for organizing itself politically, for example; neither the establishment of world government nor the creation of sovereign regional

organizations seem likely. But the relationships which nation-states choose to maintain with one another is quite another matter.

Consider the evolution of world affairs over the past twenty years. China and the Soviet Union, then close allies, are now bitter adversaries. China and the United States, then implacable foes, are building increasingly close relations. As feared in 1964, North Vietnam has gained control of all that was once known as French Indo-China, but Vietnam's gain has helped the Soviet Union primarily -- not, as then expected, the Chinese, who now engage in almost daily military incidents with their former Vietnamese ally.

Europeans, bitterly divided in 1964 between East and West, with few contacts of any sort between the two camps, now maintain a range of economic and human contacts of such great magnitude as if to suggest that nothing really divides them -- only an anachronistic military competition. Even conservative West German politicians now speak ritualistically of the desirability of deepening this cooperation and contact. At the same time, the Socialists in France, Italy, and Iberia, once believed to be sympathetic toward Soviet positions, have become stalwart defenders of a tough political and military posture toward the Eastern Bloc. It is clear that European political attitudes have been altered substantially since 1964.

In short, much can change over a twenty year period, including basic international relationships and physical aspects of the strategic environment which have a significant impact on military requirements and on choices among competing military strategies and force structures.

This study is intended to bound these uncertainties. It does not attempt to predict what the strategic environment will be like in ten to twenty years, but rather outlines alternative possibilities. The alternatives include one possibility which represents an extrapolation of current trends -- it is more or

less a picture of what the world would be like if all the trends which the experts can identify today were to continue unchanged. But this should not be confused with a forecast of what is most likely to happen. What would be most surprising about such a "surprise-free" forecast is if it proved to be accurate. If there is one lesson of history, it is to expect the unexpected; "surprise-free" forecasts are presented in this study solely as points of departure.

Specifically, the study has three objectives:

1. To identify and discuss the basic demographic, economic, technological, and societal trends that will shape the strategic environment in the next ten to twenty years.
2. To identify and describe the basic trends in political/military relations within the various regions of the world, and between those regions and the United States.
3. Based on these previous analyses, to describe alternative strategic environments that might emerge over the twenty year period which would have significantly different implications for U.S. military planning.

Several different types of methodological techniques were applied to these problems. The factors which can affect the strategic environment for military planning are large in number and complex in their relationships to one another and in their potential impact on political/military relations. Some factors -- demographic trends, the distribution of resources, economic growth rates, for example -- are largely observable and quantifiable in character, and it is relatively easy to project the range within which they might vary over the period of the forecast. In considering these variables, we made use of standard sources, many published by the U.S. Government, that forecast such trends in a variety of scenarios.

Other factors that influence the strategic environment have a similarly tangible aspect in that they depend in part on physical capacities, but also will be directly dependent upon national decisions. The proliferation of nuclear weapons is an excellent example of this type of factor. The questions of which nations will have nuclear capabilities in ten to twenty years, and what the size and character of their arsenals might be, can have a decisive impact on the threats posed to American security. Nuclear attacks, after all, are the only contingencies which we believe threaten American territory and people directly; we are far more confident of our ability to deter or defend against attacks with conventional weapons.

Questions of nuclear proliferation thus should be considered in U.S. military planning. Proliferation will depend in part on which nations could have access to the physical facilities necessary to create the special materials and build the other components necessary to fabricate nuclear weapons; this question is relatively easy to answer. In addition, though, there is the question of intentions: Which of those candidate proliferators actually will choose to invest the necessary resources to exercise the option?

The development and proliferation of militarily-significant conventional technologies is a comparable question: They will have a major impact on the strategic environment. The rate and pattern of proliferation will depend partly on physical capabilities. But they also will depend on the choices of national decision-makers.

We depended heavily on Delphi techniques to forecast both nuclear proliferation and advances in conventional military technologies. In each case, a panel of experts was recruited and the members asked, individually, to address an open-ended question about current trends and likely future developments. Individual responses were tabulated and used as the basis for deriving a

forecast of the likely future. The technique is described more completely in Appendix A.

A third class of factors are more difficult to forecast because they have only a limited physical component. These are the basic societal values and attitudes which determine foreign policies and the relationships of nations to one another. To forecast trends in these relationships, we relied on structured interviews with experts -- individuals with detailed knowledge of, and great experience dealing with, the different regions of the world. A complete list of the roughly 60 experts interviewed for this part of the study, many of whom have served at the highest level of the U.S. Government or in European governments, is contained in Appendix B. On the basis of these individuals' analyses, it is possible to identify both current trends in the different parts of the world and the major uncertainties which could cause significant departures from the directions indicated by current trendlines.

This initial report of the study's findings is organized into three major chapters.

In the first, Chapter II, we describe trends in several of the basic factors which will determine the relative potential leverage which the United States will bring to the international environment in ten to twenty years. Included are both those factors which will determine American capabilities (technology, public attitudes toward the U.S. role in world affairs, economic growth, and defense spending) and those which will serve more as constraints on the flexibility of decision-makers (dependencies on regions abroad for critical resources, technologies available to other nations, and nuclear proliferation).

In the second component, Chapter III, we review alternative ways that events might unfold in the different regions of the world. For the purposes of this discussion, we have divided the world beyond the United States into six regions: Europe, the Soviet Union, South and East Asia, the Middle East (including

north Africa), Africa south of the Sahara, and Latin America. In each, based mainly upon the experts' analyses, we describe both a "surprise-free" forecast and the key uncertainties which could result in alternative futures. These discussions include analyses of the fundamental demographic, economic, attitudinal and technological trends that will determine events in each region -- as well as an assessment of the consequences of these basic factors for political/military relationships.

In the final component of the report, Chapter IV, we describe five alternative strategic environments -- five composite pictures of plausible end-states of the basic factors described in the preceding chapters. One environment represents an extrapolation of present trends; it is a composite of the "surprise-free" forecasts. The remaining four alternatives are strategic environments which differ significantly from the "surprise-free" forecast (and from one another) in their implications for U.S. military planning. Taken together, the alternatives provide a reasonable bound on the space of conceivable futures, providing both a basis for testing the adequacy of alternative force postures and military strategies, and also a means of developing hedges against unexpected, but feasible, developments.

CHAPTER II

U.S. CAPABILITIES AND CONSTRAINTS

More than any other single factor, the future environment for U.S. military planning will be shaped by the policies pursued by the United States itself, and by the resources it is able to bring to bear in support of those policies. As the world's largest economy by far, as a great military power, and as the political and diplomatic leader of most of the world's democratic nations, the United States can often have a decisive impact on world events. Consequently, projections of U.S. capabilities and analyses of the factors which might constrain its flexibility in international affairs are essential components in any forecast of alternative future strategic environments.

A great number of factors shape U.S. decisions about the policies it wishes to follow in world affairs, and determine the assets which it can bring to bear in support of those policies. In this chapter, we examine four of the most important of these factors: (a) The development of military technologies in this nation and abroad, trends which will help to determine both U.S. military capabilities and the military threats posed to American interests; (b) the growth of the U.S. economy, a factor which can exert a profound influence on this nation's basic position in world affairs, have specific implications for defense spending, and determine the extent of our dependencies on foreign nations for certain economic resources important to the nation's well-being; (c) the spread of nuclear weapons to other nations; and (d) public attitudes toward foreign policy, a factor that will determine the basic outlines of the nation's stance in world affairs.

A. MILITARY TECHNOLOGIES

It is obvious that both the rate of technological change and its primary directions are important determinants of the future strategic environment. Technological advances, of course, will have a direct impact on the military capabilities of the United States and those of its allies, while advances in Soviet technologies will contribute to the shape and severity of the military threat posed to this country and its interest abroad. Technology also will help to determine the vulnerabilities and assets of the U.S. position in world affairs. Over time, technological change can influence the relative economic power of nations and thereby modify the distribution of tangible U.S. interests around the globe. This can cause us to become more independent of some nations, but also can increase our dependencies on others. Earlier in this century, for example, tin and natural rubber were essential ingredients for the nation's industrial production, a fact that required we pay close attention to developments in Southeast Asia -- the primary source of those commodities. In more recent decades, however, technological developments shifted the output of American industries markedly. Minerals found primarily in southern Africa, such as cobalt and chromium, are now of far greater importance for the nation's economic performance. Trends such as these can alter the strategic environment significantly by requiring policies to assure access to the new regions of critical importance. Therefore, such technological trends must also be considered in military planning.

The technological forecasts used in this study were derived largely from a Delphi panel established specifically for this purpose. These findings were supplemented with interviews with several individuals in key posts within the U.S. defense scientific community, and by the findings of several previous studies -- notably the Defense Science Board's 1981 Summer Study. (The

methodology used to derive the technological forecast is described in greater detail in Appendix A.)

Readers should bear in mind that technological forecasts also enter other parts of the study. The analysis presented in the section on U.S. resource dependencies, for example, incorporates experts' predictions of the degree to which technology will make possible alterations in present patterns of U.S. commodity imports. Moreover, the regional forecasts each incorporate experts' predictions of economic performance which, in turn, hinge to an extent on projections of relative technological progress in different countries. In this section, we concentrate primarily on the impact of technology on the United States' relative military capabilities.

1. General Observations

The time period examined in this study, 1994 to 2004, is not so distant that one should expect revolutionary technological change. Overwhelmingly, the experts contributing to the study discounted this possibility. With only one partial exception, those technologies which were identified as likely to have significant impact on U.S. security interests are well-known and are already being applied to the solution of U.S. (and Soviet) defense problems. This fits with recent experience; virtually all the technologies now entering U.S. and Soviet weapon inventories were under development in the late 1960s. Several respondents pointed out that given the substantial efforts apportioned to defense research by both the United States and the Soviet Union, "technological surprise", as the phrase has been understood generally, is most unlikely. As one respondent put it, "the main trends are usually evident ... the capabilities which I would expect to become operational ... will probably depend less on technological factors and more on momentum (or inertia), bureaucratic imperatives, and the occasional spurs of conflicts".

The one possible exception to this rule which was identified concerned the biological sciences. Many of the respondents mentioned technologies now emerging from biological research -- particularly genetic engineering -- as conceivably having a significant impact on U.S. security by the turn of the century. None of the respondents, however, was able (or willing) to articulate the specific developments and applications which could have such an impact. Respondents simply expressed a general feeling that the so-called bio-technologies were advancing so rapidly, and the state of knowledge in this field was so dynamic, that there could well be some sort of surprising breakthrough within twenty years. To a person, those respondents who mentioned bio-technologies believed that if such a breakthrough occurred it would be more likely in the United States than in the Soviet Union, as the U.S. scientific infrastructure in this field is much better developed. (None of the respondents addressed the possibility that a third nation --Japan, for example -- might also pursue military applications of bio-technologies.)

The U.S. lead in bio-technologies is reflective of a general U.S. advantage in the technological competition with the USSR. All the respondents believed that the United States would maintain a broad technological lead throughout the study period. The majority were modest, however, in assessing the length and significance of this advantage. Among the most positive assessments of the U.S. technological lead was the following:

...the U.S. will, in almost all cases, have the capability [i.e., in 18 key technologies] before the Soviet Union and will maintain a technological lead ... nine of the technologies will provide significant boosts to the productivity of national economies ... will permeate the U.S. economy much earlier and more thoroughly than the Soviet economy, resulting in a net strengthening ...

From such a perspective, one would expect the U.S. technological advantage to continue to expand. Most other respondents were less sanguine, however, assessing the U.S. lead at roughly five

years in most technologies -- and perhaps ten years in some aspects of electronics -- and forecasting the length of those leads to remain stable throughout the forecast period.

One respondent added a strong cautionary note. He said that despite superior U.S. technologies, U.S. weapons actually performed better than their Soviet counterparts only when electronics constituted an essential and significant component. Furthermore, he saw no indication that the U.S. was moving to improve its technological lead in any area, and expressed some concern that we might actually be caught by a Soviet breakthrough in the application of new technologies. Both tactical and strategic applications of directed energy weapons (i.e., lasers and particle beam weapons), he believed, would be the most likely candidate for such a surprise. The appearance of effective directed energy weapons in the USSR's operational inventory before the end of the century should not be ruled out, he argued, and military planners should hedge against that prospect. The United States, he maintained, should be prepared for the possibility of having to make major force structure changes on relatively short notice.

Generally, respondents restricted their forecasts to those technological trends which might affect the military balance directly. No one addressed the possibility of weather modification or agricultural breakthroughs, for example, both of which could influence U.S. security prospects dramatically.

Several of the respondents did, however, raise the possibility of technological advances which could greatly reduce the dependence of the United States and its allies on foreign sources of energy -- a potential development with clear implications for military planning. One respondent suggested that a national decision to pursue new types of nuclear power could make the United States self-sufficient in energy within 25 years at no greater cost than would be expended in the absence of such a decision. He suggested further that similar decisions could greatly reduce

the dependence of Japan and Western Europe on the Middle East for energy supplies, thus reducing the importance of that region in U.S. military planning. Other respondents noted the possibility that technological advances in fusion energy also might make energy self-sufficiency possible. No one forecast the development of operational fusion energy systems within the twenty year period of this study, however.

2. Broad Technological Advances

Respondents identified six broad areas in which significant technological advances were taking place: computing, materials, space technologies, directed energy, bio-technologies, and nuclear weapon technologies. Computing was singled out, however, as the area with by far the most important developments, largely due to the very rapid rate of change now taking place and the broad range of potential applications.

a. Computing. There was general agreement that the most significant technological changes taking place today, and those expected in the future, are in computing capabilities. Terms such as "computational plenty", "jumps" or "rapid gains" in computing, were sprinkled throughout the responses. Typically, respondents expected the following advances in computing capabilities to become operational with U.S. forces in the late 1980s, and with Soviet forces by the early- to mid-1990s:

- Digital supercomputers based on gallium arsenide circuits with the potential to operate at speeds ten times those of the current CRAY II computer at the same cost;
- Comparable advances in symbolic computers;
- Computer hardware and software that promise to reduce the time necessary to design complex integrated circuits tenfold;
- Tools to help develop computer software that can reduce the time necessary to write programs by an order of magnitude.

These new computing capabilities will multiply military capabilities in a number of ways, notably by enhancing the amount of data that can be processed simultaneously, and by promising more refined procedures for extracting pertinent information from large amounts of data. Among the potential applications of these capabilities are highly accurate guidance and tactical targeting systems for autonomous conventional ordnance, more effective signal processing for all types of sensors, more effective command and control systems enabling higher level authorities to direct combat far from the scene of the battle, and far better electronic warfare (and counter-electronic warfare) capabilities. Each of these potential applications is discussed further in a subsequent subsection of the report.

An intriguing potential consequence of these improvements in computing capabilities is likely to be the development and military application of artificial (also known as "machine") intelligence. Just as computing improvements are making possible the use of machines to design software and complicated circuits, thus accelerating the pace of advances in computing capabilities, major advances in military capabilities can be foreseen through the use of machine "experts". Several of the respondents foresaw the development of computers capable of inference and deduction based on rules specified in software packages. This might take place in the early- to mid-1990s for the United States, and by the end of the century for the Soviet Union. Such a development would permit computers to abstract pertinent information from raw data, thus providing direct support to military commanders. For example, machine "experts" could replace human co-pilots or tank gunners, assisting the single pilot or tank commander by interpreting intelligence -- particularly the images obtained from a variety of sensors -- to acquire targets for the new generation of "brilliant weapons" (see below). Such capabilities also might be used at higher command levels for "situation assessments and planning aids."

The most visionary of the respondents foresaw artificial intelligence being linked with robotics to make possible completely unmanned aircraft, tanks, warships, and submarines. Such a development, of course, could well have a marked impact on the cost trade-offs among different types of forces and on the evaluation of alternative military tactics and strategies. Respondents identifying this possibility cautioned, however, that these technologies should not be expected to influence operational inventories until well into the next century and that, in any case, there would be the possibility of relatively easy-to-design countermeasures, at least against the first generation of such weapons.

b. Materials Technology. Developments in materials technology are also having a significant impact on the future security environment. The use of advanced composite materials and ceramics will make possible the deployment of lighter, stronger, more durable, and less visible platforms of all kinds, but particularly aircraft, spacecraft, missiles, and submarines. The development of "Stealthy" platforms, combining advances in materials technology with other technological developments, will greatly reduce the detectability of aircraft and missiles, and perhaps other types of weapons, within the next ten to twenty years. Those who mentioned "Stealth" believed it would become available to the United States in the late-1980s, and to the USSR in the early 1990s. One respondent suggested, however, that advances in computing would make possible the development of fire control systems capable of tracking first-generation "Stealth" systems in the 1990s. He foresaw a continuous competition between those technologies which suppress the signals emitted by various platforms and those advances in computing which make possible the recognition of ever more faint emissions.

Several respondents suggested that developments in materials technology might reduce U.S. and allied dependence on foreign sources for certain "strategic minerals." One of the most

enthusiastic respondents stated: "The advanced countries should be much less dependent on raw materials from less-developed countries in 25 years than they are today, if presently known material technologies are fully exploited." A second respondent predicted that accelerating applications of man-made materials will exert continual pressures on the price of key raw materials, causing grave economic problems for producer nations.

Official projections of U.S. mineral imports, however, as presented in Section B below, do not share this optimistic view of the potential of artificial materials. They continue to project relatively high levels of dependence on foreign sources for critical resources.

c. Space Technologies. Advances in materials technologies are one of several developments which, according to several of the respondents, are making possible much greater exploitation of space for military purposes. Within the period analyzed in the study, both the U.S. and USSR will be able to construct very large structures in space at a relatively modest cost. Such structures might make possible the deployment of phased-array radars in space, for example, which could be used for the surveillance of oceans and land areas in all kinds of weather, and at night as well as during the day. Large optical structures also might be erected in space, as could large antennas for electronic intelligence. Manned space stations would be another potential use of large structures in space, but several respondents noted that such stations would not be a development with important security implications.

An additional development in space technologies which was singled out for special mention concerned the use of nuclear power for directed energy weapons, space-based radars, and space-based battle management systems.

d. Directed Energy. Advances in space technologies potentially could be linked with advances in directed energy weapons to provide space-based defensive systems. Respondents differed

markedly in their assessments of these prospects. Of those who addressed this possibility, most saw a prospect for effective anti-satellite weapons (which would not necessarily be based in space). Only a minority forecast effective missile defenses within the twenty year period of the study, however. Of those who were optimistic concerning the possibility of space-based, missile defense systems, the forecasts specified a range of capabilities between a 50 percent effective system and "a low leakage" system. Mentioned frequently among the reasons not to expect even a limited capability was an asserted relative ease of countering such systems. In all cases, the earliest forecast of an effective missile defense system was the very end of the period being studied.

e. Bio-technologies. As noted previously, several respondents mentioned this area as one with potential impact on U.S. security interests, but failed to specify how, exactly, that impact would be felt. One respondent noted that advances in bio-technologies "certainly will affect our ability to fight disease and injury, and ... may well affect such matters as manufacturing processes ... so that it could in the longer run have an effect on our national security posture considered broadly". Most others were more vague. For example,

... the most rapid scientific evolution occurring today is in biology, in particular the related fields of genetic engineering and immune mechanisms. It is difficult to foresee all the applications, but certainly the knowledge base and the capability to identify and activate specific agents will be very different in a decade or two from what it is now. I am only listing this development last because I do not have the imagination to see concretely the various security implications.

Potential applications of bio-technologies which would have significant implications for military planning would include the development of super-lethal pathogens (and counters to super-lethal pathogens), and also improved and cheaper agricultural seed and medicines, both of which could affect stability in the

third world measurably. None of the respondents mentioned these specifically, however.

f. Nuclear Technologies. One respondent mentioned the development of pure fusion weapons as potentially having a major impact on U.S. and Soviet military capabilities within the forecast period. A second respondent mentioned the development of more compact weapons as potentially affecting U.S. security adversely by aggravating the threat of nuclear terrorism. Several respondents mentioned the proliferation of nuclear technologies to additional countries as greatly increasing the threats to U.S. security; this potential development is discussed in a separate section of the report.

3. Specific Applications

Respondents described the implications of the new technologies both on a functional basis and with regard to specific weapon systems; both are discussed below.

a. Applications to Functional Areas

(1) Sensing: The development of more effective sensing capabilities was identified by the respondents as probably the most important application of advances in computing technologies. The ability to detect faint signals of all kinds against cluttered (or noisy) backgrounds will be combined with new understandings of optics, infra-red technology, radar, lasers, and other sensing means to create both relatively small, easily deployed sensors for tactical operations and very large, space-based systems for a wider range of purposes. Both developments are expected to greatly expand military capabilities.

Among the specific applications emphasized by the respondents were target acquisition systems which combined data from several types of sensors (including some which would be based in space) and infra-red surveillance systems. Space-based systems, it was maintained by one expert, "should be able to detect almost anything

of military value on the ground" Several respondents noted that these new sensing capabilities could restrict the gains in survivability otherwise to be expected from "Stealth" technologies.

One respondent emphasized the greater distance between sensors and human interpreters made feasible by the new technologies as being particularly significant. He foresaw the development of "instrumented battlefields" before the end of the century in which a variety of acoustical, optical, infra-red, radar, and laser-scanning capabilities will be implanted in regions of potential conflict long before the outbreak of hostilities, greatly enhancing the capabilities of the defending side.

Major improvements in computing and sensor technologies could have dramatic effects on anti-submarine capabilities as well. Several of the respondents mentioned this possibility, although only one made a confident prediction of substantial improvements "in the long-range detection and localization of quiet submarines ..." -- in the U.S. case, by the year 2000; in the Soviet case, by 2010. These advances would result from the development of supercomputers, the deployment of autonomous sensing arrays, and greater knowledge of the physics of the oceans. Likely to be particularly important are advances in computing capabilities which will make it possible to integrate large quantities of data from several types of sources.

Although respondents generally expected the greatest advances in anti-submarine capabilities to result from continued progress in acoustical means of detection, several mentioned the possibility that anti-submarine capabilities also would improve because of developments in our ability to detect the non-acoustical emissions from submarines, "including hydro-electromagnetic phenomena ... and various chemical and physical perturbations in the state of the ocean induced by the presence and motion of submarines." A radical advance in either acoustical or non-acoustical capabilities could have major strategic implications because of its

potential effect on the survivability of submarine-launched ballistic missiles. Still, it should be remembered that technological advances also will reduce the strength of the various signals emitted by submarines. The conclusion of most of the respondents who addressed anti-submarine capabilities was captured in one individual's response:

Although these potentially significant technologies have been and are being pursued by the major powers, there is no basis at present for a confident prediction of a major breakthrough. On the other hand, some not negligible evolutionary improvements in ASW, both conventional and novel, must be expected over the next 25 years.

(2) Guidance: Many of the respondents also identified improvements in guidance technologies as having significant impact on military capabilities. Infra-red seekers for both air-to-air and surface-to-air weapons were singled out by several of the respondents for attention, but most wrote more generally about the availability of relatively cheap, highly accurate guidance systems for the full-range of weapon delivery vehicles. Most importantly, it was argued, this development -- combined with new sensor technologies -- will make possible a new generation of "brilliant weapons" (see below).

A particularly intriguing possibility is that guidance systems will become so accurate within the next twenty years as to make strategic weapons armed with conventional ordinance an attractive option. As one respondent put it:

Very accurate warhead delivery ... may be achievable within the next decade using signals from the Global Positioning System to update the guidance subsystems on board a variety of delivery means ... The impact of this development ... could make the use of nonnuclear ... munitions attractive in many applications. That in turn may greatly affect negotiations on arms control and the use of space, as well as the overall strategic and tactical postures of both the U.S. and U.S.S.R.

(3) Communications: Many of the technologies already mentioned also will contribute to more capable communications systems. These developments are emerging as much in the civilian sectors of the western industrial nations as in their military sectors. Even so, the respondents noted, the Soviets do not appear to be very far behind in this area.

Developments in communications technologies will provide inexpensive systems able to handle large amounts of data very rapidly. The new systems are expected to be much more resilient as well; indeed, one respondent noted that new communications systems could be expected to survive attacks better than the forces themselves, with the partial exception of submarines. The major impact of these developments will be on the conventional battlefield.

(4) Command and Control: One commentator suggested that an important consequence of the new electronic technologies would be to permit battlefield commanders "to get back on top of the hill." Computers, remote sensors, and advanced communications systems, he pointed out, would enable commanders to see the tactical situation coherently, as a whole, thus facilitating analysis of the tactical situation, the formulation of effective strategy, and the timely direction of troops in the field. An analogy is provided by the Airborne Warning and Control System (AWACS), which already permits the air commander to perceive the entire air situation in a theater as a coherent whole. New electronic technologies will provide similar capabilities to commanders of ground forces by the end of the century.

(5) Electronic Warfare: At the same time, several respondents mentioned the possibility of major advances in electronic warfare capabilities on both sides. According to one, "electronic warfare, in many guises ... will make it extraordinarily difficult for anyone to use forces or operate systems without interference." None of the respondents ventured an opinion on the likely relative

balance between improvements in guidance, communications, targeting, and other types of systems that depend on the new electronics, on the one hand, and the simultaneous improvement in electronic warfare capabilities, on the other.

b. Hardware Applications

(1) "Brilliant Sub-munitions": Under a variety of titles, most of the respondents expected both the U.S. and USSR to deploy extremely accurate, autonomously-guided, all-weather munitions before the end of the century. (Typically, they expect the U.S. to have these weapons in the field by the early 1990s, the Soviets by the late 1990s.) These second generation, precision-guided munitions will be made possible by the previously mentioned advances in sensing, guidance, and communications. Many of these weapons can be clustered in a single delivery vehicle, thus reducing the price per unit of capability. Perhaps the most important implication of these emerging weapons will be an increase in anti-tank capabilities.

(2) Cruise Missiles: Several respondents also singled out cruise missiles for special comment. Two stated that not only will very accurate, relatively inexpensive cruise missiles be available to the United States and the Soviet Union, but that these capabilities are likely to spread to many other nations. A third respondent noted particularly the impact of advanced cruise missile capabilities on naval warfare. Adding soon-to-be-available logic circuits plus new anti-jamming and all-weather homing capabilities to existing cruise missile capabilities should greatly enhance the firepower of highly mobile surface platforms and submarines, and increase the risk to warships.

(3) Remotely Piloted Vehicles (RPVs): The same respondent noted the effect of new technologies on the potential capabilities of RPVs in the context of the land battle. He saw this potential largely in the area of obtaining very accurate, timely information

about the battlefield, thus making possible better battle management and control.

(4) **Microwave Generators:** Finally, several respondents mentioned the likely appearance of high-power, microwave generators on both sides in the 1990s. These systems, utilizing millimeter-wave radar, would have a multiple shot capability and be useful as anti-sensor, anti-electronic, and anti-personnel weapons.

Many other specific applications of emerging technologies were listed by the respondents to the Delphi survey and also in the additional sources consulted for this study. Those mentioned above, however, summarize the broad directions in which U.S. and Soviet military capabilities seem to be evolving.

B. ECONOMIC STRENGTH AND ECONOMIC DEPENDENCE

In a narrow sense, relative economic strength influences the strategic environment for military planning by determining the amount and character of resources which the United States, the Soviet Union, and their respective allies potentially can devote to national security. However, economic strength influences political/military relations, and thus the strategic environment, in more comprehensive ways as well.

First, the strength and vitality of the American economy provides a great deal of leverage to this country when dealing with other nations. As a source of goods, services, capital, and technology, and as a market and opportunity for investments, no other economy in the world is the equal of the United States. Consequently, most nations prefer to maintain stable and cooperative relations with this country and, within limits, will shade their behavior accordingly. Stable and cooperative relations between the U.S. and foreign governments encourage the American private sector to look to those nations for investment and trade opportunities. At a minimum, the absence of hostile relations means avoidance of U.S. governmental restrictions on the ability

of the private sector to conclude economic arrangements. Positive relations can encourage the U.S. government to take various actions which can add further impetus to this private sector activity, as well as to support, in some cases, direct economic assistance bilaterally or through multilateral lending organizations. Obviously, some nations (Cuba, for example) prefer adversarial relations with the United States on political or ideological grounds, in spite of the economic costs that may be incurred. Still, such cases are exceptions; most often, the American economy is a tremendous asset in the United States' political, economic, and military relations with other countries.

Second, the nation's economic requirements are a source of tangible world-wide interests whose needs for protection and enhancement often cause the U.S. to compete with adversaries (and sometimes with political allies) for influence with foreign governments. Interdependence, by definition, cuts both ways. To some extent, the United States' economic well-being is vulnerable to the actions of others. We require markets for our goods and services and sources for our energy and raw material requirements, and we often benefit by having foreign sources of specific manufactured products or components. The need to preserve these economic relations in order to maintain our economic health and vitality can sometimes constrain the flexibility of U.S. foreign policy and the freedom-of-action of American decision-makers, causing them to pursue policies which otherwise they might not consider seriously.

In short, both U.S. economic strengths and economic dependencies help to shape the strategic environment in which the armed forces must operate. These relationships are developed more completely in the following section of this report.

1. Economic Strength

Perhaps the single most important determinant of the United States' position in the world is the size and strength of its economy. With only five percent of the world's population, the

United States accounts for fully one-fourth of the sum of the entire world's gross national products. In 1982, the U.S. economy employed 100 million people and generated a GNP of more than three trillion dollars. This was one third greater than the combined GNP's of Canada, France, Germany, Italy, and the United Kingdom. With the addition of Japan, the combined GNPs of these six countries exceeded that of the United States by only ten percent.

Much has been made in recent years of the declining economic dominance of the United States, but this apparent trend has been exaggerated. Except for a brief period during the mid-1970s, economic growth in the United States has been remarkably strong and consistent during the entire post-war era. The average annual compounded rate of growth from 1960 to 1982 was 3.6 percent. From 1976 to 1982 it averaged 2.3 percent. Not only do these figures represent strong economic growth in and of themselves, but also they compare favorably to the growth rates experienced by other industrial nations.

The size of the U.S. economy, however, tells only part of the story. The importance and influence of the United States in world affairs is further enhanced by its favorable position in international commerce. Although the U.S. trades extensively, thus strongly influencing other nations' well-being, the U.S. itself is proportionately less dependent on international trade.

For example, U.S. exports in 1982 amounted to 212 billion dollars. This was more than the total for any other country and accounted for nearly 12 percent of the value of total world exports, 18 percent of the total exports of the OECD countries, and was approximately as large as the exports of all the non-oil exporting, developing countries combined. Even so, U.S. exports amounted to only seven percent of the American GNP. (The second largest exporter in the world is West Germany, with 1982 exports of 176 billion dollars, accounting for nearly 27 percent of the German GNP.) U.S. imports of 255 billion dollars in 1982 were

equivalent to more than 14 percent of total world imports, approximately one fifth of OECD imports, and again were approximately as large as the total imports of all the non-oil-exporting, developing countries. As with exports, moreover, U.S. imports are less significant to this country's economy than their size would suggest. U.S. imports equaled a little more than eight percent of the country's GNP in 1982. (West German imports, again the second largest, were 155 billion dollars, approximately 24 percent of the German GNP.)

The significance of these figures goes beyond their demonstration of the sheer size of the U.S. economy. Despite the central role of the U.S. economy in world commerce, the data suggest that the United States is much less dependent on international trade than other countries. Partially as a result of this disparity, the U.S. possesses both greater influence and greater freedom-of-action than do most other nations that are involved actively in international trade. As will be seen in Chapter III, these relative advantages can result in political leverage for the United States in several regions of the globe.

2. Economic Projections

What does the economic future look like? The projections of GNP prepared for this study are intended solely to provide a crude, comparative glimpse of what resources the United States, its chief adversary, and their respective allies could have at their disposal over the next two decades. We are not attempting to forecast economic growth rates. The purpose of the exercise is simply to explore what seem to be the likely bounds of currently evident economic trends.

The growth rates experienced during the 1960-1973 period represent the probable upper bound of economic growth for the U.S., the Soviet Union, and their respective allies, having been a period of extraordinarily rapid economic growth by historical standards. The lower bound GNP projection for the U.S. (and its

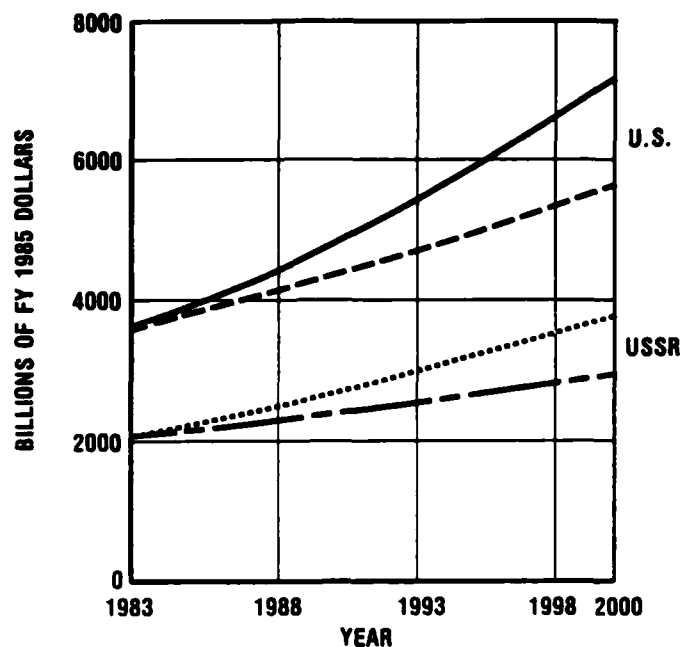
allies) was obtained by taking the average annual growth rate for the relatively low growth period of 1975-83. A 2.0 percent average annual growth rate, taken from CIA studies, was used as the lower bound for the Soviet Union (and the other Warsaw Pact countries). This two percent figure assumes that the Soviet economy will continue to be plagued by the many problems that currently beset Soviet planners (see Chapter III, below). It is, however, far from the most pessimistic forecast which could be made. Many experts believe that the Soviet economy may soon enter a period of sustained zero, or even negative, growth.

Based on these bounds, the range of projected GNP for the U.S. alone in the year 2000 would be approximately 5.6-7.2 trillion 1985 dollars (figure II-1), while the Soviet Union's G.N.P will likely range between 2.9 and 3.8 trillion 1985 dollars. Even in the worst case, therefore, the U.S. GNP would exceed the USSR's by nearly 50 percent. The Soviet Union's comparative disadvantage worsens appreciably when the economies of each side's allies are considered as well. Our baseline projections indicate that by the year 2000, NATO and Japan combined would likely have a lower bound GNP nearly twice as great as the upper bound GNP of the Warsaw Pact (figure II-2). In short, the United States' economy seems likely to continue to out-produce the Soviet economy, and the economies of the U.S. and its allies together will likely dwarf the productive capabilities of members of the Warsaw Pact. Looking over the long term, these projections have important implications for relative political influence in world affairs, as well as for relative military capabilities.

3. Implications of U.S. Economic Strength

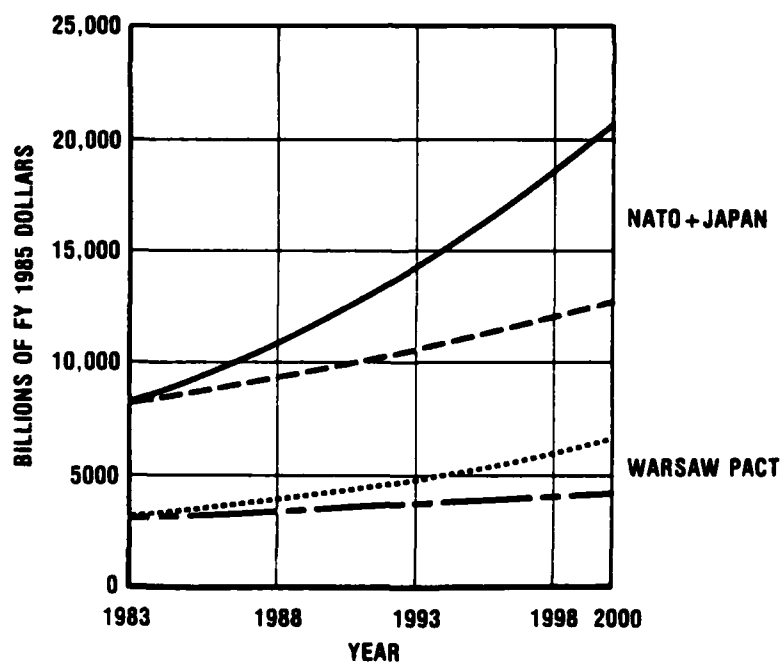
There are four basic implications of the size and performance of the U.S. economy:

1. Economic strength potentially can provide the United States with great influence around the world.



12-19-84-1

Figure II-1. RANGE OF PROJECTED GNP -- U.S. AND USSR



12-19-84-2

Figure II-2. RANGE OF PROJECTED GNP -- NATO PLUS JAPAN AND WARSAW PACT

2. Economic strength provides the nation with the potential to devote substantial resources to defense.
3. The U.S. is dependent upon specific countries or regions of the world for particular goods or markets important for the continued growth of the economy, a factor which can influence security policies.
4. Over the long term, U.S. security will depend partly on the overall performance of the global economy.

The first two, influence and the availability of resources for defense, represent benefits that accrue to the United States because of its strong economy. The second two, dependencies on specific countries for specific resources and on the long term performance of the global economy, reflect potential liabilities incurred by the U.S. as a consequence of its economic relations around the world.

a. Influence. The political influence which the United States derives from its economy is perhaps best illustrated by example. The U.S., of course, is a central figure at the annual economic summits of the leaders of the industrialized nations. Prior to the most recent (June 1984) summit, there was considerable concern that high U.S. interest rates, and their negative effect on the attractiveness of investment in other industrialized nations, would prompt considerable criticism of the United States with damaging political effects. In fact, though, a number of other economic factors resulted in a far more cooperative meeting than had been expected. The continued strength of the U.S. dollar on foreign exchange markets meant that exporting to the United States had become much easier and more profitable for most countries. Perhaps more impressive was the fact that the U.S. economy had created roughly 20 million jobs during the previous decade, while the European economies had actually lost some 2 million jobs during the same period, a factor which enhanced U.S. prestige and influence. These factors, among others, permitted U.S. policy makers to turn a threatened defeat into a major triumph.

A quite different example was presented earlier in 1984 in Africa. Angola and Mozambique failed to receive commitments from the Soviet Union for the massive economic assistance they needed -- presumably because the Soviets could not afford the cost of helping them. They were thus forced to reach accommodations with South Africa in order to establish a more stable environment in which greatly expanded U.S., West European, and multilateral investment and economic assistance would be made possible. The U.S. ability to help economically was thus converted into political gains for the West and losses for the Soviets.

Closer to home, events of the past few years have indicated quite clearly the overwhelming economic importance of the United States to the entire Western Hemisphere, especially to Central American and Caribbean nations. Relatively small amounts of economic aid, by U.S. standards, are capable of having far-reaching effects (e.g., El Salvador), while ostracization by the United States can result in severe economic hardships (e.g., Cuba).

It is important to bear in mind that there are limits to the potential political influence to be derived from economic strength. Although economic sanctions imposed against Cuba have crippled the Cuban economy, they have not been successful in moderating Cuban behavior, as recent events in Central America, and prior to that, in Africa, can attest to.

U.S. relations with the nations of East Asia provide additional and more subtle illustrations of the limits of economic influence. Nearly one-fourth of Japan's exports are sold to the United States, while one-sixth of its imports came from the U.S. More than one-third of Korean and Philippine exports go to, and nearly one-fourth of their imports come from, the United States. Despite the clear economic importance of the U.S. to these nations, the United States' ability to influence their policies, particularly domestic policies, has been distinctly circumscribed. The Japanese successfully resisted U.S. demands for economic liberalization,

for example, as well as for significant increases in military expenditures, for many years. Similarly, political liberalization and reform in both Korea and the Philippines has proceeded far more slowly than the U.S. wished, despite its economic position vis-a-vis the two countries. Events following the Aquino assassination in the Philippines, on the other hand, highlight the important role which the private sector of the economy can play in influencing events abroad. At least some of the political liberalization in the Philippines since Aquino's death can be attributed to pressures applied by foreign economic interests.

The examples offered here of U.S. economic influence fall under two very general categories. The first form of influence is a result of trade and other private economic relations. The second is a result of official, government-to-government economic aid. While less obvious, activities by the private sector are at least as powerful a form of influence as official aid, if not more so, by virtue of its ability to generate commonalities of interest over the long term. An ability to provide economic aid is one of the benefits of a strong economy. The furthering of economic ties is an important means by which such economic strength is generated and political influence is acquired and maintained.

b. Resources for Defense. A second important implication of the size and performance of the U.S. economy is the resources it potentially makes available to be used for national security purposes. The performance of the nation's economy constitutes a fundamental component of its national security. Economic growth expands the resource base available for military investment in peacetime and enhances the nation's industrial mobilization capacity in the event of war. A growing economy can ease the perceived burden of defense, making it more likely that military planners can argue successfully for increased defense expenditures. When economic growth slows or turns negative, financing defense growth becomes more difficult and public support for military expenditures

often declines. Our European allies appear to be particularly susceptible to such a relationship; when their economies have been troubled, as in recent years, the political consensus in each of those nations favoring substantial efforts for national security has often become less stable.

Many factors determine the degree of a nation's support for defense expenditures, however. The state of the economy is far from the only, or even the dominant, determinant. For example, during the early 1970s, a period of economic expansion, popular opinion strongly favored reductions in military expenditures. This contrasts markedly with the situation during the initial years of the Reagan Administration's defense buildup, which occurred during a severe economic recession. The public's perception of the threats to American interests around the world posed by the Soviet Union and other nations may well be a more decisive determinant of the level of public support for arms expenditures than the performance of the economy. So, too, may be the American public's perception that the burden of defense is being shared equally among the Western allies; a perception of unequal sacrifice also seems to lead to reduced support for defense expenditures.

Still, there is a link in democratic nations -- at least during peacetime -- between economic well-being and the likely adequacy of resources made available for national defense. It is in this regard that the United States possesses a great advantage by virtue of the size of its economy and because of its relatively promising outlook for sustained, if moderate growth over the twenty year period of the forecast. In this section, we describe the potential implications of the United States' future economic situation for future defense budgets, and contrast them with those for the Soviet Union.

The projections of defense expenditures used in this study are based on a more eclectic set of trends than those employed for projections of GNP. The U.S. high-range real growth rate of

6.87 percent per year reflects the pace of the defense build-up during fiscal years 1980-84. This is probably an unrealistic figure in terms of sustained growth, but is used strictly to illustrate the upper bound of defense increases that are conceivable. The low range U.S. baseline was constructed by assuming that the 1985-89 defense program is fulfilled as planned by the Administration, followed by annual real increases of 1.0 percent out to the year 2000. This averages out to about a 3 percent compounded annual growth rate over the full period.

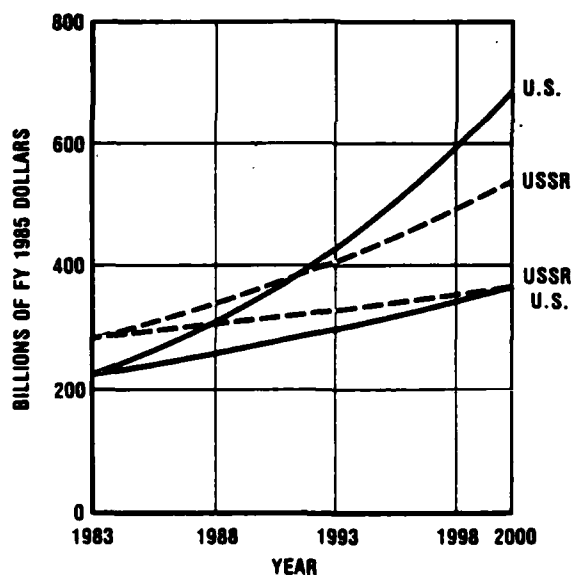
Two distinct periods stand out in the last twenty years concerning Soviet defense spending. The latest CIA estimates reveal that from 1965 to 1976 there were steady, annual real increases of about 4.0 percent in Soviet defense expenditures. In 1977, however, the rate of increase in Soviet military spending slowed to 1.7 percent, and has remained at that annual rate through 1983. These two figures are used to bound projections of future Soviet defense spending.

Experience during the high growth rate period of 1961-80 was selected as the upper bound for the non-U.S. NATO countries and for Japan. This twenty year period saw considerable economic growth in all these countries and a generally stable governing consensus that made possible steady annual increases in defense expenditures. For non-U.S. NATO countries, the high-range growth rate is 4.0 percent, for Japan it is 11.0 percent. For the non-Soviet members of the Warsaw Pact, the comparable period of sustained economic growth and rising defense expenditures was 1966-76; the figure of 7.3 percent represents the average annual growth during this period and is used to project their high range growth rate in defense expenditures.

Recent economic and political developments in Western Europe suggest that support for defense spending could continue to decline. Accordingly, the low-range growth rate assumed for non-U.S. members of NATO is flat -- no growth. The period 1976-83 (with a 0.8

percent growth rate) coincides with an economic downturn in Eastern Europe, and was chosen for the low-range forecast for non-Soviet members of the Warsaw Pact.

Were it to continue to increase defense expenditures at the rate it did between 1980 and 1984, by the year 2000 the U.S. would be committing approximately 11.0 percent of its projected mid-range GNP to defense (figure II-3). If the USSR also pursued a defense build-up at its highest plausible rate, the U.S. would be outspending the Soviet Union by almost 30 percent. Even so, the Soviet Union would be committing 16.2 percent of its projected mid-range GNP to defense. In short, in an intense competition not only would the Soviets not be able to match U.S. defense expenditures, but also the burden of defense on the Soviet economy would be very great indeed.



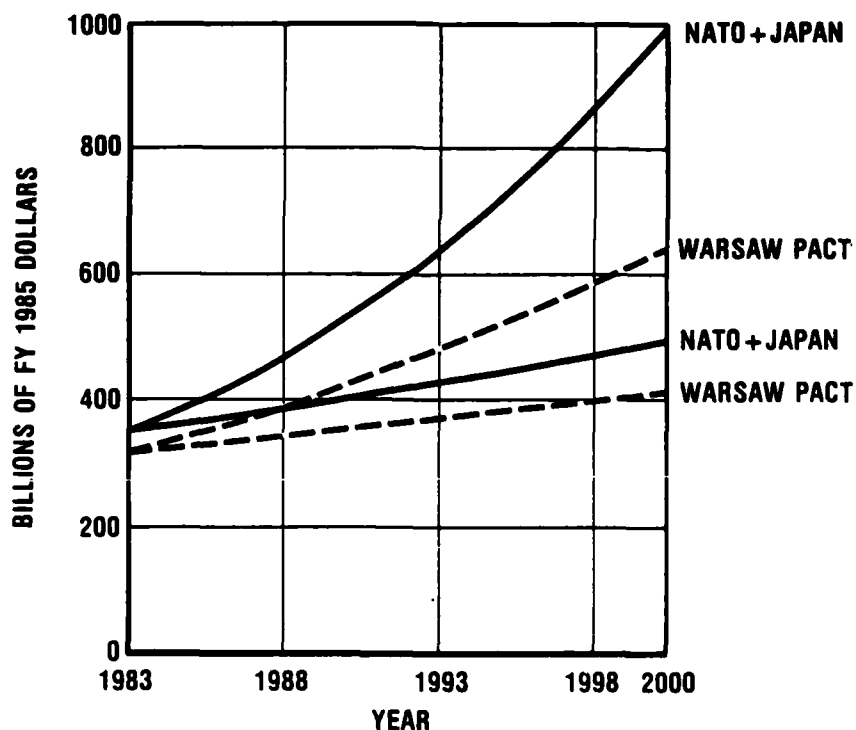
12-19-84-4

Figure II-3. RANGE OF PROJECTED MILITARY EXPENDITURES -- U.S. AND USSR

If the U.S. and Soviet Union were to follow their respective low range growth trends, on the other hand, their expenditures would be comparable in absolute terms. They would both be

allocating around 365 billion 1985 dollars to defense by the year 2000. Even so, these figures represent only 5.7 percent of the projected U.S. economy, but 11.1 percent of the projected Soviet GNP -- again a comparison which greatly favors the United States.

When each nation's allies are added to the equation, the Soviet position worsens appreciable. A comparison of projected defense expenditures for the two alliances reveals that, at the high end, the Western nations could be spending close to one trillion 1985 dollars on defense annually by the year 2000, and yet only be committing 5.8 percent of their combined GNP (figure II-4). The Warsaw Pact could reach an annual expenditure of approximately 650 billion 1985 dollars, only two-thirds the Western total, yet this would correspond to a burden of 13.0 percent of their combined GNPs.



12-19-84-3
Figure II-4. RANGE OF PROJECTED MILITARY EXPENDITURES -- NATO PLUS JAPAN AND WARSAW PACT

The low-range projections for the West show annual expenditures rising from close to 350 billion 1985 dollars to close to 500 billion 1985 dollars in the year 2000. This increase, however, would represent a fall in the defense share of GNP from 4.2 percent to 2.9 percent. Comparable Warsaw Pact low-range projections rise from 320 billion 1985 dollars, or 10.8 percent of GNP, to 420 billion 1985 dollars, or 7.9 percent of GNP, in the year 2000.

To match NATO's low-range expenditures in the year 2000, the Warsaw Pact would have to increase defense expenditures at an annual rate of 2.6 percent. To match NATO's high-range expenditures, it would have to increase defense spending by an average of 6.9 percent each year and, by the year 2000, would expend fully 18.7 percent of its mid-range GNP on national security.

An optimistic, yet plausible, scenario would see the European members of NATO meeting the NATO aim of three percent annual growth in defense expenditures. Coupling this with the mid-range projections for the U.S. and Japan, total defense spending by the West could reach 760 billion 1985 dollars a year by 2000. This level of spending would correspond to only 4.5 percent of the West's combined, projected mid-range GNP. In such an eventuality, the Warsaw Pact would have to sustain annual increases of 5.3 percent to match the West, an effort which would require the Pact to commit 14.5 percent of its combined mid-range GNPs -- a commitment nearly three times greater, in terms of available resources, than that of the West.

Not too much should be made of these parametric exercises. The data are strictly illustrative and, in any event, authoritarian governments like those of the Warsaw Pact nations are far more capable of sustaining heavy defense burdens in peacetime than are democratic nations. Still, the point is clear: The economies of the United States and other Western countries represent significant potential advantages in the continuing competition with the USSR.

c. Dependencies. Because of its trade and other economic relations around the world, the United States cannot help but become somewhat dependent on other nations for its economic well-being. These dependencies are of two types. The first consists of product dependencies, the reliance both on imports and exports of finished or semi-finished manufactured products and services. The second, and perhaps more obvious, is resource dependencies -- namely, energy and minerals.

Perhaps the most important point to keep in mind concerning U.S. trade in products and services is how little, relative to most other industrialized countries, the United States' economy is dependent upon exports and imports. Even so, the second most important fact is that U.S. dependence on foreign markets has increased substantially during the last ten to fifteen years. Both of these points are demonstrated in table II-1.

Table II-1. TRADE AS A PERCENT OF GNP

Nation	<u>1970</u>		<u>1982</u>	
	Exports	Imports	Exports	Imports
United States	4%	4%	7%	8%
West Germany	19	16	27	24
Japan	10	9	13	13
Canada	20	17	25	20
France	13	14	18	21
United Kingdom	16	18	21	21

In 1982, U.S. exports and imports were equivalent to seven and eight percent of the U.S. GNP, respectively. Japan's exports and imports represented 13 percent of its GNP, followed by France, the U.K., Canada, and finally West Germany, whose exports accounted

for 27 percent of GNP, and whose imports were equivalent to 24 percent of GNP. Every country in the sample became more dependent on trade between 1970 and 1982, as can be easily seen from the Table. In this case, the United States experienced the greatest increase in its level of foreign trade as a percent of GNP. In 1970, exports and imports each amounted to only four percent of GNP, almost one-half the 1982 figure. Approximately one half of the increase in imports since 1970 can be attributed to energy imports, particularly to the higher price of petroleum (see below).

The extent to which the United States' economy became more interdependent with the economies of other countries and regions of the world is further evidenced in tables II-2 and II-3. The figures in the Tables represent the percent of total U.S. exports and imports accounted for by each region and country listed. Note, for example, that in 1970 more than 63 percent of U.S. imports came from Europe and North America; only 27 percent came from Asia and Africa. By 1982, only 50 percent of U.S. imports were coming from Europe and North America, while more than 42 percent came from Asia and Africa. The figures for East and Southeast Asia are particularly noteworthy, illustrating the rapid growth experienced by many of the countries in that region.

In 1981, 13.4 percent of U.S. manufacturing output and 12.8 percent of its manufacturing employment relied directly or indirectly on exports. This represents a substantial fraction of U.S. economic activity, and any diminution of international trade would certainly have adverse effects on segments of the U.S. economy. This is precisely what happened from 1980 to 1982, when foreign trade contributed to about one-third of the decline experienced in U.S. manufacturing employment during the economic recession of that period. The reasons for the decline in exports were quite straightforward: It was primarily the direct result of the steep appreciation of the U.S. dollar, which caused American exporters to experience a severe price disadvantage on inter-national

TABLE II-2. DESTINATIONS OF U.S. EXPORTS, 1970-82

Percent of total U.S. exports by region and country

Region or Country	1970	1975	1980	1982
Developed Countries	69.1	60.2	59.3	53.7
Developing Countries	30.0	37.1	36.7	38.9
Communist Areas	0.8	2.9	3.4	3.1
Africa	3.7	4.6	4.1	4.8
Asia	23.2	26.2	27.3	2.7
Oceania	2.8	2.2	2.2	2.7
Europe	34.3	30.4	30.6	28.3
North America	28.6	28.0	25.7	24.5
South America	7.5	8.2	7.9	7.2
Western Hemisphere	36.1	36.1	33.6	31.7
-Mexico	3.9	4.8	6.9	5.6
-Venezuela	1.8	2.1	2.1	2.5
-Brazil	1.9	2.8	2.0	1.6
Western Europe	33.5	27.8	30.6	28.3
-Germany	6.3	4.8	5.0	4.4
-U.K.	5.9	4.2	5.7	5.0
-France	3.4	2.8	3.4	3.3
Near East Asia	3.1	7.7	5.4	7.5
-Saudi Arabia	0.3	1.4	2.6	4.3
-Israel	1.4	1.4	0.9	1.1
Africa	3.7	4.6	4.1	4.8
-Egypt	0.2	0.6	0.8	1.4
-Nigeria	0.3	0.5	0.5	0.6
-Algeria	0.1	0.6	0.2	0.4
-South Africa	1.3	1.2	1.1	1.1
East & Southeast Asia	9.3	9.4	10.7	11.8
-Taiwan	1.2	1.5	2.0	2.1
-Hong Kong	0.9	0.8	1.2	1.2
-Indonesia	0.6	0.8	0.7	1.0
-Korea	1.5	1.6	2.1	2.6
-Philippines	0.9	0.8	0.9	0.9
-Singapore	0.6	0.9	1.4	1.5

Source: Statistical Abstract of the United States, 1984.

TABLE II-3. SOURCES OF U.S. IMPORTS

Percent of total U.S. imports by region and country

Region or Country	1970	1975	1980	1982
Developed Countries	73.2	58.5	51.2	58.0
Developing Countries	26.1	40.6	47.8	40.6
Communist Areas	0.6	0.9	1.0	1.4
Africa	2.8	8.6	14.1	7.3
Asia	24.1	28.1	32.8	34.9
Oceania	2.2	1.6	1.4	1.3
Europe	28.5	22.3	19.0	21.5
North America	35.0	32.0	26.3	28.7
South America	7.4	7.5	5.9	5.9
Western Hemisphere	42.4	39.4	32.1	34.6
-Mexico	3.1	3.2	5.1	6.4
-Venezuela	2.7	3.7	2.2	2.0
-Brazil	1.7	1.5	1.5	1.8
Western Europe	28.0	21.6	19.0	21.5
-Germany	7.8	5.6	4.8	4.9
-U.K.	5.5	3.9	4.0	5.4
-France	2.4	2.2	2.2	2.3
Near East Asia	0.9	5.6	7.6	4.8
-Saudi Arabia	0.1	2.7	5.2	3.1
-Israel	0.4	0.3	5.2	3.1
Africa	2.8	8.6	14.1	7.3
-Egypt	0.1	-	0.2	0.2
-Nigeria	0.2	3.4	4.5	2.9
-Algeria	-	1.4	2.7	1.1
-South Africa	0.7	0.9	1.4	0.8
East & Southeast Asia	8.5	10.6	12.2	13.7
-Taiwan	1.4	2.0	2.8	3.6
-Hong Kong	2.4	1.6	2.9	2.3
-Indonesia	0.5	2.3	2.1	1.7
-Korea	0.9	1.5	1.7	2.3
-Philippines	1.2	0.6	1.7	2.3
-Singapore	0.2	0.6	0.8	0.9

Source: Statistical Abstract of the United States, 1984.

markets. A second factor was the lower demand for exports generated by U.S. trading partners due to economic recessions in their countries.

U.S. reliance on imports is more difficult to analyze quantitatively. (Here we are still considering products and services only, not energy and raw materials.)

The tremendous size and diversity of the U.S. economy means that few products are imported which are not, or could not, also be manufactured here in great quantities. There is, for example, no foreign equivalent to the worldwide dominance maintained by the U.S. in the aerospace and computer markets. Although many domestic industries have suffered in recent years from inroads made by foreign producers, none of these inroads presages either foreign domination of key U.S. industries or significant reliance on foreign sources of supply in any one industry.

The "deindustrialization of America" was a myth spawned primarily by the despair of economic recession, a myth which has been easily refuted by recent research. Manufacturing as a whole has been an important engine of both economic growth and exports in the last 10 to 15 years, and is expected to keep playing a central role in the years ahead. This does not mean, however, that specific industries within the manufacturing sector will not be faced with severe import competition. But even in those industries most severely affected (e.g., steel, autos, machine tools), there is rarely any suggestion that imports will make the U.S. completely or overly dependent on foreign sources of supply.

(1) Foreign Sources of Petroleum. The importance of imported oil in U.S. energy consumption, the dramatic impact on the economy of the oil price shocks of 1973-74 and 1979-80, and the continued potential instability of U.S. and allied nations' oil supplies are at the root of substantial concern over the strategic implications of dependence on foreign oil.

The United States and all other industrial nations have developed technologies and lifestyles which depend heavily on petroleum. Industrialized nations shifted steadily toward oil in the post-war period and in the last two decades imports have risen sharply. Oil is a unique and important fuel for a number of reasons, playing an important role in virtually all energy-consuming sectors of the economy. Air and surface transport are technologically dependent on liquid fuels, a reality with important implications for national defense. Oil has a very low substitution potential in the short run and only modest potential over a longer period of time. Additionally, oil, or more precisely imported oil, is a vital residual energy source. Oil imports are an essential reservoir from which the United States and other countries could draw potentially in response to sudden changes in supply or demand.

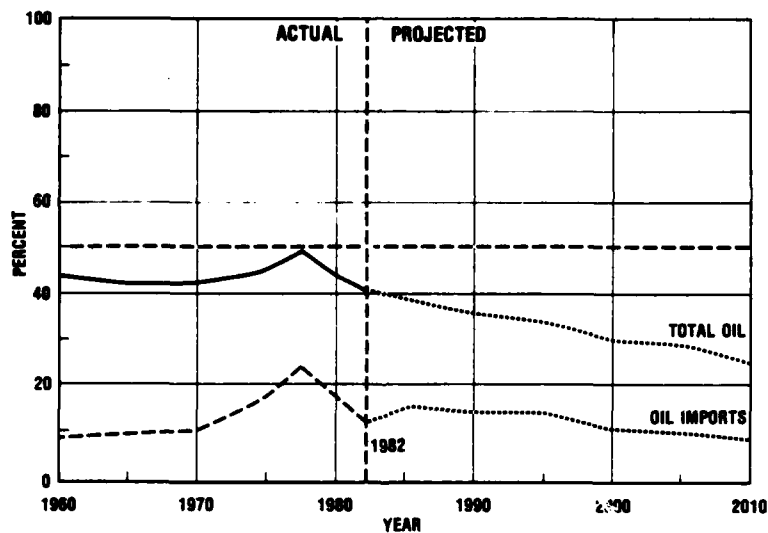
The oil crises of the 1970s demonstrated that the dependence of the industrialized nations on imported oil can be quite costly. The chronic instability afflicting many of the countries on whom western nations rely for significant shares of their oil imports, the many conflicts among nations in the oil-producing regions, and the uncertain motives and influence on the world oil market of the OPEC nations, make continued dependence on foreign sources an important security consideration for the United States and its allies.

(a) The Role of Oil Imports in U.S. Energy Consumption

From 1952 to 1982, the proportion of U.S. petroleum demand met by imported oil rose from near zero to about 30 percent. Imported petroleum's share of U.S. consumption actually peaked near 50 percent in 1977, and has been declining since then. The volume of oil imports increased tenfold over this same period, from less than one million barrels/day in 1952 to near nine million at the close of the 1970s. U.S. oil imports grew almost 13 percent per year from 1969 to 1973 and despite doubling of real oil prices in 1973, began to decline only after a second price doubling in 1979.

At their peak in 1977, oil imports accounted for 24 percent of total U.S. energy consumption; today they represent between 10 and 15 percent of total consumption, a figure at which they are expected to stabilize (figure II-5).

The high cost of foreign oil is also cause for concern. In the thirty-year period before topping out in 1981, the value in real terms of U.S. fossil fuel imports increased by a factor of one hundred, from \$0.7 billion in 1952 to \$70 billion in 1981. U.S. fossil fuel imports continue to command a high price: \$63 billion in 1982, of which crude oil imports accounted for three-fourths.



Source: U.S. Department of Energy, Energy Projections to the Year 2010, October 1983.
6-21-84-7

Figure II-5. PERCENTAGE OF U.S. ENERGY DEMAND MET BY OIL AND BY OIL IMPORTS

(b) Oil Imports in Western European and Japanese Energy Consumption

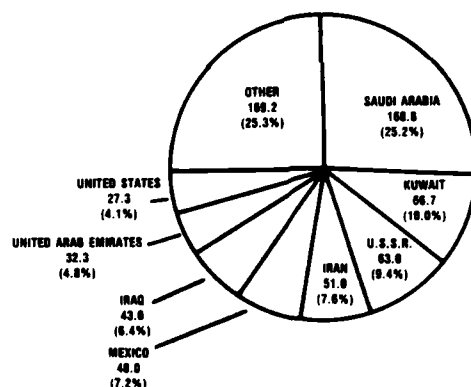
Western Europe and Japan rely on imported oil for their energy needs to a much greater degree than does the United States. Throughout the past two decades, the nations of Western Europe and Japan imported between 80 and 100 percent of the petroleum they consumed. During the 1970s, net petroleum imports provided Western Europe with 60 percent of its total energy requirements and Japan with between 70 and 78 percent. Following the oil price hikes of 1973-74, Norway and the United Kingdom were able to increase their domestic production of oil and gradually lower their dependence on imports, eventually becoming net oil exporters by 1975 and 1980, respectively. The other nations of Western Europe continue to rely heavily on foreign oil, however.

Allied import dependence peaked at 70 percent of total energy requirements in 1977-78. Since the second oil price shock and resulting recession, Western European dependence on foreign sources has declined, reaching toward 50 percent in 1982. Japan, like most countries, responded to the oil price shocks with fuel switching and conservation efforts, but managed to achieve only minor reductions in its reliance on foreign oil. The current Japanese import picture is distorted somewhat, however, by large purchases to fill a petroleum reserve. The Japanese are buying more than they need now, in order to have stocks on hand in the event of a new embargo or other disruption in supplies.

(c) Oil Supplies

The great risk associated with U.S. and allied dependence on foreign oil derives not from the threat of depletion of world reserves (at least not within the relevant planning period of 10-20 years), but rather from the potential unreliability of supply. As the Arab oil embargo of 1973-74 and the oil price shocks of that year and 1979-80 demonstrated, oil supply interruptions can result in major economic disruptions.

Oil reserves are distributed with remarkable unevenness over the earth, with nearly one-half located in the countries of the Persian Gulf (figure II-6). Now, as in the early 1970s, OPEC oil accounts for about 70 percent of the world's proven oil reserves and about 80 percent of the total in non-communist countries. Persian Gulf crude oil production, which made up about 30 percent of non-communist production in 1960, rose to a high of 50 percent in 1977 before falling to its current level of about 32 percent. OPEC's share of non-communist crude oil production increased from 45 percent in 1960 to 67 percent in 1977; it has since dropped to about 50 percent as a result of increased non-OPEC production and reduced Iranian exports. Recently, Mexico has emerged as an important non-OPEC supplier, with the fifth largest proven reserves in the world.



NOTE: Quantities are scaled in proportion to area according to the BTU content of the reserves. One billion barrels of crude oil equals approximately 5.3 trillion cubic feet of wet natural gas.

Source: U.S. ENERGY INFORMATION ADMINISTRATION, 1983 ANNUAL ENERGY REVIEW, APRIL 1984
9-23-84-12

Figure II-6. ESTIMATED INTERNATIONAL CRUDE OIL AND NATURAL GAS PROVED RESERVES, DECEMBER 31, 1983

[1] **U.S. Suppliers.** In 1960, OPEC's share of U.S. petroleum imports was approximately 64 percent. It dropped to 38 percent

in 1970, rose to 78 percent in 1977, and has since dropped substantially to 42 percent of U.S. oil imports in 1982. During the period of high U.S. dependence on Middle Eastern oil, Saudi Arabia fulfilled an average of 15 percent of U.S. petroleum demand. Middle Eastern OPEC members as a whole provided an average of 22 percent of total U.S. needs. Since 1970, North and West African OPEC members have supplied between 10 and 15 percent of U.S. imported oil.

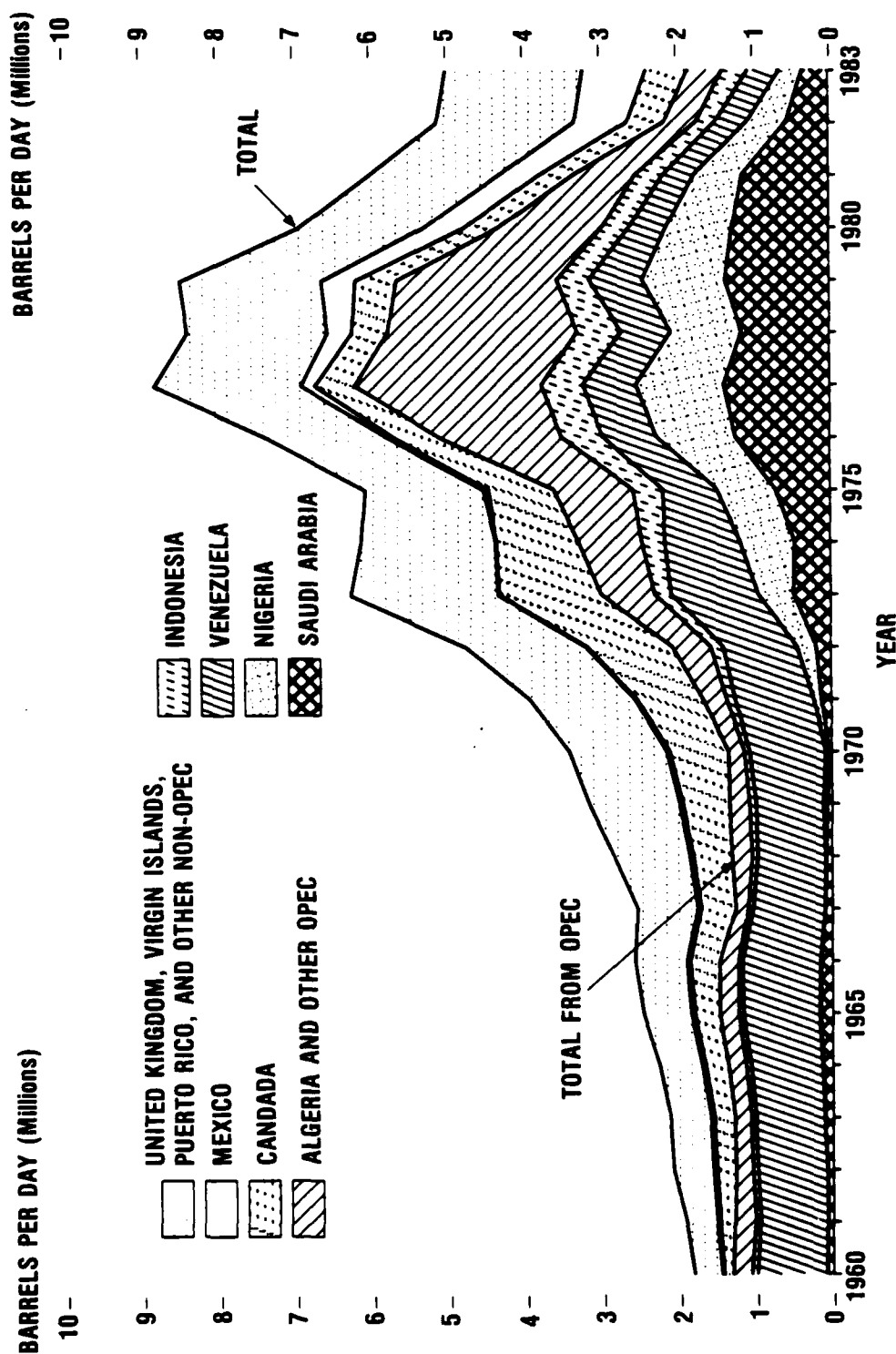
Canada and Mexico are the only major non-OPEC U.S. suppliers. From 1969-74, Canada regularly supplied about 22 percent of U.S. oil imports. Canadian exports have since decreased by about two-thirds, but Mexican exports have increased to fill much of the gap. The U.S. petroleum imports schedule for 1960-1983 is shown in figure II-7.

[2] **West European and Japanese Suppliers.** Most of the oil imported by West European nations comes from Middle Eastern countries; Africa is Western Europe's second largest source (figure II-8). Japan, on the other hand, depends almost entirely on Middle Eastern producers for its oil (figure II-9). Most West European countries and Japan are heavily dependent on OPEC for crude oil imports (80 to 90 percent average).

(d) **Future Energy Dependencies**

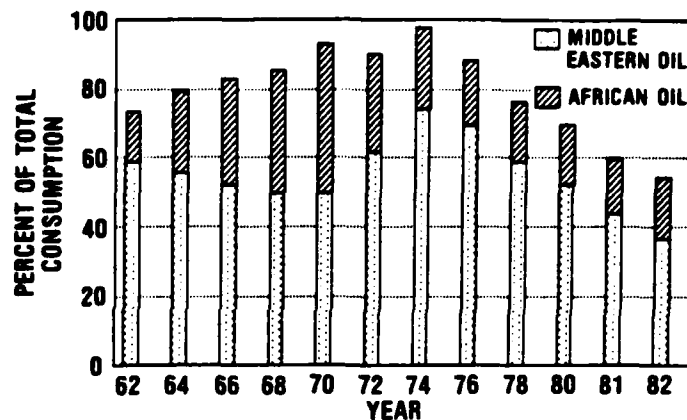
Energy consumed per unit of gross output is expected to continue its present decline for the industrialized countries through the end of the century for two major reasons:

- Energy prices are projected to rise steadily during the period, resulting in continuing efforts to reduce demand;
- The OECD countries underwent industrialization during a period of relatively low energy prices and therefore consume energy relatively inefficiently; a potential for improved energy efficiency is likely to exist well into the next century due to the long life of existing, energy-inefficient capital equipment and housing.



Source: U.S. ENERGY INFORMATION ADMINISTRATION, 1983 ANNUAL ENERGY REVIEW, APRIL 1984.
 5-23-84-13

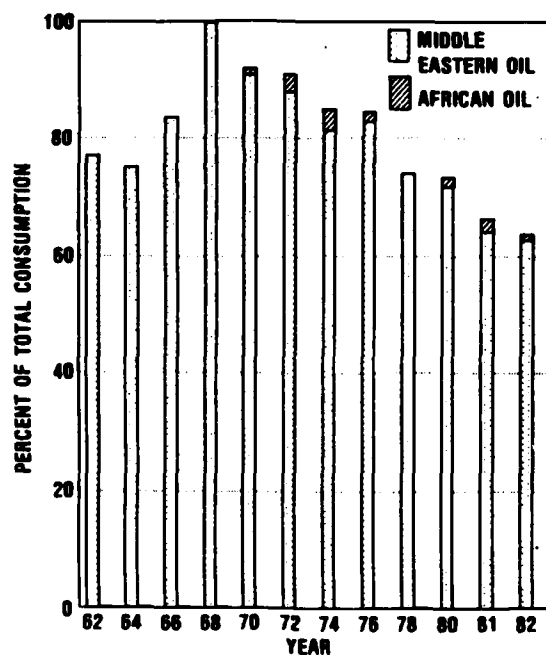
FIGURE II-7. U.S. IMPORTS OF PETROLEUM BY COUNTRY OF ORIGIN



Source: American Petroleum Institute, Basic Petroleum Data Book, Vol. III, September 1983.

9-21-84-6

Figure II-8. THE ROLE OF MIDDLE EASTERN AND AFRICAN OIL IN TOTAL WESTERN EUROPEAN PETROLEUM CONSUMPTION



Source: American Petroleum Institute, Basic Petroleum Data Book, Vol. III, September 1983.

9-21-84-10

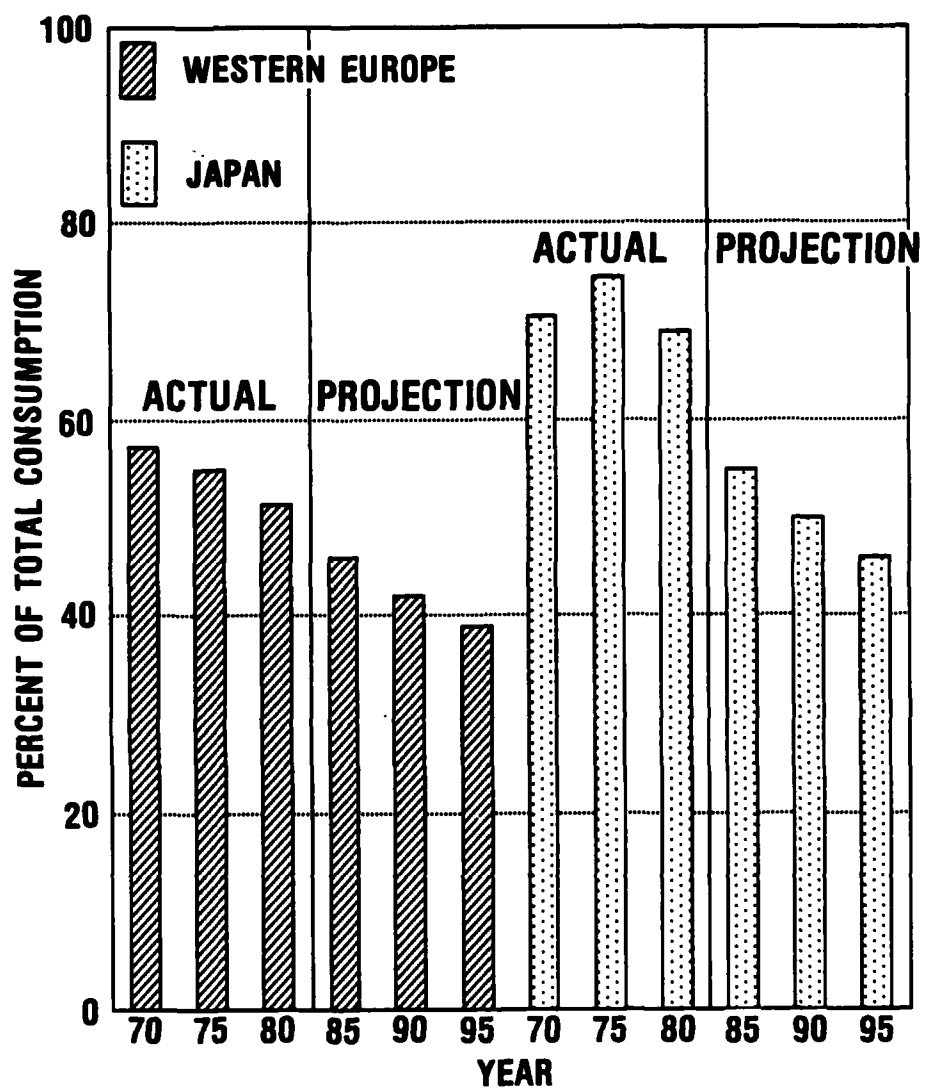
Figure II-9. THE ROLE OF MIDDLE EASTERN AND AFRICAN OIL IN TOTAL JAPANESE PETROLEUM CONSUMPTION

The developing countries, on the other hand, which do not now consume a great deal of energy can contemplate few prospects for energy conservation. Total primary energy consumed per unit of output for these countries is thus expected to stabilize or grow slightly through the year 2010.

Despite their projected greater efficiency in energy use, and although some import reductions have already been achieved, Western Europe and Japan are expected to remain heavily dependent on petroleum imports for their energy needs. Their oil imports are likely to increase as these countries emerge from economic recession in 1985. The Department of Energy's 1981 "Midprice Scenario" projects declining shares of oil in total primary energy consumption for the OECD countries, but dependence on foreign oil is believed to be unlikely to drop lower than 35 to 40 percent of total energy demand through the year 2000 (figure II-10).

From 1950 to 1973, the relationship between energy consumption and economic activity remained fairly stable in the United States. The energy price increases of the 1970s, however, brought about an 18 percent decline in energy consumed per dollar of economic activity between 1974 and 1982. This trend toward greater energy efficiency should continue. Energy consumption is projected to increase at only about 1.3 percent per year, less than one-half the 2.8 percent rate of growth projected for the U.S. economy.

Higher oil prices also have reversed the trend toward increasing oil consumption and imports. The percentage of the total U.S. energy demand met by petroleum is expected to continue its steady decline from a 1977 high of close to 50 percent to 31 percent in 2000; it may rise somewhat to 25 percent in 2010. Foreign oil's share of total U.S. energy supplies also should drop substantially-- from its 1977 peak of 24 percent to 12 percent by 2000, and to as low as 8 percent by 2010.



Source: American Petroleum Institute, Basic Petroleum Data Book, Vol. III, September 1983.
5-21-84-9

Figure II-10. OIL AS A PERCENTAGE OF WESTERN EUROPEAN AND JAPANESE ENERGY CONSUMPTION

Despite these favorable trends, as world economic activity expands, demand for OPEC oil is expected to grow steadily and could reach 24 to 26 million barrels per day between 1986 and 1990. This could produce significant upward price pressure in the world oil market and create the potential for a temporary world oil price surge in the late 1980s. Sharply higher world oil prices would almost certainly result if there were coincident reductions in OPEC production, due to new military conflicts or deliberate decisions to curtail output. Cessation of the Iran-Iraq War and the resumption of full Iranian and Iraqi production, on the other hand, would work to keep prices near their current levels. The sharp needs of many producers (Algeria, Mexico, Nigeria) for import earnings due to their international debts also would tend to cause production to remain high and prices, therefore, to remain stable.

In short, OPEC members, as the world's marginal suppliers of oil, can independently or in concert have a strong direct impact on the availability and price of oil in the world. Even their influence is limited, however, since OPEC countries must account for the effects of their actions on world economic conditions (and therefore on their own prosperity), and since many of the elements which shape future world oil markets cannot be controlled directly. Also, cartels which attempt to set prices above competitive levels eventually face lower demand for their goods as price incentives lead to increased production by non-cartel members. Lower prices, lower production by cartel members, and possible cheating within the cartel may follow. All three factors followed the OPEC price increases in the 1970s.

Cartel cohesion also may suffer from the conflicting goals of member countries. Iran, for example, with its limited reserves, ambitious political objectives, and relatively large population, has a high absorptive capacity for revenues and, consequently, an incentive to maximize short-term revenues by increasing prices.

For Saudi Arabia, large reserves and a small population create incentives to keep prices at moderate levels in order to maintain a long-term market while gradually diversifying its economy in an orderly manner.

Strong economic incentives thus exist for OPEC countries to maintain the price of their oil at free markets levels. However, while these economic considerations can certainly be expected to influence OPEC policies, the potential for politically motivated oil price hikes or oil supply disruptions cannot be discounted.

While Venezuela, Nigeria, and Indonesia are important sources of Western oil, it is clear that the Middle Eastern suppliers are the most crucial. Of the individual countries, only Saudi Arabia could hope to withhold supplies deliberately from the market with any effect. Apart from embargoes and other deliberate interruptions, sources of potential supply disruptions include the internal political, social, and economic stresses which have accompanied rapid modernization in the Persian Gulf and North Africa; inter-state disputes stemming from a variety of causes; and terrorism.

As in the case of higher oil prices, Western Europe and Japan would clearly suffer more from a sustained oil supply disruption than would the United States. This is not particularly comforting, however, as the economies and political systems of the Western nations are bound together so closely that the allies' vulnerability represents a U.S. weakness as well. The price increases which would accompany any oil supply disruption would harm all the Western economies. And the coercive political power of an interruption in oil supplies would be negated only slightly when transmitted from allied governments to the United States.

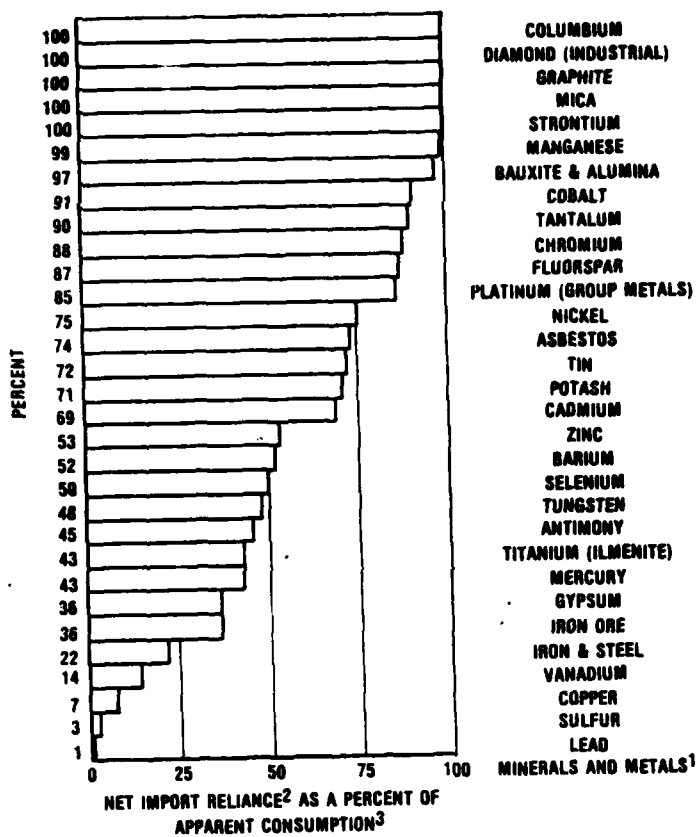
(2) Mineral Dependencies. The United States presently imports 75 percent or more of its requirements of twelve non-fuel minerals (figure II-11). Of these, four (chromium, cobalt, manganese, and platinum) are at the center of concern over U.S. resource dependencies because of the high share of their supply met by imports

from insecure foreign sources and their importance for the production of weapons and other defense equipment.

The U.S. is 77 percent import-dependent for chromium, 93 percent import-dependent for cobalt, 98 percent import-dependent for manganese, and 90 percent import-dependent for platinum-group metals. Although it possesses large stockpiles of each of these minerals, in the foreseeable future the U.S. will remain particularly dependent on imports from the Republic of South Africa and the USSR (chromium, manganese, and platinum-group metals), and Zaire and Zambia (cobalt). Other nations are able to provide only minor amounts of these minerals.

These minerals dependencies should be taken into account in U.S. military planning; it is important, however, to place these needs in perspective when evaluating their strategic implications. The value of all U.S., non-fuel, mineral imports is only a small percentage of U.S. net expenditures on energy acquired from abroad: Five percent in 1980 and just over 15 percent in 1981. Between 1979 and 1981, the country's annual net trade bill for non-fuel minerals averaged only \$6 billion. Furthermore, the four critical strategic minerals at the center of concern carry relatively low price tags -- from \$250 million to \$500 million each annually, an amount equal in value to one to two days of imported petroleum. While supply disruptions of any of these materials would certainly be costly for the United States, they would not, necessarily, be devastating.

Though many of these elements are employed in essential applications, quantities used are generally small and most industries could accommodate price increases. In 1978/79, when cobalt supplies from Zaire were disrupted, for example, the result was a sharp rise in cobalt prices and some delays in the availability of key components. The industry hardest hit by this disruption was the jet engine industry, which utilizes cobalt in a number of key components. Even here, though, industry adjustments



6-30-64-20 ¹Substantial quantities are imported for rutile, rhodium and zircon. Data withheld to avoid disclosing company proprietary data.
²Net import reliance = imports - exports + adjustments for government and industry stock changes.
³Apparent consumption = U.S. primary + secondary production - net import reliance.

Figure II-11. NET IMPORT RELIANCE AS A PERCENT OF APPARENT CONSUMPTION

permitted continued production, only small increases in the price of engines, and no slippage in delivery schedules.

There are specific risks involved in depending on foreign sources of strategic minerals. Potentially, producers could manipulate supplies, and thus prices, for political or economic objectives. During a time of industrial mobilization for war, when demand would be rising sharply, disruption of production or transportation facilities could be a tactic employed by an adversary to good effect. During a war, alternative supply arrangements would probably have to be made.

Many factors alleviate these potential problems, however. Producer cartels have proven to be ineffective in manipulating prices of non-fuel minerals; the possibilities of alternative sources, conservation, and substitution appear to be quite extensive. Moreover, the economic needs of producers tend to be so great that they can ill-afford the sacrifices necessary to withhold supplies for a period of time sufficient to make a substantial price gain. The existence of stockpiles of strategic minerals in this country and some allied nations provides an alternative to foreign sources of supply should a disruption occur during a war or crisis mobilization. So, too, does the possibility of re-initiating domestic mining of some strategic minerals. New extractive technologies combined with rising prices could make such domestic production economically competitive in some cases.

Over the long term, concerns about the national security implications of strategic minerals are likely to diminish. Ceramics and man-made composite materials are gaining wider applications. Technologies are being developed that will permit the exploitation of new sources of supply, and industry is learning new means of conserving and recycling critical commodities. Although the nation's dependence on foreign sources of strategic minerals offers some vulnerabilities currently, these are small dangers as compared

to energy dependencies -- and are likely to diminish further in the future.

4. Political Global Economy

The strength and vitality of the American economy and its interdependencies with other economies around the globe have additional implications for political/military relationships and thus for the strategic environment for U.S. military planning.

Many Americans believe that the sheer size of the American economy and the relatively high proportion of the earth's resources consumed by Americans create a certain responsibility on the part of the United States to provide economic assistance to people in less fortunate nations and to help other countries to develop economically. Those who support this view understand the position as a matter of ethics -- a moral responsibility. One need not subscribe to such a viewpoint, however, to recognize that because many Americans take such a position, the flexibility of American foreign policy will be constrained to some degree. Funds allocated for the support of bilateral or multilateral aid programs are not, of course, available for alternative uses. Perhaps more importantly, U.S. attitudes towards particular countries in the poorest parts of the world -- Central America, South Asia, and Africa south of the Sahara being the primary locations -- and therefore American policies toward those countries, are colored in part by the perception of many Americans that our relative affluence conveys certain responsibilities to assist the inhabitants of these regions to advance economically.

The strategic environment for military planning will be influenced by the rate of economic progress (or the lack thereof) in these poor regions in other ways as well. As will be made more explicit in Chapter III, the increasing gap between rich and poor nations, falling or stagnant standards of living in parts of the globe, and rapidly rising populations create a certain atmosphere in some regions conducive to the development of various phenomena

inimical to American interests. It is difficult to predict the exact form these difficulties may take. In some cases, these pressures lead to massive migrations which can create regional instabilities and -- if close to home -- tensions between the United States and the nation in question. Moreover, populations beset by economic failure, without hope of self-advancement, living in squalor, particularly as compared to electronically-conveyed images of life in the more advanced nations, are obvious recruiting grounds for terrorist organizations. And the hopelessness and resentment of these regions are generally a fertile field for demagogues of all types -- their ideological labels may differ, but the message is the same. They urge violence and disorder, seeking radical change in place of peaceful and gradual transitions. As has been seen more than once in the post-War period, the results can have major effects on American interests.

The strength of the American economy conveys broad responsibilities. Because it accounts for a substantial share of the world's total output and is the largest such share attributable to an individual nation, the United States has been, and will continue to be, thrust into a leadership position in the world economy, almost regardless of the relative position of leadership or isolation preferred by its citizens. Desired or not, decisions taken by the United States concerning its own economic policy affect -- sometimes pointedly -- the economies of other nations. As was stated forcefully by Argentina's President Raoul Alfonsin in early 1984, for example, even small increases in U.S. interest rates can have drastic effects on the indebtedness problems of Latin American (and other) countries. Similarly, on several occasions during the past two years, European leaders have pointed to the large U.S. deficit as a reason for the persistence of the recessions in their nations. They reason that large U.S. deficits lead to high interest rates in this nation which then attract foreign investors and deny capital needed to stimulate economic growth in Europe.

Given that the economies which are most interdependent with our own tend to be those of our closest political allies, it is particularly incumbent upon U.S. decision-makers to consider international consequences in defining domestic American policies. A failure to accept these responsibilities can color political relationships adversely, which can then have an adverse impact on cooperation for security purposes. An acceptance of international economic leadership and the responsibilities it entails, on the other hand, can at least theoretically be used as leverage for obtaining more favorable political and military relationships.

Finally, we should note the way that economic dependencies and responsibilities can develop into broader political/military commitments, or at least constrain the political/military choices available to American decision-makers. To the extent that the United States is economically dependent upon a specific nation, it often will seek to create an environment of cooperation with the country in question such that economic cooperation can be facilitated. At a minimum, it will seek to avoid the development of hostile relations which might jeopardize favorable economic ties. Such considerations at times may dominate other determinants of the character of relations desired with the country in question.

The U.S. relationship with Zaire provides a good example. Absent the strategic minerals which the U.S. obtains from Zaire, it would probably be the sort of nation with which we would prefer to remain at arms length, having a somewhat capricious government that is generally recognized to be corrupt, repressive and unstable. In part because of our desire to avoid disruptions in the supply of Zaire's mineral exports, however, the U.S. has sought to maintain favorable political relations with that nation and, in the process, has become closely allied with the present Zairian Government -- so much so as to support in 1977 and 1978 French/Belgian military operations to defend the Zairian Government from an insurgent attack, and to provide more direct forms of military

assistance to Zaire. Less dynamic means of support also have been provided and a fairly close political relationship has evolved. By now, the U.S. is widely perceived to have accepted a commitment to preserve the Zairian Government. Although this perception may well prove to have been false if it were ever tested in conflict, for now its existence colors political relations between the United States and other nations in the region and thereby influences the strategic environment for military planning.

In other words, the existence of economic interdependencies creates a desire to maintain a political relationship that can facilitate economic cooperation. This economically-derived preference constrains foreign policy choices and may even, at times, imply security commitments that could eventually place real demands on U.S. military resources. This is one important way in which military commitments are derived from the American economy and its interactions with the rest of the world.

C. NUCLEAR PROLIFERATION

The continuing proliferation of nuclear capabilities is an important factor shaping the future strategic environment for several reasons. Most importantly, of course, nuclear weapons pose the one clear threat to the physical security of the U.S. homeland. For many years, U.S. policy has been based on the presumption that the more nations there are that possess nuclear weapons, the more likely it is that there would be a nuclear war one day and the greater the risk to U.S. interests. Soviet decision-makers must have similar concerns, judging from the USSR's relative cooperation in restraining the spread of nuclear weapons to other nations. Indeed, given that the majority of the most likely potential proliferators tend to be adversaries of either the USSR or one of its allies, the threats to the USSR implied by nuclear proliferation may be greater than those perceived by U.S. decision-makers.

Many aspects of U.S. foreign policy -- particularly security commitments -- are intended at least in part to help persuade certain nations not to seek a nuclear weapons capability; this objective influences both U.S. policy toward the potential proliferator and toward other near-by nations. In the mid-1970s, for example, U.S. policy toward East Asia was strongly influenced by the objective of persuading Taiwan and South Korea to turn-off (or at least turn-down) what had been substantial programs to achieve nuclear capabilities. Once a nation acquires a nuclear capability, moreover, particularly as its force of operational weapons increases in size and becomes more sophisticated, the fact of such capabilities begins to influence the evolution of events in that region, potentially affecting U.S. ties with a range of nations. Several analysts have argued, for example, that such a process has occurred in the Middle East since about 1970 -- that the behavior of Egypt and other nations is explained in large part by recognition of Israel's presumed nuclear capabilities.

Finally, of course, the possibility that such hostile nations as Iran and Libya may acquire nuclear weapons must be factored into evaluations of appropriate strategies and forces for several contingencies. There may even be a risk of nuclear terrorism over the long term. As more nations acquire nuclear weapons, the probability that a sub-national group might somehow acquire an operational device, or the components to build one, can only increase -- perhaps substantially.

Forecasting the proliferation of nuclear weapons is a two-part problem. The easier part is to describe the facilities and other capabilities necessary to build nuclear weapons and then to identify the specific nations which may themselves possess those physical capabilities or have access to such facilities in other nations. This problem is made somewhat difficult by the convergences between civilian nuclear power or research programs and

weapon manufacturing requirements, but these can be dealt with relatively well, particularly in view of the international safeguards which are placed on virtually all aspects of the nuclear fuel cycle by most suppliers and recipients.

The more difficult problem is to identify which of this set of potential proliferators -- those with the physical capacity to build weapons -- actually would choose to exercise the option. This is a difficult decision for any state, as it requires a major investment of resources and, more importantly, can jeopardize both relations within a region and ties to external powers. Still, the benefits of acquiring a nuclear capability can appear to be very important, particularly for those nations, like Israel or South Africa, which are relatively isolated in world affairs or, like India, aspire to a larger world role.

Forecasts of the proliferation of nuclear weapon capabilities often have erred on the high side. In the mid-1960s, for example, many forecasts concluded that there would be 20 to 30 nuclear weapon states by 1990; as will be seen below, most experts now expect there to be something like one-third to one-half those numbers in the year 2000. Previous forecasts appear to have failed both on the intentions side of the problem, by underestimating the disincentives nations see in acquiring nuclear capabilities and, on the capabilities side, by failing to foresee the relative effectiveness of the safeguards system erected by the international community.

The proliferation forecast used in this study was derived from a Delphi panel established specifically for this purpose. The methodology used to derive the proliferation forecast and the experts who constituted the panel are described in Appendix A. Suffice it to note for now that the group was balanced between individuals with a technical background and those with more of a policy background, and also between those who are very concerned about the possibility of nuclear proliferation and those who take

a more relaxed view of these prospects. (There are sometimes interesting contrasts between the views of the proliferation experts presented here, and the predictions of the regional specialists interviewed for the forecasts of regional patterns of political/military relations; when appropriate, these contrasts are discussed in Chapters III and IV of the report.)

Findings

The panelists were asked to identify the specific nations, in addition to the five declared nuclear powers, likely to have acquired a nuclear capability before the end of the century. Several rounds of questions were used to narrow the range of responses. Additional questions probed the type of capabilities these potential proliferators were likely to develop. The responses can be grouped into three categories:

a. Certain Proliferators. The panelists were virtually unanimous in forecasting that India, Israel, and South Africa will have acquired a nuclear capability and, most believe, a substantial inventory of nuclear weapons before the end of the century. Indeed, several of the respondents noted that they believe that all three nations already have, or would very soon have, a small operational stock of weapons. As noted, two of these nations have severe security problems and are relatively isolated in world affairs. The third aspires eventually to a leadership role in international politics. All three states have refused to ratify the Non-Proliferation Treaty and are known to have the unsafeguarded facilities necessary to manufacture nuclear weapons.

b. Probable Proliferators. The majority of the panelists forecast that five other nations will have acquired nuclear weapons before the end of the century. These five, in the order in which they were named by the panelists, are: Pakistan, Brazil, Argentina, Taiwan, and South Korea. The first three of these countries are known to have active nuclear programs --allegedly for peaceful purposes -- that will very soon provide them with complete (and

unsafeguarded) systems that could be used to produce nuclear weapons; none of the three has signed the Non-Proliferation Treaty. Pakistan, in particular, is believed to be close to attaining a weapons capability and may test a nuclear device -- putting it on a par with India -- within a few years. Taiwan and South Korea both maintained active nuclear programs at one time and, although both have since ratified the Non-Proliferation Treaty, the experts believe there is some substantial danger, given their security situations, of a reconsideration (see below).

c. Possible Proliferators. Additional potential proliferators mentioned by three or more of the panelists include: Japan, Iraq, Egypt, West Germany, Sweden, and Switzerland. The three European countries and Japan have advanced nuclear industries but little apparent incentive -- at present -- to develop an explicit weapons capability; the experts' concern is that these incentives might change, particularly in the Japanese case -- a possibility which is also highlighted in the regional forecast. Both Iraq and Egypt, on the other hand, have expressed interest in acquiring nuclear weapons in the past, but lack the technical capabilities. Egypt, at least, has since renounced such intentions, ratified the Non-Proliferation Treaty, and made arrangements to safeguard its nuclear facilities.

The respondents cautioned that these forecasts depend strictly on the assumptions made about the future course of world events. Most important are two assumptions: First, it was generally assumed that there would be no nuclear war before the end of the century; any such conflict, the panelists stated, would greatly increase the likelihood of additional nuclear weapon states.¹ The second crucial assumption concerns the U.S. role in world affairs. Most

¹Several reviewers of a draft of this report suggested the opposite; any use of nuclear weapons, they believed, could facilitate an unprecedented degree of U.S.-Soviet cooperation and movement toward nuclear arms control and disarmament.

of the nations mentioned above depend --directly or indirectly -- on U.S. security guarantees. In the absence of those guarantees and an activist U.S. policy and forward military posture to make such guarantees credible, it was generally maintained, the likelihood of additional nuclear weapon states would increase substantially.

In short, one should expect between three and fourteen additional nuclear weapon states by the end of the century. In the most likely case, assuming that there is no nuclear war between now and then and that the United States continues to play an active role in world affairs, the actual number will likely be toward the lower end of the range, perhaps four to six (Israel, India, South Africa, Pakistan, Brazil, and Argentina).

D. PUBLIC ATTITUDES TOWARDS FOREIGN POLICY

In Chapter III of this report we identify trends in political/military relationships in the several regions of the globe. According to the experts whose views form the basis for those regional analyses, the single most important factor determining those trends is the behavior of the United States; specifically, the continued willingness of the United States to play an activist role in international politics. The likelihood that the U.S. will continue to continue to play such a role in world affairs, in turn, depends greatly on the attitudes of American citizens towards international relations and American foreign policy. History has shown repeatedly that although the President (along with the Congress) has great latitude in formulating and implementing foreign policies, in the end, the sustainability of the policies he chooses depends on their ability to command the support of the American people.

Although public attitudes towards the proper role for the United States in foreign affairs have varied widely over the years, and can be differentiated greatly on the basis of specific issues, scholars and practitioners of the art of opinion analyses have

identified certain underlying attitudes which seem to remain nearly constant. Two such basic attitudes are most relevant for the purposes of this study: (1) Americans are broadly supportive of maintaining a "strong" military posture, with the precise definition of "strong" varying somewhat in response to events and the position adopted by the President and other national leaders. (2) There is a general reluctance among Americans to become "involved" in the affairs of other nations, particularly when such involvement implies a risk of protracted military engagement. Each of these points is discussed below.¹

1. Military Strength

The U.S. public clearly understands the anarchic nature of the international political system and the essential role which military strength plays in assuring the nation's security within that system. The public generally supports policies -- including budgetary allocations -- to maintain the nation's strength for two reasons: (a) deterrence, or as it is more commonly expressed, "to keep other nations from bothering us"; and (b) defense, so that when the nation's interests are threatened directly, it has the capability to defend them.

Obviously, the public's perception of the level of strength which is necessary at any one time will vary. Support for increases in military strength diminishes following prolonged military build-ups, just as it increases following periods of relatively low military spending. Perceptions of the need for greater defense efforts also vary in response to events at home and abroad. Support for military spending quite naturally diminishes somewhat during periods of economic difficulties; a growing economy, on the other hand, lends itself to rising defense outlays. Support

¹(This section draws heavily on an interview with, and the written work of, William Schneider; see, particularly, his "The Beleaguered Consensus", in Joseph S. Nye (ed.), Managing U.S.-Soviet Relations (Council on Foreign Relations, 1983).)

for military build-ups is related also to foreign events: the loss of tangible interests abroad (e.g., seizure of American property), the "loss" of foreign leaders or nations who had been friendly to this nation (e.g., overthrow of Iran's Shah), or perceived insults to the nation's prestige or position (e.g., riots in which American symbols are desecrated) all result in greater support for military spending.

Most often, the public takes its cue from the President. Presidential support for military build-ups is helpful not only in terms of the budgetary process itself, but also to assure public support for the program. When the President's preference runs counter to the public's basic support for a "strong" military posture, however, he can sometimes be overruled. This occurred, for example, during the Carter Administration. During the first two years of President Carter's term, public opinion consistently supported higher levels of military spending than the President was proposing; eventually, the Administration altered its position to fit the public's demands.

In short, the public support's for a "strong" military posture is consistent and unlikely to change in the future. Even when the public favors lower levels of defense spending, that position is based on a perception that in view of circumstances (e.g., the economic situation, the international situation) the nation's "strength" is sufficient. Reduced public support for defense spending has never been associated with a perception that military "strength" was no longer important or relevant.

A related question concerns public support for nuclear weapon programs, and here the experts consulted for this study had mixed opinions. At present, this type of military "strength" is singled out by the public and generally receives less support than improvements in conventional military capabilities. The public perceives nuclear weapons as having a special character which diminishes their utility and associates great risks with their potential

use. The degree of public concern about nuclear weapons has varied over the years, with the present period reminiscent of the late 1950s and very early 1960s. The public's concern about nuclear issues is qualitatively different than other "peace" issues, which derives from the public's apocalyptic view of the consequences of nuclear war.

The current anti-nuclear movement, which has attained considerable political importance, was indeed a "grass roots" movement in origin -- its strength was evident before national political leaders began to associate themselves with it. What is not evident is whether the current anti-nuclear movement has resulted from special circumstances and therefore will diminish in strength as those circumstances are altered by events, or if the attitudes professed by the movement are likely to constitute a permanent factor in American public opinion. The experts were split evenly on this question. This contrasts markedly with the opinion of European experts who unanimously believed that the anti-nuclear movement would be a permanent fixture of the European political scene.

2. Involvement Abroad

There is a fundamental prejudice among the American public against "involvement" in other countries' problems. This is a contemporary echo of traditional isolationist sentiments -- dating back to George Washington's warnings against foreign entanglements and the basic attitudes which caused many American settlers to leave Europe. A basic view of many Americans is that non-involvement, particularly as concerns the deployment of troops, is the best guarantor of "peace." Combined with the maintenance of a "strong" military posture to deter others from involving themselves with our interests, American non-involvement, it is believed, will protect the nation's security and interests.

Americans' preference for military non-involvement thus is not by any means the result of the Vietnam experience; it predates

the U.S. involvement in Vietnam by centuries. However, one result of Vietnam was to confirm what much of the public long suspected, which probably explains why the popular reaction against Vietnam and several subsequent military involvements abroad (e.g., Salvador, Lebanon) have been so powerful. In particular, the Vietnam experience confirmed the public's basic suspicion of the internationalist policies favored typically by government experts and the foreign policy elite. In its most basic terms, Vietnam confirmed the popular view that if the "people" permit the State Department, bureaucrats, and other "elites" to have their way in foreign policy, the results are likely to be catastrophic and the price will be paid -- not by those "elites", but by the general public.

Clearly, Americans do not oppose all forms of military involvement abroad. Swift, decisive interventions almost always receive popular support, particularly when the threat posed to American interests which necessitated the intervention can be identified pointedly. The coincident contrast between the public's overwhelming support for the 1983 Grenada operation and continuing public pressures against modest, but apparently open-ended, forms of military involvement elsewhere in Central America, demonstrated the public's discrimination among different forms of military intervention quite vividly.

Public opposition to military operations that do not involve the deployment of ground forces also tends to be less vocal, as the danger of combat involvement is less pointed. This is probably one reason why American Presidents have tended to rely more on naval forces for crisis and other "peacetime" operations; the political costs of such military involvements are lower.

The American public also has supported for more than thirty years the deployment of substantial numbers of U.S. troops in Europe and East Asia, policies which deviate markedly from traditional American attitudes. It should be noted, however, at least as concerns the European deployment, that the U.S. military presence

originated as a deliberate, bi-partisan initiative and has continued to receive the support of the mainstreams of both major parties throughout the post-war period. Furthermore, the policy has neither required the involvement of American troops in combat nor, for the past twenty years, engendered a perception of a significant risk of combat in any real terms. Even so, public pressures have risen periodically for the removal of U.S. troops from Europe, a development which seems to have recurred in the past few years. Indeed, current pressures are such that the experts interviewed for this study generally believed that some reduction in the American troop presence in Europe would be necessary within the study period if the basic U.S. policy towards Europe were to continue to receive popular support.

It is difficult to predict the future level of public support for policies necessitating U.S. military involvement abroad.

On the one hand, support for internationalism tends to increase with educational level, which is rising across the nation over time. Moreover, the growing international interdependence of the American economy increasingly is exposing American businessmen and women, traditionally among the most isolationist elements of American society, to less parochial experiences and a greater understanding of the benefits which attend an active American role in world affairs.

On the other hand, there is a growing perception that U.S. defense partnerships with Western Europe and nations in East Asia impose an extraordinary burden on the United States, a burden not shared equally by the treaty partners. These negative effects are heightened by the related perception that these same defense partners are competing unfairly with Americans for trade and other economic benefits. There has been a broad trend toward protectionism, reduced international cooperation, and even isolationism in many nations; Americans share in this trend to a degree.

Most importantly, the power of the traditional American preference for non-involvement abroad remains strong, particularly when that involvement is seen to imply a serious risk to American lives. This attitude can be overcome when the threat posed to American interests is clear and, in some cases, by Presidential leadership. The basic attitude favoring non-involvement, however, will remain an important factor shaping the strategic environment for U.S. military planning.

CHAPTER III

REGIONAL FORECASTS

The environment for U.S. military planning is determined most importantly by evolving political and military relationships among nations within the several regions of the globe, and between those nations and the United States, on the one hand, and the Soviet Union, on the other. These relationships, in turn, reflect a variety of trends within each region -- including demographics, social movements and attitudes, economic developments, the spread of technologies, and many others -- as well as the policies pursued by outside powers seeking to influence intra-regional affairs. Currently, the relationships among the European nations and between those nations and the great powers place the greatest demands on U.S. military capabilities. Increasingly, however, considerations of intra-regional relations in Asia, Africa, and Latin America are posing additional (or alternative) demands on U.S. military capabilities.

So many factors can influence the direction and extent of trends in political and military relations that there is no reliable, empirically-based model for forecasting how intra-regional relationships may evolve. Moreover, the precise means through which the basic factors which determine intra-regional relations interact with one another seem to be dynamic and often quite subtle -- again contributing to the difficulty of making accurate forecasts. Many times, the dynamics of economies appear to be the dominant factor in international relations, but often situations develop in which powerful social or religious movements, or simply the force of a charismatic leader, can move events in directions which an economic analysis would never have predicted.

Given this absence of empirically-based models to forecast trends in political and military relations within a region, there

is little alternative but to rely on the intimate knowledge and implicit predictive models of academic experts and other individuals with detailed information about the events and trends in a particular region. Each such expert will base his or her forecast on an unstated model of what is, and what is not, important in determining events in the particular region in question. These models will differ to a degree, sometimes significantly, and this is a major drawback of dependence on expert opinion for forecasts. Still, when a substantial number of experts are consulted, there often emerges a consensus which can be accorded a certain amount of legitimacy and confidence.

The regional forecasts in this study are based primarily on interviews with 60 individuals, each of whom has had considerable experience either in the affairs of a particular region or in the broader questions of relations among nations. The interviews were structured, but experts were encouraged to carry the conversation into whatever subjects they believed to be pertinent. Interviewees were promised non-attribution, and were also offered the option of remaining anonymous, which only a few accepted.

The participants in these interviews included many individuals with experience at the highest levels of government -- including a former secretary of state, two former secretaries of defense, a former national security advisor, a former chairman of the Joint Chiefs of Staff, and a former British foreign minister. The set of interviewees was balanced, both between individuals who have served in Republican and Democratic administrations, and between those who take a conservative view of world affairs and those whose views may be considered more liberal. These balances were imposed both on the overall set of interviewees and on the subset for any one region. Some effort also was made to include within the group of interviewees a range of age groups and diverse backgrounds. There is a bias, however, toward individuals who have gained the pragmatic perspective associated with government service,

a fact which may have influenced the forecasts to some extent. An annotated list of the individuals interviewed for the study is presented in Appendix B.

Through these interviews, we sought to identify -- for each region addressed -- two descriptors. First, based upon his or her perception of trends then visible in the region, we asked each expert to forecast the most likely pattern of political/military relations over the next ten to twenty years. These "surprise-free" forecasts provide starting points for understanding how trends in each region should influence U.S. military planning. We then asked each expert to describe less likely, but still plausible, patterns of relations in each region. Essentially, through this question, we sought to elicit the major uncertainties in the region -- and particularly those uncertainties which would pose the greatest risks to U.S. interests. These uncertainties, or variations of the "surprise-free" forecast, provide the most important means of constructing the alternative composite strategic environments described in Chapter IV.

In this chapter we describe the "surprise-free" forecasts and major uncertainties for six regions of the globe: Europe, the Soviet Union, East and South Asia, the Middle East, Africa, and Latin America.

A. EUROPE

The experts forecast that in the "surprise-free" scenario the nations of Europe will gain increasing autonomy from the United States and the Soviet Union over the next ten to twenty years. This trend will be evident in both eastern and western Europe, the experts believe, but in neither case will the shift toward greater autonomy be so pronounced as to challenge either the current basic alliance structure or the specific composition of NATO or the Warsaw Pact.

In Eastern Europe, the experts believe that the primary mobilizing political force will continue to be nationalism. They view the persistent strength of nationalistic appeals despite nearly forty years of occupation by the Red Army, as suggesting that this powerful motivator of events and opinions will remain a fundamental determinant of national behavior throughout the period of this forecast. Poland, of course, where an impressive underground infra-structure has survived two and one-half years of military rule, is the most visible demonstration of the power of East European nationalism, but echoes of the Polish movement can also be seen in Czechoslovakia and East Germany. The economic independence shown by Hungary, the ideosyncratic foreign policy behavior of Rumania, and the East German efforts to build ties to the West are all further evidence of the power of East European nationalism.

The key question in contemplating the likely future course of events in Eastern Europe is the degree of diversity and autonomy which Soviet leaders are likely to tolerate. Several experts pointed out that by pursuing their independence -- whether in economic policy, internal political arrangements, or through the various ties between the nations of Eastern Europe and the West which have sprung up in recent years -- the East European countries are treading a dangerous line. None of the experts doubted that at some point Soviet leaders could feel compelled to intervene militarily to enforce a minimum degree of cohesion and stability among their erstwhile allies.

Still, some experts point out that the Soviet Union may be compelled to accept some greater degree of diversity within Eastern Europe and may benefit from it to a degree. As will be described shortly, the USSR's own internal prospects in the "surprise-free" forecast appear bleak; this would divert their attention and make Soviet leaders reluctant to use force to control events outside their borders. In addition, the appearance of greater independence within the Warsaw Pact strengthens the appeal of detente and

cooperative relations in Western Europe, thus improving the USSR's political standing and facilitating beneficial economic relations.

These explanations of Soviet behavior notwithstanding, the experts point to the USSR's tolerance of greater political and economic diversity within the Warsaw Pact as a new factor with potentially important implications for U.S. military planning over the long term. As one of the most senior experts, speaking about the continuing dissent in Poland, put it:

Old Joe Stalin would never have put up with this situation. In fact, he would have welcomed an opportunity to squash the Poles as a useful lesson to other Europeans. The new Soviet leaders may be getting soft.

As for Western Europe, the experts forecast continued modest economic growth and political strains, particularly between the nations of Europe and the United States. Political difficulties between the U.S. and its allies would arise largely as a reflection of real differences of interests between the two, but also might be tinged by a certain degree of "anti-Americanism" -- a more basic negative reaction to American culture and mores, and a resentment of the United States' greater wealth and power. The experts unanimously expect American interests to shift increasingly toward the Pacific during the forecast period --reflecting both the greater dynamism of Asian economies and the changing composition of the U.S. population, a trend which could exacerbate to a degree the problems that can be seen already in U.S.-European relations.

Still, none of the experts expects these difficulties to cause fundamental changes in NATO or the basic structure of relations in Europe, at least not in the "surprise-free" forecast. The alliance, the experts predict, will most likely survive throughout the forecast period, neither wholly solving the problems which have hampered the development of a fully effective defense posture in recent years nor seeing those problems exacerbated to the point at which the continued existence of the alliance might be called seriously into question.

AD-A159 156

ALTERNATIVE STRATEGIC ENVIRONMENTS 1994-2004(U)

273

INSTITUTE FOR DEFENSE ANALYSES ALEXANDRIA VA

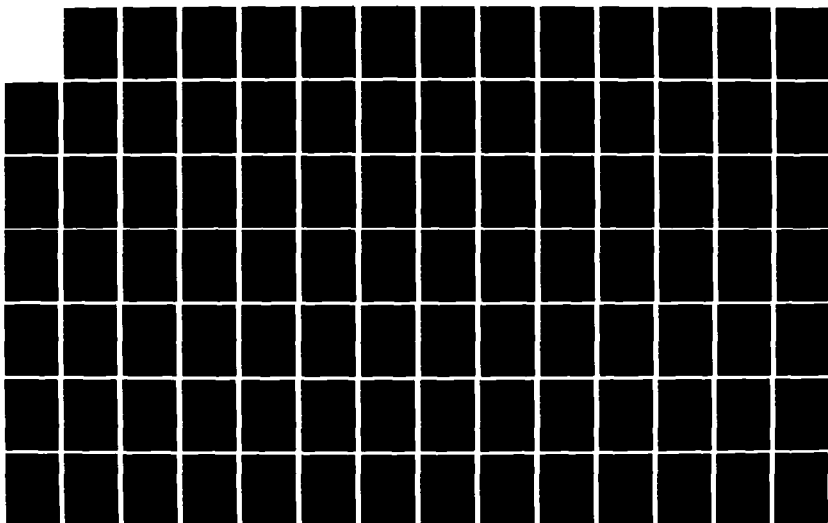
B H BLECHMAN JAN 85 IDA-P-1785 IDA/HQ-84-28746

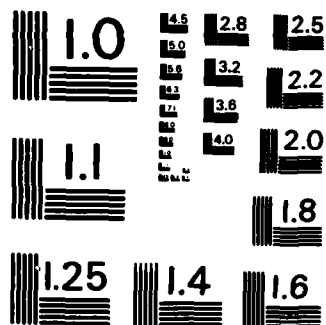
UNCLASSIFIED

ADA903-84-C-0031

F/G 15/7

NL





MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

Specifically, almost everyone interviewed expects that the constraints on the alliance's defense posture now evident are likely to continue to hamper its defense preparations in the future. These constraints include: (a) tight restrictions on increases in defense spending (most experts thought that there would be virtually no real growth in European defense budgets through the 1980s); (b) powerful popular movements against nuclear weapons, which will induce European governments to seek means of reducing reliance on nuclear threats in NATO's strategy; (c) a reluctance to move very far toward either the real integration of national military forces or toward national specialization along functional lines; and (d) increasing pressures (from this side of the Atlantic) for a reduction in the U.S. presence in Europe. Interestingly, on this latter point, virtually all the experts interviewed -- Americans and Europeans -- thought that if the size of the reduction was not excessive, and if it were handled properly, a "substantial" withdrawal of American forces would not necessarily have an adverse impact on U.S.-European defense cooperation.

These problems notwithstanding, the general consensus of the experts was that in the "surprise-free" scenario NATO would somehow "muddle through," making some improvements in conventional capabilities, some changes in its nuclear posture, and some modest progress towards greater standardization and interoperability. In no event would these improvements be nearly as great as Western security officials believe are necessary to build a robust defense posture but, the experts believe, they should be sufficient to maintain an effective deterrent in virtually all circumstances.

The major new development which the experts identified in the European political/military context was the increasing willingness of Germans on both sides of the border to emphasize the bonds of their common German identity. Most of the interviewees do not believe that this greater attention and outspokenness reflects a return to Nineteenth Century German nationalism. They

assert that Germans overwhelmingly understand that there cannot be a re-unified German state -- at least not during the time frame of this study. However, there is clearly a greater common acknowledgment of the similarities in the German situations in East and West. Many Germans apparently see themselves in similar circumstances -- particularly in their dependence on the threat of nuclear war for their security. Many Germans also perceive a special role for their countries as mediators between east and west.

The new greater outspokenness in West Germany also represents a yearning for a stronger national identity, a trend associated primarily with the younger generations now assuming dominance in political life. Such aspirations are one factor leading to difficulties in the U.S.-German relationship, as more Germans become willing to recognize that American and German interests are certainly compatible, but not necessarily identical. (Similar German impatience with unequal arrangements among European nations presage difficulties in FRG relations with other countries, particularly France.)

The appearance in East Germany of this new attention to German identity was noted particularly by several of the experts. Marked recently by official celebrations of historical German figures who previously had been ignored by the East German Government, its most important effect has been to create additional channels of communications and exchanges between East and West, including some between private organizations and churches.

At present, the Soviet Union obviously is prepared to accept the emergency of special ties between the two Germanies only up to a point. The forced cancellation of Erich Honneker's (the East German leader) planned visit to Bonn in September 1984 spoke volumes about the USSR's continued ability to circumscribe movement toward the new German identity. Still, the degree to which the Soviet Union has already accepted enriched ties between the Germanies is reflective of the previously mentioned reasons for

Soviet tolerance of East European nationalism: Soviet leaders are distracted and reluctant to intervene because of their own internal problems, and also perceive that there are benefits from closer intra-German ties due to their positive effects (from a Soviet viewpoint) on West German politics and therefore on economic relations.

The experts are unsure how far this trend might go. Most believe that the various forms of intra-German association can not develop very much further, at least not in the near future, as it is "a very dangerous game for Honneker" and could lead to a Soviet crackdown. Others point out that the trend also raises uneasy feelings among many in the West, particularly in France, where some see the new emphasis on German identity as a step toward a unified, neutralized German state.

The "surprise-free" projection of the future of Europe is thus relatively optimistic from a U.S. perspective, featuring continued dissension in Eastern Europe, relative tranquility in Central Europe, and the continued ability of NATO to mount an adequate deterrent despite the now well-known constraints on its options. There are three major uncertainties in the experts' forecast, however; three potential developments which, though unlikely in the opinions of the experts, are plausible to varying degrees and would have major implications for U.S. military planning.

The first uncertainty is the most likely to come about: One or more Soviet military interventions in Eastern Europe to enforce the authority of a regime expected to provide closer conformity with Soviet policy preferences and better control over a restive population. Poland is obviously the most likely scene of such an intervention, although it is far from the only potential target. A minority of the experts believe that at least one such intervention is almost a certainty, given how far events already have progressed in Poland. It is only a matter of time, they believe,

until a renewed Soviet leadership tires of the Jarulzelski Government's inability to gain full control of Poland's substantial political and economic problems. And, even if such a scenario does not come about, these experts maintain, there is a reasonably high probability that the domestic discontent in Poland will become more outspoken and perhaps violent in the not too distant future -- causing an even weak and cautious Soviet leadership to act decisively.

The results of any Soviet intervention in Eastern Europe are likely to be profound, although they would depend to some extent on how quickly and with how much violence the situation were controlled. The probability that an attempt by the Red Army to suppress the Polish national movement would lead to widespread and intense violence is fairly high, many of the interviewees maintain, and there would be a chance that such a conflict would trigger uprisings elsewhere in Eastern Europe, including --according to a couple of the experts -- the Soviet Union itself.

Even if controlled quickly, however, an intervention in Eastern Europe would likely lead to renewed West European attention to defense requirements and far greater cohesion within NATO. Just as the 1982 imposition of martial law in Poland is credited by several of the experts with leading to a much tougher French posture toward the Soviet Union, an overt military intervention could have comparable (and more exaggerated) results in Western Europe generally. A particularly likely result of such an intervention would be the end of whatever nascent trend toward German neutralism may already exist.

The second uncertainty is considered by the experts to be far less likely: The creation of a unified, neutralized, and, for all practical purposes, disarmed Germany. This possibility is the logical consequence of the trends toward greater recognition of a common German identity and the far richer ties between East and West Germany described previously. Such a development,

which envisions the detachment of both Germanies from their respective security alliances, obviously would have the most significant effects on the environment for U.S. military planning. Still, it would represent an extrapolation of current trends to a point well beyond that which most of the experts believe to be possible.

Several of those interviewed, however, see the possibility of German re-unification and neutralization as being deeply rooted in economic and cultural factors. According to this view, West Germany is likely to become increasingly dependent upon East Germany and the remainder of the Eastern Bloc for both markets and raw materials, a development they attribute to the increasingly technologically backward and, consequently, less competitive position of Germany as compared to Japan, the United States, and certain other European countries. According to this view, German industries are not adapting to modern circumstances nearly as rapidly as those in other nations. At the same time, it is argued, the Soviet Union and its allies are likely to find West Germany an increasingly important source of basic manufactured goods, capital, and other economic resources. As a result, West Germany will look increasingly to the East for its export markets, and the East will look increasingly toward West Germany for a variety of goods and economic services. These economic trends would naturally impart momentum to policies that support closer political ties and, perhaps, eventually to re-unification as well.

Moreover, this theory continues, it is psychologically comforting for Germans to drift closer to the East, as historically they have always been much more a Central European power than a part of the West. In a cultural sense, according to this analysis, a close alliance between France and Germany, or Britain and Germany, is an unnatural one. Given the history of the Twentieth Century, neutralization and effective de-militarization are

necessary conditions for Germany to regain its complete identity and resume its historic role in European and world affairs.

The majority of the experts do not find this argument persuasive, largely on its economic grounds. German respondents, particularly, found the thesis that Germany will be unable to compete effectively with other Western nations on a long term basis to be erroneous. They admit to a technological lag at present, but believe it likely to be short-lived. There also was considerable skepticism that the Soviet Union would ever permit a re-unified Germany, even under the conditions just specified. Most of the experts believe that the USSR would never have sufficient confidence in its ability to control Germany politically and economically to permit unification to take place under any circumstances.

According to the experts interviewed, the odds on the third uncertainty ever becoming a reality depends largely on actions taken by the United States. This variation of the "surprise-free" forecast foresees the restructuring of NATO to exclude the United States as a military member, and the emergence of an independent European military alliance led implicitly by the French. Different experts put forth different elaborations of this possibility. In some, the U.S. would remain associated with the new entity only in a political sense -- there might be cooperation on a variety of issues, but no common military planning. In others, the United States might maintain a residual nuclear commitment and, in still others, also might commit sea power and airpower to the defense of Europe. In all scenarios, however, U.S. ground forces would be withdrawn totally from Europe.

In all cases, moreover, the United States would have been supplanted as the primary Western power in Europe -- almost certainly as a result of its own decisions. Virtually all the respondents stated that an independent European defense entity could only come about as a result of a U.S. decision to withdraw all,

or the most substantial portion of, its forces from Europe. In such an event, the Europeans would face the choice of seizing the initiative and maintaining an effective defense entity themselves or accepting a position in which they were effectively dominated by the Soviet Union.

The success or failure of any independent European defense entity would depend crucially on France's willingness to "share" its nuclear capabilities; in effect, to replace the United States' nuclear guarantees with its own. No other power could play this role, the experts believe, although the British certainly could contribute to some extent. All the experts agree that the possibility of an independent German nuclear force is extremely far-fetched. The experts disagree on whether or not the French might be willing to undertake the nuclear guarantor's role, even assuming that the U.S. had withdrawn from Europe. Some point to the greater cooperation in defense matters which has characterized French-German relations in recent years as suggesting that such a relationship might be possible. Others argue that, in fact, the rhetoric of Franco-German defense cooperation has proceeded farther than its reality, and that the French will never yield the one advantage they maintain over the Germans --their unilateral possession of strategic nuclear capabilities.

As is discussed in the final chapter, the creation of an independent West European defense entity would have the most profound implications for U.S. military planning.

B. THE SOVIET UNION

The experts consulted for this study paint a grim picture of the Soviet Union's prospects over the next ten to twenty years. They disagree only in their relative degrees of pessimism. Within the "surprise-free" forecast, some of the experts believe that at best the Soviet economy and political system might turn around in the mid-1990s. Many other experts, however, state that in the

"surprise-free" case there is little reason to expect the USSR to make significant progress toward the solution of its serious internal problems at any point during the next twenty years.

The USSR's negative outlook stems primarily from systemic problems in the Soviet economy and form of government; problems which are resulting in mounting evidence of widespread societal disaffection. The Soviet Government is not nearing collapse by any means, nor even threatened with serious instabilities, at least not in the "surprise-free" case. But this uniform recognition of the severity of the USSR's internal difficulties is a surprising finding of this study with important implications for the Soviet Union's likely future posture in international affairs.

Planning cannot be based on "surprise-free" forecasts alone, however; it is obviously important to hedge against alternative developments, even if the experts believe they are unlikely to become realities. Two such uncertainties pertain to internal developments within the USSR: (a) the prospect that a new, dynamic leadership could implement the reforms necessary to break out of the systemic limitations on Soviet economic and political performance; and (b) the alternate possibility that systemic problems could become so severe as to lead to serious disorders within the USSR. The "surprise-free" forecast and both alternative possibilities are discussed below.

1. "Surprise-free" Forecast

The Soviet Union's primary internal problem is a weak economy. Soviet economic growth has been slowing considerably for some years. The experts differ over its near-term prospects, but estimates of future growth range from negative rates to only modest real growth (one or two percent per year). Even at the high end of this range, the USSR probably would be losing additional ground when compared to the economies of the U.S., most of its industrial allies, and even some nations in Eastern Europe and the Third World. The Soviet Union's comparative position is worsening

particularly because of its apparent inability to incorporate contemporary technologies in its civilian sectors, especially computing and other electronic technologies.

The USSR's most pressing economic need is for substantial capital investments to modernize its infrastructure. According to one of the most pessimistic of the experts, "even if military spending were frozen at present levels and consumption held constant, investment will decline in the future and the basis for economic growth will be eroded." The USSR's basic problem is that the devastation of the Soviet economy during the Second World War was so complete that during the first ten to fifteen years of the post-war period, investment in almost any part of the infrastructure helped to create economic growth, and explained the very rapid growth rates that were sustained even into the 1970s. The Soviet economy is now at the point, however, at which available capital must be highly targeted in order to improve productivity or to stimulate growth in other ways, yet because of the USSR's tight centralization and artificial pricing system, there is no effective means of identifying the most important priorities.

There is no evidence that the Soviets are considering seriously the types of radical reforms which would be necessary to break out of these systemic limitations -- particularly to decentralize and to create incentives for greater individual performance. (In effect, the Soviets must do what the Chinese have been doing for the past five years -- see below.) Indeed, Soviet officials did attempt to implement such reforms, at least tentatively, in both 1965 and 1976, but in each case Communist Party officials stepped in and reversed the measures which had been set in motion. This experience is a reminder that real economic reform will not occur without major changes in the Soviet political system as well.

Reforming the economic system in effect means denying the small elite which now benefits from current methods their advan-

tageous positions -- this would hit the Party "apparatchiks" harder than any other group. In other words, there would have to be a real shift of political power, either away from the Party to the military or security organs, or within the Party to a younger, and perhaps more nationally minded leadership cadre. Both are possibilities, with the former probably somewhat more likely than the latter, but the experts do not assign a very high probability to either event.

Several experts caution not to exaggerate the criticality of the Soviet economic situation, particularly its implications for the possibility of radical change in the political system. "We are not dealing with a Soviet leadership so hard-pressed that it is compelled either to cut a deal with the West or engage in adventures," one well-known expert stated. He adds, however, that while confident of this assessment in the near-term, his confidence declines as he looks out toward the end of the twenty year forecast period.

The prospects for serious internal reforms are greatly reduced by the weakness -- some experts say "near paralysis" -- of the current leadership. The selection of Konstantin Chernenko to succeed Yuriy Andropov as General-Secretary of the Communist Party is seen by most of the experts as indicating the inability of the current leadership cadre to choose -- probably for a protracted period -- among contending factions. One expert notes that the best thing which could happen to the United States would be for Chernenko to live for a long, long time, thus delaying the accession of a younger, more dynamic individual capable of persuading the present elite to bring about necessary reforms.

Some of the experts suggest the existence of considerable tension between the Soviet regime and the Soviet people, and even of a profound disaffection within Soviet society. Evidence of such alienation includes declining productivity and birthrates, soaring alcoholism and absenteeism, and so forth. These indicators

are obviously inter-related and their meaning should not be exaggerated, but at least a substantial minority of the experts believe that there is something fundamentally wrong in Soviet society that is having observable consequences.

Disaffection most likely stems primarily from increasing consumer unhappiness, and a growing recognition of the difference between the quality of Soviet life and the lives of other Europeans, to say nothing of American life. In other words, whatever tension exists is more economic than political in its origins. Still, there is some evidence of growing disenchantment with the political leadership as well. Outspoken criticism of Chernenko by private Soviet citizens has been reported frequently in the press -- a most unusual development. Some experts go so far as to suggest that Soviet political leaders are losing their legitimacy in the eyes of the people. This explains, they believe, the recently greater prominence of the Soviet armed forces. Still revered and honored throughout Soviet society, the visible support of Soviet military officials confers a certain amount of respectability upon Soviet political leaders who, on their own, this viewpoint continues, would more likely be perceived as largely corrupt and ineffectual. (The recent dismissal of Soviet Chief-of-Staff Ogarkov indicates that this analysis should not be carried too far.)

A crucial question in assessing future developments in the Soviet Union is the degree to which various nationalities might seek greater autonomy from the tight control currently exercised by the Russian-dominated central authorities. The experts differ substantially on this issue.

Virtually all the experts discount the problem as concerns Asian nationalities within the USSR, at least for the next ten years. They note that the nationalities in South-central Asia really have little sense of identity or nationhood -- and little history of independent nationalism to point to. Nor is there any

evidence that their Islamic allegiances are causing difficulties for the central Soviet authorities; there are no signs of the spread of Islamic fundamentalism to the USSR. And finally, people in the Southern Asian portions of the USSR seem relatively happier with their economic circumstances: The more moderate weather makes life somewhat easier and, by comparison with their previous relatively primitive standard of living, the people of this part of the Soviet Union continue to benefit from the Soviet economic system.

Looking toward the second half of the forecast period, some of the experts note one trend which could cause difficulties in Asia. The relatively much higher population growth rates of the Asian minorities (the birth rate for "Great Russians" is below that necessary for zero growth) means increasing demands in these regions for meaningful jobs and other opportunities for advancement. If the central Soviet authorities are not willing to satisfy these demands by reallocating resources to the regions now inhabited by Asian nationalities and are not able to persuade larger numbers of Central Asians to move to those regions of the Soviet Union planned for rapid development, there could be increasing unrest near the end of this century or the beginning of the next.

There are sharp differences among the experts as to the consequences of the nationalities problem within the Soviet armed forces. One analyst speaks of the creation of a secret society among the Russian officers to protect their interests in, and overwhelming dominance of, the officer corps -- something like the secret Boer societies which protect the interests of officers of Dutch-origin within South African institutions. Other experts speak of the difficulties which the Soviet armed forces experience because of the limited education and modernity of Asian nationalities, and their resentment of Russian domination. But still others discount these problems, and a few view the Asians' service in the Soviet armed forces as a positive experience which tends to

socialize them as citizens of the USSR, rather than members of specific nationalities.

In the near-term, the most difficult nationalities problems are expected to occur in the European portions of the USSR, particularly in the Ukraine and the Baltic states. Unrest in these regions is fed by nationalistic expressions in Eastern Europe and, to a limited extent, one can see echoes of movements like "Solidarity" within the Soviet Union itself. The degree to which these problems surface is related to economic performance, but they are very close to the surface and, in the event of serious economic failure, could become very visible quickly. Even so, none of the experts argued to include serious internal disorders in the "surprise-free" forecast.

The implications of the "surprise-free" forecast for U.S. military planning are discussed in the final chapter of this report. In general, however, these implications are positive for U.S. interests. Under the conditions specified in the "surprise-free" forecast, the experts foresee the Soviet Union as less assertive and generally preoccupied with internal problems, at least during the first half of the forecast period. According to the experts, Soviet leaders are now re-evaluating the relative costs and benefits of involvement in the Third World, and seem more reluctant to take-on additional commitments there (see the section on Africa). They see themselves on the defensive in Europe, the result both of continuing problems in Eastern Europe and the significant failure of their efforts to capitalize politically on the disarray in Western Europe resulting from the deployment of intermediate-range missiles and other problems. This is not to say that the Soviet Union will give ground voluntarily, turn isolationist, nor fail to capitalize on situations in which they perceive an opportunity to enhance their interests, or harm those of the West, with little risk. It suggests simply that, in the words of one of the experts, "The West's bargaining position is

stronger now than it has been in a decade, and if the U.S. can sustain a moderately assertive foreign and defense policy, it will likely remain strong into the 1990s."

2. Break-Out From Systemic Limitations

As noted previously, it is certainly possible that over the next twenty years the Soviet Union will take the steps necessary to break out from its present systemic limitations. Such a process would probably begin with the elevation of a younger, more dynamic leader who is able to consolidate his authority and remain in office for a considerable period of time. Mikhail Gorbachev, currently the apparent most likely successor to Chernenko, could be that individual. Conceivably, in fact, he could accede to power within the next couple of years and remain ascendant throughout the remainder of the forecast period.

Such an individual would be in a position to force basic reforms throughout the Soviet economic and political systems. He obviously would need the help of the military to do so but, if anything, the experts believe that the Soviet armed forces would encourage such a development, not restrain it. The success of the reforms would depend upon many factors, not least of which would be luck; weather is extremely important in determining the success or failure of Soviet agriculture and, with it, the Soviet economy overall.

Soviet economic performance also would be helped by a permissive international environment. Although all the experts agree that the USSR will allocate to the armed forces whatever resources they perceive to be necessary for their security, the majority also agree that under most circumstances Soviet leaders would prefer to restrain military spending, recognizing the consequences of the military burden for economic performance. A permissive international environment also would facilitate economic growth by making possible greater imports of capital and technology, and perhaps reducing limitations on markets for Soviet exports.

As the Soviet economy and political system recovered, one would expect the new leaders to exercise a stronger hand in world affairs. Most of the experts profess virtual ignorance of the foreign policy views of younger Soviet leaders (and great concern about our very limited knowledge of their views), but one can assume that they are likely to be somewhat more confident of the Soviet Union's power, having grown up with it and not having experienced the traumas of the early decades of the Soviet state. One expert says that in the context of an improving Soviet economy and settlement of the succession question, he would expect that "on the margin, Soviet leaders will be more eager to test the USSR's power in world politics." A second expert notes that the next generation of Soviet leaders is unlikely to be as quick to back away from confrontations with the United States as in the past. In short, in the event of a renewal of Soviet economic growth and the solution of current political problems, one would expect a more assertive Soviet foreign policy, if not a more aggressive one.

3. Serious Internal Disorders

It is also possible, if unlikely, that the USSR's economic and political problems will get significantly worse, not better. Left uncorrected, the trends toward lower, perhaps negative economic growth, political paralysis, and societal disaffection could lead to serious internal disorders within the forecast period. All of the experts think that Soviet authorities would be able to cope with any such problems that developed, but the possibilities of industrial sabotage, labor disorders, and even food riots are mentioned by several of the interviewees, as are the emergence of overt nationalistic movements in parts of the European USSR.

In any such eventuality, one would expect the threat posed by the Soviet Union to U.S. interests to be greatly reduced. The experts were asked explicitly whether they perceived a risk that desperate internal problems might prompt Soviet leaders into

adventures abroad as means of diverting attention and inducing greater domestic cohesion. The majority thought not, arguing that internal problems greatly weakened the USSR's will and ability to mount challenges abroad.

C. EAST AND SOUTH ASIA

Asia and the Pacific are clearly playing an increasingly important role in U.S. foreign policy and the experts interviewed for this study are virtually unanimous in expecting this trend to continue over the next twenty years. They also expect East and South Asia's very impressive economic growth to continue throughout this period, at least in the "surprise-free" scenario. Moreover, the expectation in this case is that the performance of key nations' political systems will improve markedly, resulting in greater political stability along with impressive economic performance. All in all, the experts' forecast for East and South Asia is the most optimistic of the six regional projections.

Three grave uncertainties also are identified, however, as feasible developments which could alter this prospect significantly. Most importantly, there is considerable uncertainty as to whether or not China can maintain the impressive economic growth, political stability, and pragmatic foreign and domestic policies which have characterized it for the past five years. The development of an unstable situation within China, or a shift in Chinese policy toward alternative policies, could have severe implications for U.S. military planning. Equally significant would be a major change in Japan's overall foreign policy orientation. According to the experts there is some risk, although a very slim one, that over the course of the next twenty years Japan will decide to pursue a more independent and assertive foreign policy, and build the substantial conventional and even nuclear forces necessary to back-up such a policy. This too could have major implications for U.S. defense planning. And, finally, several of the countries

on the rim of the Asian mainland -- particularly India, Indonesia, and the Phillippines -- face severe internal problems that could lead to radical changes in government; the situation in Korea, too, must be considered unstable, but more because of the possibility of a new war on the Peninsula than because of internal problems.

The gradual amelioration of old conflicts among the nations of East Asia and the development of mutually beneficial political and economic relations have contributed substantially to the region's impressive economic development over the past two decades. In the "surprise-free" scenario, our experts expect these favorable trends to continue and deepen, although certain events could occur which would alter this benign situation significantly.

Under the leadership of Deng Xiaoping, China has instituted far-ranging political and economic reforms which have made possible sustained economic growth on the order of six percent per year. These reforms include, most importantly, decentralization and the introduction of incentives to encourage entrepreneurship and high individual productivity. For example, some state revenues are remanded to local governments to spend on local projects according to their own priorities. Farmers are allowed to sell crops produced beyond established quotas on the open market. Individuals are permitted to open small businesses that employ others, and workers in some state enterprises are allowed to retain some portion of the profit associated with production beyond official quotas. In addition, the Chinese Government has pursued the pragmatic policies necessary to attract foreign investors, to gain access to foreign technology and expertise, and to obtain loans and development assistance from multinational organizations.

The experts we interviewed expect in the most likely case that the high rate of Chinese economic growth will continue for some years, and average between four and five percent over the entire twenty year period. With such growth rates, China would

likely make substantial progress in lifting the living standard of its people and developing a modern industrialized society. Much depends, however, on China's ability to control its population growth. Considerable progress has been made on this, but more so in the cities than in the countryside, where three-fourths of the Chinese people live. Without further success in lowering the population growth rate (and also without continued good harvests -- meaning relatively good weather), much of China's prospective economic growth will be necessary simply to maintain the present living standard, a situation which could be conducive to renewed political instability. So far, in the countryside, China's economic growth has resulted in the creation of a relatively small class of relatively rich peasants and modest improvements in the quality of life of the majority of people. If the promise of continued expansion of the class of relatively well-off people and further advances in the average standard of living is not continually fulfilled, resentments could grow and have adverse implications for political stability.

Much also depends on China's ability to maintain favorable ties with Japan, the United States, and other industrialized democracies. Developments can be imagined which would affect these relations adversely, with negative implications for China's access to capital and other necessary resources from abroad. The U.S. relationship is particularly dependent on how the Taiwan issue is handled -- a sudden break in the current arrangement, perhaps a move by the Taiwanese to establish Taiwan as an independent nation -- would cause severe difficulties for U.S.-China ties; so, too, would a new war or even a confrontation in Korea.

In the "surprise-free" case, China's relations with the Soviet Union are not expected to change substantially. Both nations will attempt to maintain correct ties and avoid conflict, but China has little incentive to seek a more far-reaching accommodation with the USSR. While the two are bound to some degree

by their common obeisance to Marxist-Leninist ideology, their differences -- in terms of territorial disputes, very real racial hostilities, and even the proper interpretation of Communist theory in contemporary circumstances -- are far more significant. Sino-Soviet ties also will be influenced by relations between China and Vietnam. One expert projects that China will be even less accommodating as far as Vietnam is concerned in the future, as he believes that a real bitterness has entered that relationship. So long as China remains relatively weak militarily, as is expected for at least ten more years, nothing much is likely to result from this enmity, except for providing opportunities for the USSR to gain base rights in Southeast Asia. But in the long run, this expert would not be surprised to see China act to settle old scores.

All the experts expressed considerable concern about what might happen after the death of Deng Xiaoping. He is the last Chinese official with roots in, and good ties with, the three key institutions in Chinese life -- the party, the government, and the armed services. He is also the last prominent survivor of the "Long March", which confers additional prestige and influence. The experts' concern is that following Deng's death, a struggle may ensue among the three institutions for dominance, and also between those who favor continuing the pragmatic policies established by Deng and those who might wish to return to more ideologically orthodox policies, such as those implanted in China by the Soviet Union in the 1950s. The armed forces also might bid for a larger share of the political (and resource) pie in such a situation. Modernization of the Chinese armed forces has been delayed substantially in recent years, a situation about which the military leadership is becoming increasingly restive.

The net outcome of such a tumultuous situation is difficult to forecast. Much would depend on how much time Deng had had to pursue present policies and to place individuals with similar ideas in key positions. There are clearly struggles within the

Chinese ruling establishment, as suggested by the various campaigns on cultural and ideological issues that have proceeded in fits and starts in recent years.

There could be an orderly succession following Deng's demise and a new leader who continued to pursue the same pragmatic policies; or there could simply be a period of prolonged instability in which various forces struggled for control in different parts of the country. Eventually, power might be seized by a faction -- perhaps in the armed forces -- that had become dependent upon Soviet support and favored a return to more orthodox, highly centralized economic and political systems, with the resulting development of close ties between the two nations. Or the military might take over on their own; one expert even foresaw the establishment of relatively autonomous military governments on a provincial basis as a real, if very remote, possibility. One option which was ruled out by most of the experts was a return to the ideological fervor of the Cultural Revolution. The excesses of that period apparently have thoroughly discredited the more extreme interpretations of Maoist thought.

Should Deng pass away in the near future, the balance of domestic forces in Beijing could be influenced strongly by American and Soviet policies toward the region. Pro-Soviet factions could be greatly assisted by either a determined Soviet effort to bring peace to Southeast Asia and reach accommodation with the PRC in Central Asia, or American policies toward the Taiwan issue or Korea that forced China's hand. A continuation of recent U.S. policies toward the region, on the other hand, benefits those who would continue to implement Deng's reforms.

Developments in China also will be influenced by directions in Japanese foreign policy. One expert emphasizes that the Chinese are made nervous by Japanese rearmament plans, even within the current parameters, and that this causes China to seek closer ties with the United States as means of gaining some influence on

Japanese plans. Accelerated Japanese rearmament, however, particularly if it occurred along with a U.S.-Japanese split, could cause severe reactions in China. These tensions arise largely for historical reasons and will diminish as a new generation of Chinese come to power; they are likely to persist at least through the current twenty year planning period, however.

In the "surprise-free" case, the experts expect Japan to continue to experience substantial economic growth based increasingly on high technology industries, to remain stable politically, and gradually to adopt a more assertive foreign policy within the framework of the security relationship with the United States. As such, the military capabilities of the Japanese armed forces will rise slowly, but not so much as to cause real concern in neighboring states or to provoke the Soviet Union. Japanese-Soviet ties are projected to remain correct, but very cool. None of the experts foresees either a settlement of the Northern Islands controversy, the conclusion of a Soviet-Japanese peace treaty, or a significant expansion of trade and other economic interactions between the two countries.

A sharp increase in Japanese re-armament could have a severe impact on China and its policies, almost regardless of the policy context in which it occurred. Several experts postulate that at some point during the forecast period, following some catalytic event -- e.g., a U.S. failure to respond to a crisis in Korea or even the Persian Gulf, the development of sharper Japanese-U.S. trade conflicts -- Japan could decide to move away from the United States and pursue a more independent foreign policy. Serious pursuit of such a course could lead eventually to termination of the U.S.-Japan Security Treaty, the withdrawal of U.S. forces from Japan, and a substantial expansion of the Japanese armed forces. With a solid industrial base already in place in Japan, it would be relatively easy for the Japanese to acquire powerful, modern armed forces rapidly; what is necessary is a decision to

invest the substantial financial, manpower, and other resources necessary to expand the size of the Japanese military services. When asked, the experts agreed that even the development of an independent Japanese nuclear force is conceivable, but all thought such a possibility to be extremely remote during the next twenty years. (The proliferation experts were considerably more concerned about the development of a Japanese nuclear force than were the Asian experts.)

Even without a nuclear component, however, the development of substantial Japanese armed forces in pursuit of an independent and more assertive foreign policy would have the most serious consequences for the political-military environment in East Asia. It could well drive China back into the arms of the Soviet Union and create a very unstable situation between both those countries and Japan. One or the other, or both, would likely attempt to force the unification of Korea under a friendly regime, thus preempting any Japanese attempt to re-extend its former dominance of the Peninsula. And there could be considerable tension throughout the region if the nations of Southeast Asia also reacted with renewed fears of Japanese domination.

If the Japanese decided to rearm significantly beyond current plans but did so while remaining in the U.S.-Japan security relationship and in conformance with U.S. policies, the consequences would likely be less radical but might still lead to instabilities in the region. China's reaction, particularly, is hard to predict, much depending on the balance of power in Beijing at the time. The nations of Southeast Asia would not like the development, but their responses could probably be moderated by U.S. and Japanese assurances. The Soviet Union almost certainly would react strongly, although it is not clear in what way. Various contingencies involving Korea would have to be considered, among other possible adverse developments.

The third important uncertainty in South and East Asian affairs is the political stability of several countries on the rim of the region. In the "surprise-free" forecast, these nations are generally expected to continue to record impressive economic growth rates and to move increasingly toward stable political systems -- the usual concomitant of sustained, moderate economic growth. There is some danger, however, of serious political unrest and disorders in some of these countries.

India is the largest of these problem countries and suffers from chronic unrest among various ethnic and religious groups demanding greater autonomy, if not outright independence. While none of these movements is that serious at present, several of the experts believe there is a possibility that if the Indian economy falters during the period, there could be substantial pressures for the effective dismemberment of the Indian nation.

Other problem nations include the Philippines and Indonesia. Here the problem is more political; unpopular regimes perceived to be corrupt and repressive maintain tenuous holds on authority and could be overthrown at any point during the period; in both cases, however, the problem is severe in the near-term. A violent revolution in the Philippines, of course, could threaten the important U.S. bases there.

Korea also suffers internal political unrest, which has persisted despite efforts of the Chun regime to control corruption in government and to initiate a modicum of political reform that might lead eventually to the re-emergence of democratic practices. Any forecast of Asian events also must consider the possibility of a new war in Korea. Again, this is primarily a near-term problem. Many of the experts state that North Korea believes that there now exists a window of opportunity which will close as South Korea's remarkable economic growth increasingly overwhelms the North's capabilities. No one thinks that an overt invasion is likely; they do see a possibility, however, of renewed Northern

subversion and terrorism in the South leading to military clashes and eventually to a new war. Such a campaign might even be encouraged by the Soviet Union if it adopted a more aggressive policy toward the region; in response, say, to a sudden and significant increase in Japanese rearmament. Internal unrest in the South stemming from political difficulties also could encourage the North to step up attempts to subvert the government in Seoul.

In Southeast Asia, the primary uncertainty is provided by Vietnam's continued occupation of Cambodia and the resulting guerrilla war in that nation. This conflict at times results in border incidents involving Thai forces; although unlikely, the possibility of escalation to a broader regional conflict cannot be ruled out.

In short, the experts believe that the strategic environment in East and South Asia will remain dominated by relations between the U.S. and China, on the one hand, and China and the Soviet Union, on the other. Also important will be relations between Japan and each of the first three powers. While developments in other nations could influence these great power relationships and affect their security positions in specific ways (e.g., by denying base rights), in terms of military planning it is best to concentrate primarily on relations among the great powers.

D. THE MIDDLE EAST

The experts' forecast for the Middle East (including North Africa and Southwest Asia) is surprisingly upbeat given the tremendous amount of conflict and upheaval which has characterized the region in recent years. The Middle East projections are all carefully hedged, however, and, all-in-all, the experts seem to have less confidence in forecasting future trends in this region than in any other.

In effect, the experts' picture of the Middle East portrays an unstable balance of two contending forces: One force moving the region in modernist directions, incorporating secular,

pragmatic, and moderate elements; the second force stemming from traditional roots, incorporating religious, idealist, and ideological elements. On balance, the experts believe that the struggle between these contending forces is slowly being won by the modernist tendency. The contest is far from over, however, they note, and the balance can swing perceptibly in response to events and the actions of individuals. Interestingly, the experts believe that over the long run the outcome will be determined largely by the nations of the region themselves, with the great powers playing only marginal roles. And, of particular import for U.S. military planning, they see Egypt as the swing state in the struggle -- the one in which the conflict is drawn most tightly.

The rate and distribution of economic development is likely to be a crucial determinant of the course of events. There are large masses of people in the region, particularly in the cities, with virtually no connection to organized, secular society, no economic opportunity, and no hope for their own futures. These people tend to be young (according to one expert, more than 50 percent are under 20), and far better informed about the world and their relative deprivation -- thanks to modern communications technologies -- than their counterparts even 25 years ago. This is the breeding ground for extremist ideologies -- whether religious or secular in origin -- which promise escape from the futility of their present lives and the achievement of idealistic objectives. The same class of people who provided support for pan-Arab nationalism and leaders like Egypt's Gamal Abdel Nasser in the 1950s and 1960s, now are the basis for fundamentalist religious movements and the radical policies, such as terrorism, which those movements sometimes espouse.

The primary question is whether the economies of these countries can grow fast enough (and whether population growth can be contained sufficiently) to offer significantly greater opportunity and better living conditions for these people, thus reducing the

appeal of extremist movements. A second question is whether key governments can implement domestic policies that open up the political processes in their countries somewhat, giving these individuals a sense of participation in government and a stake in maintaining the existing system. A third question is whether the moderate governments of the region, together with the United States and other external supporters, are capable of pursuing policies that can defuse potential international conflicts, thus avoiding the emergence of new, and the exacerbation of old, "causes" that attract the support of the impoverished classes and thus provide openings for extremists.

The experts' hesitant answer to these questions is a qualified yes, and thus the "surprise-free" forecast envisions the gradual moderation of conflict within the region and its slow evolution toward sustained economic growth and political stability. This is not to suggest that there will not continue to be both international and domestic violence in the Middle East throughout the forecast period, even in the "surprise-free" case. It implies simply that we may have seen the worst of the region's conflicts already, and that the future trend will be toward greater internal stability and the peaceful resolution of external disputes.

The experts point to several factors in support of this assessment:

1. Continued economic growth in most countries leading to a slow expansion of a middle class with a stake in stability, rising educational levels, and the gradual extension of secular and modernist perspectives.
2. Growing recognition within the region that the Iranian revolution has failed and therefore constitutes a diminished threat to other governments. The Khomeini Government has shown itself to be not only more brutal than the government of the Shah, but also to be incompetent, "incapable of either ruling or of defeating the Iraqis, by war or revolution."
3. Recent signs that greater popular participation in domestic political systems is being encouraged by moderate governments. Jordan, for example, revived its

parliament in early 1984; this is one of the few national outlets for political participation by Palestinians. In addition, Egypt held elections in May 1984 which were more open and less tarnished by manipulation than any since the 1960s. They resulted in the election of a genuine opposition party to a substantial number of seats in the Egyptian parliament, a party that can provide a voice within the system for individuals opposed to the government's policies. In several other states, governments are permitting more open dissent and encouraging discussions of future moves toward more broadly-based political participation and even democratic rule.

4. An emerging alliance of moderate, pro-Western governments, able to cooperate to a far greater extent than in the past, including Egypt, Jordan, Saudi Arabia, Iraq and moderate Palestinian factions. (Jordan's resumption of diplomatic ties with Egypt in September 1984, and the only isolated criticism of the move -- from Iran, Libya, and Syria -- is a sign that augers well for the moderate alliance.) These governments -- which take a pragmatic view of world affairs -- tend to be pro-Western, largely because of economic considerations, but also because of their fears of the Soviet Union (see below).

Assuming that these trends persist, the experts expect the next twenty years to see the gradual amelioration of conflicts in the region and continued progress toward greater stability both within nations and between regional governments. In the words of one expert, the most likely case would see:

...progress toward Arab-Israeli peace -- no utopian settlement, but progress in fits and starts; the building of a moderate Arab coalition that cooperates quietly with Israel, and continued progress toward closer cooperation among the members of the Gulf Cooperation Council; the gradual erosion of traditional regimes through a broadening of their systems of government...the downfall of the Iranian Mullahs following their challenge by the Iranian middle class and armed forces....

Specific components of this "surprise-free" forecast include the following:

1. **Arab-Israeli Conflict**

None of the experts thinks that a formal settlement of this 40 year old conflict is likely; rather, they believe that it will

likely "slowly wither away," with Arab governments less and less willing to support the Palestinians militarily and more willing to cooperate quietly with Israel for various purposes. This forecast depends crucially not only on the continued viability of moderate regimes in Egypt and Jordan, but also on the accession of a government in Israel able and willing to facilitate such cooperative behavior.

Such a forecast does not exclude additional violence between Israel and Arab governments. Indeed, several of the experts forecast a new Israeli-Syrian War within the decade, but the general feeling is that such a conflict is necessary for, and would make possible, a tacit settlement of differences between the two states. As for the Palestinians, the experts suggest either that they will supplant the Hashemites as the dominant force in Jordan or that some sort of "fuzzy" settlement will be reached -- in effect creating a Palestinian entity of some sort on the West Bank without actually saying that this is what is being done.

2. Iran-Iraq Conflict

Most of the experts do not expect a real settlement of the Iran-Iraq conflict. Although there might be prolonged truces or quiet periods, most of the experts believe that, in the absence of a change of regimes, the war will continue for a long time -- "for a generation," several said -- with neither party able to win a decisive victory.

If there were a change of regime, the experts hesitantly forecast that it would more likely take place in Iran than in Iraq. Even so, one cautions, we should not expect a return to a pro-Western government; that is probably not in the cards under any circumstances. More likely, he believes, is a new Iranian government that incorporates religious elements under the leadership of a fiercely nationalistic, military regime. Attaturk's regime in Turkey earlier in this century exemplifies the model this expert has in mind.

3. Other Gulf States

According to most of the experts, the Saudi Government has demonstrated considerable stability despite difficult events and domestic pressures in recent years, and thus should be able to maintain its position well into the 1990s. One expert foresees a generational break in the Royal family becoming relevant by the end of the century, after which there will be no logical successor to the King, no precedent to turn to, and therefore the potential for a real power struggle. Conflict among the members of the Royal family at this point, he notes, would necessitate a greater role for other elements in the Saudi Government -- e.g., the Army and the technocrats --and therefore an uncertain situation. The future robustness of the oil market of course will play an important role in determining the stability of all the Gulf states.

Soviet roles in the Middle East in the "surprise-free" forecast are likely to be isolated. The USSR will likely continue to maintain a strong position in Libya, South Yemen, and Syria, and might even pick up one additional client -- Kuwait was mentioned as a possibility by one of the experts, but the Soviet Union is expected to have only limited influence and leverage on the main-line Arab governments. According to the experts, on a popular level the influence of the USSR derives strictly from its professed support for the Palestinian cause; on official levels it derives mainly from the Soviet ability to provide military aid and other "security services" to embattled governments. At the same time, the Soviet Union is understood to have very little to offer the nations of the Middle East in the way of economic development -- the real problem facing these governments -- and nothing to offer in the way of diplomatic leverage against Israel. Moreover, the Soviet tendency to meddle in the affairs of those governments who do accept their help is well known and understood. The official atheism of the Soviet government is a distinct hinderance in its relations with all Middle Eastern states.

Overt U.S. influence will not be great either, although the tremendous leverage associated with the U.S. economy, particularly in the energy sector, assures a far broader role for this country than the USSR. Potentially, even more important in assuring a U.S. role in the region will be our development assistance and role in multinational lending institutions, and also the investment capital and various forms of technical services offered by private U.S. firms. Still, the experts do not, in the "surprise-free" case, expect these forms of leverage to be sufficient to achieve a more prominent and decisive U.S. position. They think it unlikely, for example, that the Gulf states would accept an overt U.S. military presence on their territories at any point in the next twenty years.

The experts identified two classes of great risks in this otherwise optimistic forecast.

First, one certainly can not rule out the possibility that fundamentalist movements will reverse recent trends and gain control of additional, perhaps key, governments in the region. An Iranian victory in the Gulf War, for example, could greatly magnify the prospects for the eventual triumph of Khomeini-style forces in the smaller Gulf states and even, perhaps, in Saudi Arabia (or parts of it, anyway). Similarly, the failure of the Egyptian Government to manage its substantial internal problems effectively -- perhaps because of uncontrollable events like a natural calamity -- could result in a violent revolution in that country and the establishment of a radical regime. Other governments considered particularly vulnerable to a fundamentalist revolution include Pakistan, the Sudan, and Tunisia. As shown in the recent election, even Israel may be vulnerable to the accession of extremist governments that would make the pragmatic solution of the region's problems difficult.

In terms of U.S. military planning, the most important implication of these contingencies would be enhanced threats of state-

sponsored terrorism, severe risks to western economic interests, particularly oil supplies, and greater opportunities for the enhancement of Soviet influence.

Second, the possibility of a re-invigorated Arab-Israeli conflict cannot be considered a remote contingency. A fundamentalist revolution in Egypt, of course, almost certainly would mean the return of that country to the ranks of the "confrontation states" (and Jordan along with it), and a resumption of overt military conflict with Israel. But an escalation in the Arab-Israeli conflict could emerge even if key Arab nations continue to move toward moderate policies. In the event of a new Israeli-Syrian War, for example, there could be considerable pressure on the Egyptian Government to intervene, depending upon the chain of events precipitating the conflict. Or, for that matter, greater Israeli pressure on the West Bank and Gaza -- an official annexation, for example, combined with an accelerated and expanded settlements policy -- could lead eventually to a reversal of Egypt's current policy of peaceful coexistence and the resumption of wide-scale Arab-Israeli violence.

In terms of U.S. military planning, the most important implications of a renewal of the Arab-Israeli conflict would be: (a) more limited access for U.S. forces to bases and staging and over-flight rights in Arab nations; (b) greater opportunities for Soviet involvement in the Middle East and, with them, greater access for Soviet armed forces to the region; and (c) over the long term, a risk that nuclear weapons might be used by one or more of the belligerents, a development with severe implications for the risk of U.S.-Soviet conflict.

E. AFRICA, SOUTH OF THE SAHARA

Trends in Africa appear to be dominated by the overwhelming economic problems of the region. The most severe drought ever recorded has worsened significantly what was already an extremely

serious situation in large portions of the continent. The results -- mass malnutrition and even starvation in some areas, grinding poverty, only slow progress towards modernization in narrow sectors -- dominate considerations of political advantage or disadvantage. The experts consulted for this study see little reason to expect progress toward the solution of Africa's overwhelming economic problems in the near-term. "Perhaps things might get better in the 1990s," one suggested, "but certainly not for the remainder of this decade." A second expert was even more pessimistic, seeing a serious prospect of food riots in widespread urban areas in the near-term and significant problems throughout the forecast period.

These economic problems have clear political implications, provoking an extraordinary amount of ferment. In the 1980s alone, coups or attempted coups have taken place in Ghana, Kenya, Nigeria, Uganda, and Upper Volta, to say nothing of the continuing insurgencies in Angola, Chad, Lesotho, Mozambique, and Zimbabwe. The coups follow a common pattern, being led by younger military officers expressing impatience with existing economic models -- both Marxist and capitalist -- which typically mask a high degree of corruption and incompetence. Each coup raises new expectations, but none has exhibited any considerable degree of success.

The stark economic needs and political instability of most African countries put strict limits on the flexibility of their governments. Only Western nations and Western-controlled multilateral lending institutions can provide the investment, technology, markets, and outright grant aid Africans need so desperately. Consequently, regardless of ideological preferences and personal beliefs, leaders of African states typically perceive little choice but to attempt to create conditions conducive to Western economic involvement.

This was demonstrated graphically in 1984 in the case of Angola and Mozambique. Both governments are ruled by regimes

which profess Marxist-Leninist ideologies and, more importantly, were dependent upon Soviet and Cuban support as revolutionary movements; Angolan leaders remain dependent on Cuban troops for continued control of revolutionary forces within their country. Both nations have experienced severe economic difficulties in recent years, in part because of the drought and other inescapable circumstances, but also because of deliberate policies on the part of the South African Government. South Africa has provided covert support for dissident, revolutionary movements in both countries, and also has pursued a policy of overt military actions on the territory of Angola and Mozambique aimed at disrupting anti-South African and Namibian guerrilla organizations. The resulting high level of violence and instability had a severe impact on economic activity in the southern portions of the two countries, and also affected the climate for Western investment in, and assistance to, Angola and Mozambique adversely.

According to several of the experts, both governments sought relief from this situation by asking the Soviet Union for military support and for status as members of the Soviet economic bloc, COMECON, as had been granted previously to Cuba and Vietnam. The Soviets declined, apparently believing themselves to be too greatly extended already to assume these additional responsibilities. As a result, the two governments were forced to reach accommodation with South Africa on the latter's terms, specifically committing themselves not to provide support to organizations seeking to overthrow the South African Government. Presumably, this will create a climate in southern Africa that is more conducive to the amelioration of the most severe economic problems now faced by Angola, Mozambique, and other bordering states.

Soviet influence in Africa is limited by other factors as well. The Soviets are known throughout Africa, according to the experts, as racists -- far worse racists than the Americans or even former colonial powers. They are also perceived as inveterate

meddlers in the internal affairs of African nations. In country after country in Africa (e.g., Ghana, Guinea, Mali), the USSR has carved out an influential position for a while, but then has been requested to leave because of their heavy-handed attempts to interfere in internal politics. These lessons have not been lost upon African leaders.

Other highlights of the "surprise-free" case include the following.

1. Neither an orderly transition nor a violent revolution is expected in South Africa, but rather a gradually deteriorating internal situation involving greater, but still containable, violence. The experts believe unanimously that a real transfer of power to the black majority through peaceful means is extremely unlikely. They can imagine some largely symbolic steps in that direction, and also the further accrual of greater power by black labor unions and other "grass roots" organizations, a trend which could ameliorate some of the worst aspects of black living conditions in South Africa, but no real transfer of political authority or change in the relative distribution of economic wealth.

As a consequence, and particularly in view of the 1984 South African agreements with Angola and Mozambique, the experts expect to see a younger, more radical, and more violence-prone leadership cadre take over the primary revolutionary organization, the African National Congress. One result of such a change would be a sharp increase in violent incidents. Still, as one expert puts it, "No one believes the revolution is at hand. The government's repressive powers are huge -- the South African military has never yet had to intervene in domestic situations; and the fragmentation of black politics greatly weakens the prospects for successful revolution."

2. There will be continuing, and in some cases increasing, pressures for the break-up of some of the larger African nations. The colonial boundaries which still delineate modern African nations

in many cases combined ethnic groups with long histories of conflict in territories lacking any natural, geographic or demographic reasons to expect national cohesion. Moreover, in most cases the colonial powers created neither an economic infra-structure nor the institutions necessary to build a nation. The analogy usually drawn is with India, which also includes a variety of ethnic and religious groupings. In the Indian case, though, the British did create a substantial economic infra-structure and also left a certain legacy of nationhood -- in the armed forces and also in a competent bureaucracy, among others. In the African case, the de-colonization process was so much more rapid that virtually nothing was created to hold many of these countries together, except modest armed forces.

In addition to Chad, which has been in effect divided already, the most severe problems, in the order suggested by the experts, are:

Ethiopia -- This is a somewhat different case, as Ethiopia is really a Nineteenth Century empire attempting to hold itself together. According to the experts, powerful secessionist movements exist in at least three provinces, in addition to the revolutionary movement in Eritrea. The Marxist Government of Ethiopia, according to the experts, is making little progress against, and may even be losing ground to, these movements.

Zaire -- The primary tension in this nation comes between the inhabitants of Shaba Province, which contains most of the country's mineral wealth, and the central government, which is dominated by other ethnic groups. Moreover, the natural economic links for Shaba run not through the capital in the north, but rather to the south and west. The country is held together currently by the President, Mobutu, and the Army, which is the only national institution. The situation after Mobutu's death could be problematic.

Angola -- The internal situation here is very difficult, according to the experts. There is an existing civil war, which is having dire economic effects and for which it is very difficult to envisage a constructive solution. According to at least one of the experts, the territorial integrity of Angola is very uncertain.

Nigeria -- This country continues to struggle for unity in the face of historic conflicts between the Muslim, northern tribes which dominate the armed forces, and other tribes, which largely control the country's economic resources. One expert suggested that the coup in Nigeria in 1983 was another manifestation of this struggle, reflecting the northern tribes' concern that if civilian rule continued, a non-northerner would take office in 1987. There was, of course, a very costly civil war in Nigeria in the late 1960s, and no real power-sharing arrangement has ever been implemented successfully. Still, the war was so costly in lives and suffering that there are great disincentives against a renewal of fighting, making Nigeria the least likely of the four problem states to suffer significant internal violence.

The consequences of these internal problems are hard to predict and would depend on the circumstances which attended a crisis in any of these nations. Chronic conflict and turmoil is one possibility. The actual creation of smaller, new states is a second. And the restructuring of individual nations into some sort of confederation would be a third. In all cases, however, these problems suggest opportunities for Soviet or Cuban intervention.

One expert goes so far as to suggest that the very concept of nation-states may be slowly decomposing in Africa. There is, after all, no a priori reason to expect this European model of how to organize societies to take root in the Africans' circumstances. If national governments cannot deliver the services which Africans have been taught to expect from them, they may for

all practical purposes lose all vestiges of authority. The chronic turmoil and lawlessness which has characterized nations like Uganda for a long time, and Ghana more recently, may presage a broader trend in many parts of the continent.

3. Declining French influence in African political/military affairs is forecast by several of the experts. The French position in Africa in the 1980s, they maintain, is like the British position in the Persian Gulf in the 1960s -- nearing the end of its decisive phase. These experts expect France to continue to exert economic and cultural influence in much of the continent, but believe that French resources are too limited to permit it to maintain its past role as defender of the political status quo. They point to the French Government's unsuccessful attempt to maneuver the U.S. into assuming France's traditional responsibilities in Chad in the Fall of 1983 as the first demonstration of this decline. Next time, the experts predict, either the U.S. will have to become more directly involved or no Western power will play a significant role.

The most important uncertainty in forecast of African relations concerns the prospective level of violence in the south of the continent. Although unlikely, the experts believe that a sudden and massive escalation of violence within South Africa is possible, one sufficient to cause the exodus of a substantial portion of the white population, installation of a very brutal and repressive successor white regime, and the extension of military conflict to include other nations in the region. Such events could result from wide-spread, almost spontaneous civil disorders within South Africa combined with relatively successful guerrilla attacks on urban targets. While the families of Dutch ancestry - - the majority of the white population in South Africa -- have lived there for a century or more and for the most part will not leave the country voluntarily, a substantial portion of the white population are relatively recent immigrants from former Portuguese

territories in Africa and Rhodesia. This white minority remain despite the threat of violence, according to the experts, because of the high living standards enjoyed by the white population, and also because of a perception that if push ever came to shove, the European and U.S. Governments would come to the aid of the South African Government. Large-scale violence within South Africa could transform both these conditions, resulting in large-scale emigration and the creation of a far more difficult situation.

The implications of such an eventuality for U.S. military planning are twofold: (a) the opportunities for Soviet intervention in support of the guerrilla movement, and also in defense of the bordering nations, would be greatly expanded; and (b) there also would be direct and indirect threats to the security of Western sources of strategic minerals found predominantly in southern Africa, including chromium, cobalt, gold, and platinum.

F. LATIN AMERICA

The experts drew a mixed picture of the future strategic environment in Latin America. The "surprise-free" forecast for Central America and the Caribbean is bleak, largely because of the region's overpopulation and crushing economic problems, as well as the support for revolutionary movements provided by Cuba and other Communist regimes. As a result, the experts project continued political instability and internal conflict in several nations and -- depending primarily upon the policies pursued by the United States -- the possibility of the establishment of one or two additional Marxist-Leninist regimes. Obviously, U.S. relations with Cuba are expected to remain tense. Further to the south, however, the outlook is somewhat more optimistic from the standpoint of American interests. Here the experts foresee in the "surprise-free" scenario the possibility of renewed economic growth and the further development of more stable, civilian-controlled, democratic political systems in many nations of South

America. In the near-term, however, fulfillment of this expectation depends upon the conclusion of a durable solution to the international debt situation. And future events in Brazil, which could have a major impact on both economic and political developments throughout the continent, remain uncertain.

1. Central America

The experts interviewed for this study are generally pessimistic about the likely future course of events in Central America and the Caribbean. This conclusion stems primarily from their assessment of the region's economic prospects, for which they see virtually no grounds for optimism and, given the continuing population pressures in many of the nations of the region, substantial reason for despair. As one of the interviewees put it, "Central American countries are desperately poor for the most part, and simply do not have the resources to take-off. Past models of economic success in the hemisphere, such as Venezuela, depended on a source of significant revenues -- no such source is in prospect in Central America." The experts also point to problems other than economic ones, particularly the support for revolutionary movements provided by Cuba. In terms of the domestic politics of Central American countries, the experts' pessimism stems mainly from their expectation that small elites would continue to dominate these countries and refuse, for the most part, to implement the sort of democratically-oriented domestic policies necessary to build stable political systems. (It should be noted that the interviews were concluded before the apparently successful 1984 elections in El Salvador.)

As a result, the experts forecast continued instability and domestic violence in many nations of the region, and a strong possibility that one or two additional Marxist-Leninist regimes might be established. In addition to Nicaragua, El Salvador, Guatemala and Honduras --in that order -- were considered the nations most likely to experience such a change. Panama and some

of the Caribbean Islands -- notably Haiti -- also were mentioned by several of the experts as nations in which serious problems might be experienced during the forecast period.

The experts do not expect in the "surprise-free" case to see the wholesale shift of the region to Cuban dominance -- one or two nations following Nicaragua's lead (and the continuation of violence in others) is the most pessimistic projection -- for two reasons. First, they believe that the United States would react decisively in the event of the establishment of an additional Marxist-Leninist regime. And, secondly, they tend to believe that the Soviet Union is not in a position to underwrite the economies and military security of additional nations in the region (see below).

Interestingly, the experts also do not expect -- in the "surprise-free" case -- that substantial violence or significant instability would spread to Mexico. They suggest that the Mexican Government has demonstrated its resiliency and stability during its recent financial crisis and that, virtually regardless of what happens in the rest of Central America, it is unlikely that revolutionary activity would find much support in Mexico. Experts note that the ruling political party, the PRI, had co-opted much of the left's potential base of support -- particularly the labor unions -- and that the more violent leftist elements had been suppressed during the 1970s. The Mexican formula for stability rests on a certain amount of revolutionary rhetoric and calculated demonstrations of independence from the United States (as in Mexican Presidents' tendency to differ publicly with their U.S. counterparts). But it also depends on a less visible, very practical approach to economic decision-making in which the needs of the different economic sectors are satisfied. As one expert put it,

The Mexican political system has gone through substantial change; there is no great oscillation between right and left. The state is now seen as the primary legitimizing institution,

resting on the military, the PRI, and state-run economic enterprises.

If anything, most of the experts believe that the further success of revolutionary movements in Central America would drive the Mexican Government's policy farther to the right.

The experts unanimously expect relations between the United States and Cuba to remain poor. No one believes that any serious rapprochement between the two states is possible so long as Fidel Castro remains in power, and no one sees any reason to expect Castro not to hold onto power as long as his health remains good. As one expert put it, "There is no evidence of popular alienation; the economic situation is bad, but not collapsing and not likely to become bad enough (because of Soviet support) to cause fundamental change."

Essentially, the experts believe that Castro is absolutely committed to his role as a leader of world revolution and would not be willing to compromise that position in the interest of better relations with the United States, no matter how enticing such a prospect might appear on economic grounds. Indeed, the Cuban leader appears to value American hostility as means of demonstrating his revolutionary elan and relevance. The experts believe further that by now Cuba is firmly dependent on Soviet military and economic support and would therefore find it difficult to reach agreements with the U.S. that required explicit limits on the Soviet military role in Cuba. Moreover, they point to an even more basic problem: One of Fidel Castro's firmest demands is that Cuba be treated as the equal of the United States. From his perspective, this precludes even discussing Cuba's relations with third nations or involvement in foreign situations; the only proper topics for U.S.-Cuban negotiations, he believes, are aspects of the bilateral relationship.

The Soviet role in Central America in the "surprise-free" forecast, according to the experts, is likely to be limited. The

USSR will continue to support Cuba and, through Cuba, other Marxist regimes and revolutionary movements. The Soviet Union appears unwilling to accept major new economic responsibilities, however, and has made clear -- according to one expert -- its unwillingness to risk a military confrontation with the United States to defend Nicaragua or any additional Marxist-Leninist governments in the region.

2. Key Uncertainties

This outlook for Central America and the Caribbean, like all the forecasts, is far from certain. All the experts say that they can imagine alternative scenarios, although they find them unlikely. On the one hand, they suggest, it is possible that the United States would be unwilling or unable to act in support of existing governments in the region, in which case it would be feasible that revolutionary forces could make major breakthroughs in the region. Under such circumstances, one might envision Marxist-Leninist Governments established in El Salvador, Guatemala, Haiti, Honduras, Panama, and perhaps other Caribbean island-nations, in addition to Cuba and Nicaragua. This extensive a revolutionary breakthrough would threaten Mexico's stability as well, and in this "worst case" one might therefore expect to see large-scale violence in Mexico. It also would be conceivable -- although extremely unlikely, even in such a scenario -- that the USSR would be sufficiently emboldened by the United States' inaction to establish a more threatening military presence in the region. The implications for U.S. military planning obviously would be severe.

Alternatively, the experts also can imagine a more promising outlook. In this scenario, an activist U.S. policy leads to the containment of revolutionary movements, progress toward social reform in the nations of the region, and the gradual achievement of greater stability and economic growth. In this scenario, Nicaragua would probably remain under its present government but pursue more moderate policies, internally and externally, and

evolve along the model of Algeria -- a nation fiercely revolutionary in rhetoric, but equally pragmatic in its relations with other countries. Cuba would not necessarily change in this scenario, although its influence would be contained. Eventually, it also might assume a more pragmatic stance in world affairs.

3. South America

The "surprise-free" outlook farther south in the hemisphere is more promising than in Central America, although far from certain. Several of the experts point to the emergence of seemingly stable, democratic political systems in several countries -- Colombia, Ecuador, and Venezuela -- as foreshadowing a favorable future. Other nations also are witnessing movement toward civilian-controlled, democratic rule; the accession of a popularly elected civilian government in Argentina in 1984, and Brazil's continued, if protracted transition toward civilian government are cited in support of this thesis. (Chile is a notable exception to this trend.) In some cases, the trend toward democratization has resulted from the past failures of military regimes -- particularly in the economic sphere, although the failures of the Argentine armed forces were more far-ranging. Looking toward the long-term future of the trend, however, the experts are greatly cheered by the emergence in several countries of mass political parties incorporating pluralistic elements. Previously, Latin American political parties tended to reflect the personal following of a single individual, a type of political organization which would not imply long-term political stability.

The experts tentatively foresee resumed economic progress in South America in the near term, at least for most countries. Peru is a notable exception to this forecast, and is seen as the least stable of the countries of the continent. Countries heavily dependent for export earnings on single commodities whose markets are depressed -- e.g., Chile's copper and Venezuela's oil -- also may recover only slowly. And much depends, the experts stress, on

the degree to which the U.S. recovery is sustained (thus assuring better markets for South American goods), and also on whether or not a durable solution to the international debt crisis is devised and implemented successfully. Most of the experts believe that there are good prospects for successful resolution of the debt situation.

The resumption of economic progress and democratic rule in South America does not suggest the return of the United States' former dominance of these country's foreign policies, however; far from it. The experts expect the nations of South America to pursue increasingly independent policies involving closer ties with European countries, and Japan for some nations, and a leadership role of greater prominence in the Third World for others. Brazil, it is noted, will likely become especially important in the latter context, at least in the "surprise-free" forecast. Active Brazilian ties with some nations in the Middle East (notably Iraq) and Africa (notably Angola and Mozambique) are emphasized by some of the experts.

Both the Cuban and Soviet roles in South America are expected to be limited. Cuba maintains relations with some nations and supports some revolutionary movements -- M-19 in Colombia being the most prominent -- but the situation in the South is very different than that in Central America. The Soviet Union's role is likely to remain largely commercial. Trade between the USSR and several South American countries has been expanding in recent years and is expected to continue to grow. This trend is not expected to confer political influence, however, and often takes place with the most vehemently outspoken anti-Communist governments (e.g., the former military regime of Argentina). Opportunities for Soviet military involvement in South America in the "surprise-free" forecast are projected to be limited. The one big Soviet arms transaction in the past -- to Peru in the mid-1970s -- is generally viewed as having proven the inappropriateness of Soviet

equipment. To the extent that South American countries wish to move away from dependence on U.S. equipment, the experts forecast, they will turn primarily to sources in Western Europe for technologically advanced weapons.

4. Key Uncertainties

The experts are far from confident about the relatively optimistic picture they describe for South America. As noted, much depends on a successful resolution of the debt problem and on a sustained U.S. economic recovery. A failure in either could result in a very serious economic situation and the political instabilities that would be associated with it. One expert also suggested that technological advances may inflict structural constraints on Latin American economies. He foresees the increasing application of ceramics and man-made materials imposing permanent restrictions on the potential export earnings of those Latin American countries that depend on mineral exports (e.g., Chile, Bolivia) and, thus, on the capital available for their economic development.

Several of the experts emphasize Brazil's uncertain future as a key to future developments in the region. While relatively well-off because of its huge resources (other than energy, which is a serious problem), Brazil may never fulfill its own peoples' expectation of becoming a world power. The Brazilian elite represents a sophisticated and dynamic culture, but there are also huge masses of very poor people in Brazil whose circumstances and resulting political disquiet greatly restrict Brazil's ability to play a leading external role. The process of transition to civilian rule is far from assured, and the possibilities of either a return to strict military rule or the outbreak of significant internal violence cannot be ignored.

Brazil is preparing nonetheless to play a larger role in South American affairs, particularly with those countries bordering the Amazon basin. Looking beyond the forecast period, one can imagine Brazil eventually becoming a major actor on the global

scene. Whether or this this actually transpires may well depend on events during the next ten years.

Economic failure in South America, if prolonged, could lead to internal, politically-motivated violence in several countries, notably Brazil, and a greater danger of international conflict as well. There are several existing, if quiescent disputes within the region, any of which could heat up suddenly. In this context, the conclusion drawn by both the Nuclear Proliferation Panel convened for this study and the Latin American experts interviewed - - that both Argentina and Brazil were likely to develop nuclear weapons before the end of the century -- could be ominous.

CHAPTER IV

ALTERNATIVE COMPOSITE FUTURES

The strategic environment for U.S. military planning at the end of the century will be shaped largely by the key variables identified in the preceding chapters: Technological advances in the U.S. and other nations, the relative rate and composition of economic growth in the industrial nations and the amount of resources they each are willing to allocate for defense, trends in the dependencies of the United States and its allies on foreign sources of critical commodities, the proliferation of nuclear and advanced conventional military capabilities, public attitudes in this country toward foreign policy and commitments abroad, and economic, demographic, and societal trends within the various regions of the globe. No doubt there are many other factors that will help to shape the international environment ten to twenty years from now, but these six appear to be particularly important.

The possible states of these critical variables can be combined in many different ways to create a large number of alternative composite futures. Not all can be fully developed in any single document, and there is no obvious rule to guide selection of the most interesting permutations. Insofar as the primary purpose of this study is to examine the implications of alternative futures for U.S. military planning, we have selected alternatives for detailed development with wide-ranging effects on the desirability of different types of force structures. Taken together, the five alternatives described in this chapter provide a reasonable means for testing the adequacy of current and proposed military plans in environments which would most greatly stress alternative force structures and military strategies.

The five alternative strategic environments have been constructed by combining possible end-states of relationships in the six regions of the world with alternative assumptions about U.S.

involvement in world affairs, broadly defined -- that is, whether the United States is playing an activist or isolationist role. Developments in each region are characterized either as the "surprise-free" forecast described in Chapter III or as one of the key potential variations also discussed there. The experts interviewed for this study generally agreed that U.S. policy was the most important single determinant of the course of world events, which accounts for the elevation of the "activist-isolationist" factor as one of the major variables in the construction of alternative scenarios. Aside from this broad characterization of American policy (activist/isolationist), capabilities and constraints on U.S. policy are not used as structural determinants of alternative futures, but rather are discussed within each postulated environment as a possible source of variations. In some cases, there is a logical connection between the hypothesized strategic environment and a specific end-state of a U.S. capability or constraint. In others, a U.S. capability or constraint can range widely and not influence the basic structural character of the hypothesized strategic environment.

The basic characteristics of the five alternative strategic environments are summarized in table IV-1 and discussed in the following five sections of this chapter. Each section includes a preliminary description of the implications of the alternative environment for U.S. military planning. Readers should understand that these judgments are tentative and exemplary. A precise determination of which specific force posture would be most effective in a particular strategic environment must be based upon far more detailed and rigorous analyses than were feasible in this study. The discussions of military implications are meant strictly to be suggestive; to provoke more detailed review and study.

The study concludes with the author's personal views of the likely character of political/military relations at the end of the century.

TABLE IV-1. ALTERNATIVE STRATEGIC ENVIRONMENTS

Variable Case	U.S. Policy	Europe	USSR	East and South Asia	Middle East	Africa	Latin America
Extrapolation	Activist	Surprise-Free	Surprise-Free	Surprise-Free	Surprise-Free	Surprise-Free	Surprise-Free
Third World in Disarray	Activist	Surprise-Free	Surprise-Free	Disintegration on Rim	Fundamentalist Resurgence	Upheaval in South	Breakdown in South
USSR Resurgent	Activist	Germany Neutralized	Break-Out	China Destabilized	Arab-Israeli Regression	Upheaval in South	Cuban Breakthrough
Anarchic	Isolationist	- Violence in East - West European Defense Entity	Domestic Disorder	- China Destabilized - Japan Assertive - Disintegration on Rim	- Fundamentalist Resurgence - Arab-Israeli Regression	Upheaval in South	- Breakdown in South - Cuban Breakthrough
Optimistic	Activist	Violence in East	Surprise-Free	Surprise-Free+	Surprise-Free	Surprise-Free	Rollback in Central America

Additional constraints and opportunities: Technology, resource dependencies, U.S. economic performance, defense spending, nuclear proliferation.

A. ALTERNATIVE ONE: AN EXTRAPOLATION FROM PRESENT TRENDS

Present trends in the various regions of the world, as described by the experts interviewed for this study, suggest a relatively benign environment for U.S. military planning. This is not to say that there is not likely to be considerable strife in world affairs, serious military threats posed to U.S. national security, and many situations in which important American interests are jeopardized. The world that would result from the "surprise-free" forecasts would remain a violent and dangerous place, a world in which military power would continue to play an absolutely vital role in protecting the nation and its interests abroad. The "surprise-free" forecasts do suggest, however, that the United States has considerable influence in world affairs, deriving in part from U.S. military capabilities. In other part, however, and perhaps more importantly, U.S. influence derives from the country's tremendous economic leverage, particularly that provided by the private sector, from the nation's technological prowess and organizational competence, and from the many attractive political and cultural manifestations of America's dynamic society. All these elements of national power help to shape the international environment such that military power remains most often in the background of international events -- a determinant of international status and position to be sure, but one whose greatest effectiveness is marked by the absence of explicit tests of its sufficiency.

The relative optimism of the "surprise-free" forecasts also results from the expected weakness of the Soviet Union. As one Soviet expert put it, "The Russian century is over ... They face increasing problems ... Their prospects are dim for the rest of the century ... This does not mean they are not dangerous, but strategically there is little going for them."

Soviet weaknesses are manifold. Many in Eastern Europe, and perhaps some groups in parts of the USSR, refuse to discard their nationalistic aspirations in favor of a professed ideological

bond, even in the face of decades of Soviet repression and seemingly omnipotent Soviet military power. The Soviet economic system is falling farther behind those in all other parts of the industrial world. According to some sources, the average standard of life is declining: There are reports of food shortages and widespread outbreaks of disease. Birth rates have declined precipitately, infant mortality is rising, life expectancy is on the decline.

Most importantly, Soviet weakness stems from a political system so stultified as to find it impossible to adapt to contemporary circumstances, to make the changes necessary to avoid further setbacks. The result is a continuing decline in Soviet economic prospects and growing tension between the Soviet regime and the Soviet people. The latter are becoming increasingly aware of the differences between their lives and the lives of people in so many other parts of the world, as well as of the great disparities between the Soviet elite and the great mass of Soviet citizens.

Internationally, the weaknesses of the Soviet system in the "surprise-free" forecast lead to dwindling opportunities abroad, as even officials of left-wing political parties become increasingly suspicious of Russian motives and skeptical of the putative benefits of alliance with the Soviet state. In the words of one Soviet expert, "The Russian system cannot take hold anywhere, except in the form of direct puppets supported by Soviet military power. Even Angola and Ethiopia -- tailor made for them -- are not becoming permanent advances for the USSR."

These serious problems notwithstanding, the USSR can be expected to remain powerful militarily, a force to be reckoned with in many potential situations. Although likely to become somewhat more inwardly directed -- both because of its substantial domestic problems and because Soviet leaders are becoming more realistic about their ability to sustain positions in various parts of the world -- the USSR can be expected to continue to

participate actively in world affairs and to cling tenaciously to several positions which Soviet leaders deem essential to their national security and international position. Continued dominance of Eastern Europe is perceived by the Soviets as the most vital of these interests; and their footholds in the Western Hemisphere (Cuba) and in East Asia (Vietnam) are probably considered to be critical as well. Nor will Soviet leaders give up their long-term objectives of decoupling the United States from its allies in Europe and Asia and crippling this nation's ability to organize and lead the opposition to Soviet world dominance. Soviet leaders also will insist on being treated appropriately, by which they mean as the equal of the United States. A new generation of Soviet leaders will take over the reins of power at some point during the forecast period. They are unlikely to share the present generation's adversity to risk -- at least to the same degree -- and may be more confident of Soviet military power and of their right to exercise that power in support of Soviet interests; a formula, under certain circumstances, that could lead to confrontations.

Nor do Soviet failures necessarily translate into American successes. The world is not anything like a two-player zero-sum game; and even in this "extrapolated" scenario there would be many sources of competition and conflict for the United States independent of Soviet machinations. Events in the Third World can inflict penalties on either or both of the great powers. And even among industrial nations, the expectation is that most countries will exercise greater autonomy, their continued reliance on U.S. or Soviet security guarantees notwithstanding.

A key component of these "surprise-free" forecasts is the expectation that the basic global structure of alliances will remain unchanged. The experts project that the fundamental relationships among the United States, the nations of Europe, the USSR, and Japan will evolve, but not really be altered -- at least not in any basic way. There will be strains within NATO as the

alliance searches for a satisfactory solution to its defense problems within the constraints imposed by relatively tight financial limits, an anti-nuclear movement expected to remain active and powerful, and the genuine economic and political differences which must always be expected to arise among democratic and necessarily competitive nations. These problems, however, are not projected to become so severe as to disrupt the crucial perception on the part of both the United States and the nations of Western Europe that the benefits of membership and active participation in NATO far exceed its sometimes exasperating political frictions and perceived costs and liabilities. This judgment may be accounted for by the experts' forecast that it will prove possible to adjust current military postures and the distribution of defense burdens within NATO without precipitating a political crisis.

The U.S. alliance with Japan is expected to undergo even greater strains, particularly in terms of economic and technological competition, but with the same result -- a continued alliance and close diplomatic, political, and military coordination of the two nations' policies. Japan is expected to remain only weakly armed, if economically powerful, and to continue to rely on the United States for its security. The U.S. is expected to maintain that guarantee, and the forces necessary to make it credible, despite recurrent economic problems with Japan and popular perceptions in this nation of having to shoulder an unfair burden.

Soviet relations with the industrial world are expected to suffer even more serious strains. Relations with Japan are expected to remain cold; and no one forecasts a settlement of the dispute over the Northern Islands. Soviet relations with China are projected to remain formally correct, but distant, requiring the continued allocation of substantial resources to Soviet defenses in Asia.

East European nationalism is projected to remain a potent force, periodically threatening, in its many expressions, to

reach a point at which the Soviets decide to intervene overtly to suppress an East European protest movement. Because of their weaknesses at home and abroad, Soviet leaders are expected to seek to avoid such violent incidents, however, causing them to tolerate a greater degree of economic and political diversity among their Warsaw Pact allies than they might in different circumstances.

Assuming that an overt Soviet intervention in Eastern Europe does not occur, relations between East and West, if not between the U.S. and USSR, are likely to deepen and widen. Trade, particularly, but also humanitarian contacts of various sorts -- some between such private institutions as churches and professional associations -- are expected to flourish. Better relations are not expected to diminish the two sides' fundamental antipathy, however, and therefore the determination of both East and West to maintain their respective military preparedness can be expected to persevere as well. Increasingly close ties between the two German states are projected to serve as the leading edge of this gradual expansion of cooperation between East and West, although this renewed recognition of a common German identity is not expected to go so far as to make possible the creation of a unified German state. If these projections prove accurate, the risk of conflict between East and West in Europe should remain relatively low, with a Soviet intervention to suppress an uprising in Eastern Europe, which might lead to a wider war, being the most serious potential contingency.

The most significant uncertainty in the Third World concerns future Chinese policies. In this "extrapolated" environment, the experts expect to see China maintain its present pragmatic policies, both domestically and internationally. Continuing reforms of the Chinese economic and political system will make possible an economic growth rate sufficient to outstrip population increases and gradually improve both China's industrial position and the quality

of life experienced by the majority of its people. China's armed forces also would be gradually modernized in the "surprise-free" scenario, although not at a rate which would threaten either the USSR or China's other neighbors in Asia -- especially Japan.

A similarly optimistic forecast pertains to most other nations in Asia. Rapid economic growth and gradually increasing political stability are projected to characterize the nations of South and East Asia; nations presently threatened by internal strife, such as India, the Philippines, and Indonesia are likely in the "extrapolated" scenario to elude political turmoil and domestic violence on a nation-threatening scale. (This benign forecast by Asian experts should be considered together with the view of nuclear experts that both India and Pakistan are likely to acquire nuclear weapons before the end of the century. Either the regional specialists do not share the proliferation forecast, or they do but consider such a nuclear competition to be a stabilizing force; the experts' belief is not clear from the information available.)

In the Middle East, the experts expect to see the gradual emergence of pragmatic, and secular policies, the strengthening of moderate regimes and their increasingly close cooperation, and the dampening of existing conflicts -- both those between Arabs and Israelis and those between religious fundamentalists and individuals with more modernist perspectives. This forecast is particularly promising in view of the projections presented in Chapter II suggesting that both Japan and most nations in Western Europe will remain substantially dependent upon Middle Eastern sources of petroleum throughout the forecast period.

Perhaps most surprising, as concerns the Middle East, is the experts' forecast that although it may take one more military conflict between Israel and Syria to make the outcome feasible, a de facto peace between Arabs and Israelis is the most likely prospect. As such, one would expect to see a diminution of terrorism, especially the more dangerous form recently encountered --

terrorism sponsored by the state. Broad projections like these, however, cannot account for the possibility that, regardless of the prevalent trend within a region, individual nations may follow ideosyncratic courses of action.

The "surprise-free" forecasts for other regions of the Third World are less optimistic. Prospects are most bleak in Africa and Central America. In both regions, the experts foresee little hope of substantial progress toward the alleviation of extremely serious population pressures and economic shortcomings. They forecast great societal unrest, chronic domestic insurgencies and other forms of domestic violence, and many opportunities for the aggrandizement of Soviet influence through the provision of military and diplomatic support. Still, the Soviet position in Africa is not expected to improve measurably in the "extrapolated" scenario, largely because both the leaders of the nations in the region and Soviet officials themselves recognize the very narrow limits on the USSR's ability to help these countries to ease their desperate economic situations.

The presence of Cuba in the Central American region and Fidel Castro's willingness to sacrifice Cuban national interests in the cause of "world revolution" make the outlook in this region more disturbing. In this "extrapolated" scenario, the experts expect to see the establishment of one or two additional Marxist-Leninist regimes within Central America. They do not, however, expect to see such guerrilla movements, or even serious political instabilities, spread to Mexico.

In the remainder of Latin America the experts' forecasts are more promising. There is a clear trend toward greater democratization and political stability and, as the experts assume that the present international debt problem is likely to be resolved successfully, they believe that recovery and sustained economic growth will resume in South America, making possible both domestic tranquility and the amelioration of international conflicts in

the region. The course of economic and political events in Brazil will be key in determining the accuracy of this forecast. Moreover, like the experts who discussed South Asia, the South American specialists did not really address the consequences of nuclear proliferation in the region. Assuming that the majority of our Delphi panel's estimate that both Argentina and Brazil will probably acquire nuclear weapon capabilities before the end of the century is accurate, the implications for stability in South America might be troubling

All in all, the experts project only limited opportunities for the Soviet Union in the "extrapolated" strategic environment, and only limited capabilities within the USSR to take advantage of those opportunities which do arise. The "extrapolated" scenario is one in which relative economic capabilities are the dominant force in world affairs; relative military power -- to say nothing of such intangible factors as religious movements -- while important, takes a distinct second place to the basic realities of the distribution of the world's resources and the knowledge of how best to organize society to exploit those resources which are found within national boundaries.

From such a perspective, the United States is in a greatly advantaged position vis-a-vis the Soviet Union. Indeed, looking beyond the end of this forecast period, one can foresee the gradual transformation of world politics from the basic structure established by the U.S.-Soviet competition to a system organized more fundamentally around competing economic groups. The leading edge of this competition is likely to involve the United States (possibly with the support of the West European nations), on the one hand, in opposition to a grouping of East Asian nations (not including China) under the leadership of Japan, on the other. In such a system, the Soviet bloc of nations would be a less important third party -- always capable of disrupting events because of its

military power and therefore dangerous, but not really a central player in the normal course of events.

The transition from the present system to such a radically different one, however, and indeed the basic fulfillment of the "extrapolated" scenario through the end of this century, requires that several assumptions prove accurate. Absolutely crucial is the hypothesis that the United States will continue to play an active role in world politics, that the elements in U.S. public opinion which favor isolationist policies will be contained. Secondly, the United States must be assumed to continue to allocate "substantial" expenditures to defense, expenditures which to some segments of the American public may appear to be excessive, particularly when compared to allies' defense spending. And, finally, it must be assumed that the improvements in U.S. military capabilities forecast by the Delphi technology panel will in fact be accomplished, and that the United States will maintain its technological edge over the Soviet Union. If these "surprise-free" technological forecasts were not fulfilled, the prospects for maintaining an acceptable military balance would diminish substantially, and so, too, would the prospects for maintaining the favorable political/military relationships envisioned in the "extrapolated" scenario.

Implications for U.S. Military Planning

In this composite "extrapolated" environment, the relative balance of military power, for the most part, would remain a backdrop for diplomatic activity. Generally speaking, the assumptions currently governing decisions on U.S. military forces would be upheld and thus the present basis for force planning would be fulfilled. The U.S. posture would probably develop along the general lines now envisioned. In the absence of dramatic events to make clear the need and benefits of military preparedness, however, relatively tight limits are likely to continue to constrain the amount of resources made available to defense in the

United States, meaning that hard choices would have to be made among competing military requirements and strategies.

The search for a stable strategic nuclear deterrent at reduced but modernized force levels would continue to receive emphasis, both through arms programs and negotiations. No events projected to occur in the "extrapolated" strategic environment would cause the U.S. to depart from its present emphasis on a balanced triad of offensive central nuclear forces and the maintenance of theater nuclear capabilities comparable to those of the adversary. Although the advanced technologies that could contribute to the establishment of effective ballistic missile defenses would likely continue to be developed, the technological forecast and the necessity to choose among competing defense requirements suggest that the actual deployment of a major missile defense system would be unlikely during the forecast period.

In Europe, an adjustment of military contributions, tactics, and force postures would be possible, although no radical change should be expected -- the alliance would have little reason to depart substantially from its basic strategy of "flexible response." Steps to make full use of emerging conventional weapon, sensor, and command and control technologies to raise the nuclear threshold in Europe would be pursued vigorously and with some success. Some U.S. forces may be returned to the United States as a result of adjustments in NATO plans and force postures without causing undue political disruption within the alliance. Some of these forces could be equipped and trained to respond rapidly in the event of a crisis in Europe; others would be designated for use in crises in other theaters as well. Basically, the U.S. would rely increasingly on CONUS-based forces in a high state of readiness to respond to crises world-wide. Fiscal constraints on defense resources alone would cause the United States to move in this direction. The requirement for forces that could be used flexibly around the

world also would stress resources for airlift, fast sealift, and -- especially for European contingencies -- sea control forces.

The United States also would maintain a forward defense posture in Asia, continuing to cooperate with treaty allies and other friendly governments. The alliance with Japan would remain the bedrock of the U.S. position in Asia, with substantial American forces continuing to be deployed both in Japan and Korea. The relative stability expected in East Asia also would permit retention of the major U.S. bases in the Philippines. Although some improvements could be expected in the Japanese force posture, the current modest size and defensive orientation of Japan's armed forces would not likely change during the forecast period.

Only relatively small forces would have to be maintained exclusively for contingencies in the Third World, as major upheavals would not be expected. Present policies to improve the flexibility with which forces could be employed and to create an array of forces appropriate for the full-range of contingencies would be continued. Security assistance to friends and allies in the Third World probably would be increased, requiring increases in U.S. training missions and joint military exercises around the globe.

Terrorism would remain a serious problem, and the U.S. consequently would have to improve its means of dealing with this form of inter-state violence. Both cooperative international agreements and better unilateral military capabilities tailored to these contingencies would be mandatory.

More specifically, the following planning implications are suggested by the "extrapolated" environment:

1. Strategic Forces

- a. Continued modernization of all three offensive components to maintain essential equivalence;
- b. Deployment of theater nuclear forces comparable to those of the USSR;

- c. Research and development of defensive technologies, but no deployments within the forecast period.

2. Europe

- a. Continued adherence to NATO's agreed strategy of flexible response;
- b. Reductions in U.S. troops on the continent, but on terms acceptable to the allies;
- c. Continued evolution of NATO's military organization, to increase the European role, and doctrine, to increase the emphasis on maneuver and mobility;
- d. Continued emphasis on force modernization -- primarily in conventional forces but also for selected theater nuclear capabilities.

3. East and South Asia

- a. Slowly increasing Japanese capabilities for the defense of sea-lanes within 1,000 miles of Japan;
- b. Stable U.S. military presence in the Pacific;
- c. Continued modernization of South Korean forces, with a stable U.S. presence on the Peninsula;
- d. Limited security assistance to China, largely for defensive and dual-use equipment.

4. Middle East

- a. Continued emphasis on improving CENTCOM forces for contingencies not involving Soviet forces;
- b. Expanded security assistance to moderate Arab nations.

5. Africa

- a. Increased attention to light forces capable of evacuating nationals and countering terrorism.

6. Latin America

- a. Improvements in counter-terrorist capabilities;
- b. Continued political/military actions (exercises, temporary deployments) to restrict Cuban support for insurgent movements, and security assistance to friendly governments.

B. ALTERNATIVE TWO: DISORDER IN THE THIRD WORLD

In this scenario, relations among the major industrial nations are projected to proceed as described in the "extrapolated" environment: The Soviet Union tends toward weakness and internal pre-occupations but remains hostile toward the U.S., Western Europe and Japan; nationalism remains strong in Eastern Europe; ties between East and West in Europe, and particularly in Germany, deepen; despite strains of one sort or another, the basic Western alliance structure remains sound.

It is further hypothesized, however, that events in parts of the Third World do not proceed in the relatively optimistic fashion projected in the "surprise-free" forecasts. Rapid population growth in several regions creates social pressures resulting in mass migrations both within nations and across national boundaries. Faltering rates of economic development and a widening gap between the rich and the poor create popular disquiet, political power, and a fertile field for demagogues. Social movements expousing revolutionary ideologies, some advocating terrorism and other forms of mass violence, gain greater receptivity. What exactly might go wrong in these regions is hard to predict, but a number of the more disturbing possibilities were suggested in the major uncertainties identified by the experts interviewed for the study.

Most threatening would be possible events in the Middle East. As discussed in Chapter III, there is a fine balance in several nations of the Middle East at present between forces pressing for moderate, pragmatic policies which promise gradual economic development and slow improvements in the everyday lives of the masses of people, and those more radical elements who propose instant salvation through nationalism, ideology, or religion. Fundamentalist Islam has become increasingly popular in many countries, and it is certainly possible that over the next twenty years the world may witness additional, successful, fundamentalist revolutions in several nations -- Egypt, Pakistan, the Sudan, and Tunisia were

considered by the experts to be the most likely candidates. The possibility of a successful revolution in Saudi Arabia and other Persian Gulf states may be somewhat lower, but even more costly in terms of U.S. interests.

The "radicalization" of Egypt or Saudi Arabia, or of several of the less important states could alter the prospect for political/military relations in the region greatly. It would mean, first of all, that the present Iranian regime would almost certainly survive the death of its founder, the Ayatollah Khomeini -- a less certain possibility otherwise. It would almost certainly mean a substantial increase in state-sponsored terrorism throughout the region and beyond, along with a grave escalation of the Arab-Israeli conflict. It would probably not mean an increase in the opportunities presented for Soviet expansionism, as shown by the cool relations between Iran and the USSR at present.

But the main dangers of such a trend are unpredictable. Governments motivated primarily by extra-worldly or ideal objectives are capable of quite astounding actions, as illustrated during the past several years in the Iran-Iraq War. Many such actions could threaten U.S. interests. If Saudi Arabia were among the nations which succumbed to a fundamentalist revolution, for example, one would expect to see oil exports used frequently as a weapon of statecraft, a development which could threaten the security of Japan and some West European countries directly, impose grave economic costs on the entire industrialized world and many Third World nations, and conceivably make the pursuit of some U.S. policies -- e.g., support of Israel -- more difficult.

Other dangers also might be associated with a renewal of the fundamentalist tide. Although the extent and direction of these threats to Americans and their interests in the region are hard to predict, one is sobered to recall that Pakistan, one of the nations forecast overwhelmingly by the experts to have acquired a nuclear capability by the end of the century, is also considered

a primary candidate for a fundamentalist regime. Pakistan's acquisition of nuclear weapons, particularly if the nation were then governed by a crusading Islamic Government, also could have implications for the level of support provided to insurgents in Soviet-occupied Afghanistan and, for that matter, for stability in South Asia generally.

The latter, in fact, could be the scene of considerable trouble in this alternative strategic environment. In addition to the postulated change in the Pakistani Government, the scenario envisions considerable instability in India, with a strong possibility that the nation actually would devolve into several independent states. Pakistan under a fundamentalist government could be expected to attempt to strengthen nearly any forces within India which sought greater autonomy. Depending on the precise status and distribution of India's own nuclear weapon program -- (it is assumed by virtually all our experts that India will have produced a substantial nuclear stockpile before the end of the century) -- the situation could become extremely dangerous. Other nations in East Asia are also assumed to have been destabilized in this alternative strategic environment. Indonesia and the Philippines would be the most likely candidates for internal violence and turmoil.

Other trouble spots which might witness serious inter-state conflict in this type of scenario include southern Africa, where a significant escalation of the racial conflict is eminently feasible. This would almost certainly lead to economic disarray, disruptions in the production of strategic minerals, and opportunities for Soviet intervention. And, finally, one might postulate in this scenario a reversal of the currently favorable trends in South America, leading to economic stagnation, political turmoil in several countries, notably Brazil, and possibly the initiation of conflicts among several pairs of nations in the region.

The consequences of all this for U.S. interests could be severe. Most grave might be the potential in this scenario for

nuclear proliferation and, in fact, for the possible initiation of a nuclear war. If the most dangerous expression of this scenario became a reality, the use of nuclear weapons in South Asia would be a distinct possibility, as it would be in the Middle East. And even nuclear detonations in Latin America and southern Africa would be possibilities. Although the United States certainly could avoid any direct involvement in such conflicts, breaches of the now nearly forty year sanction against the use of nuclear weapons has worrisome implications for long-term security interests.

The U.S. also could be harmed by setbacks to its world-wide military position. The loss of key bases in the Philippines would be a distinct possibility. So, too, would be the loss of access and overflight rights, as well as other military arrangements, with several key countries in Southwest Asia and northern Africa.

A third set of risks to U.S. interests posed in this scenario are economic in origin. Both supplies of petroleum and sources of certain critical minerals would be jeopardized in this alternative future. Interruptions in the normal resource production and distribution system would be threatened simply by the instability and probable violence in southern Africa and the Persian Gulf region which could be assumed given the developments in political/military relations described here. Also, the likelihood that nations might attempt to manipulate supplies deliberately for policy objectives would be much greater. Either way, unless alternative sources or stockpiles had been prepared, the economic consequences of such actions could be severe.

Finally, even broader threats to U.S. interests would be raised by this scenario, for the international relationships which it postulates are unlikely to be very stable. Given the turmoil on its southern borders, for example, and signs of trouble in East Asia, China might consider alternative security arrangements -- a deal with the Soviet Union would be one possibility. Japan, too, might reconsider its close alliance with the United States,

over time, if the latter proved unable to contend with the rising level of violence and turmoil that would characterize much of the third world, particularly Japan's petroleum sources in Southwest Asia.

For all these reasons, if this scenario ever unfolded, the U.S. would likely attempt to intervene in at least some of these situations early-on (remember, we are postulating an activist U.S. foreign policy) to protect its national and economic interests, to defend embattled friendly regimes, to disrupt facilities and production systems that were being established to produce nuclear weapons, to shore-up its political position and alliance system, and for other purposes. In most cases, given our assumption concerning the continued weaknesses and internal preoccupations of the Soviet Union, active Soviet military opposition would not be anticipated. Rather, in this future environment, emphasis on U.S. military planning would be placed on relatively light forces that could be moved quickly and flexibly to a variety of potential trouble spots. In view of the prospective limitations on U.S. military facilities in these unstable regions, mobility forces, naval forces, and long-range strike aircraft also would be valued highly. These implications for military planning are discussed in greater detail below.

Implications for U.S. Military Planning

Given that there would be a greater likelihood in this strategic environment that nuclear capabilities might be found in the hands of extremely hostile, and possibly irrational, governments, one would expect to see a greater emphasis in the United States on the development of missile and aircraft defense systems. Research and development of advanced technologies for these purposes would likely be accelerated and, if the results were promising, one could see the beginnings of the deployment of a major system before the end of the forecast period.

With the Third World in disorder, but conditions in Europe relatively stable and cooperative, primary attention in U.S. military planning would likely shift from its present NATO focus. South and East Asia and the Middle East would demand primary attention: southern Africa also would require greater U.S. military capabilities.

It may be presumed that the West Europeans and Japanese would share U.S. concerns over growing instabilities in Third World regions, particularly in view of their dependence on these regions for critical resources. European governments and peoples presumably would be willing to assist in attempts to reduce turbulence and encourage greater stability. Initially, they would no doubt prefer that their role outside Europe be a non-military one, emphasizing economic and technical policies. As such, they might be expected to pick up more of the defense burden in Europe, thus facilitating a stronger U.S. military response world-wide. Over time, however, European-U.S. military cooperation outside the current NATO geographic guidelines might increase as well. Security assistance could be one avenue for such cooperation. Coordinated naval deployments could be a second.

In East Asia, the United States could be expected to increase pressures on Japan to share a larger portion of the defense burden and to strengthen the two nations' joint military effectiveness. The Japanese specifically could be asked to take on additional defensive maritime roles, along with an expanded role in missions more directly related to the defense of the Japanese homeland, such as air defense. It would be desirable to strengthen U.S. naval forces in the Pacific and Indian Ocean in this strategic environment. Given the relative stability that would characterize European affairs, and the presumed great contributions of the European members of NATO, some of this increase might be implemented by drawing down forces in the Atlantic. Moreover, in view of the potential loss of such currently friendly governments in East

Asia as the Philippines, the U.S. may have to direct substantial efforts in its foreign relations to securing access to new facilities in order to support sustained operations in South and East Asian waters; bases in Australia might be a possibility, for example.

The United States also could be expected to place greater emphasis on programs intended to strengthen the military capabilities of those governments in the Third World that remained friendly. U.S.-Korean cooperation, for example, could be stepped-up. Generally, security assistance programs can be expected to be expanded --while joint and combined military exercises could be used extensively to demonstrate both the commitment and strength of the United States and its remaining allies.

To be prepared for potential contingencies in Third World regions, the United States would require additional military forces equipped, trained, and ready to move rapidly to distant parts of the globe. Reliance on CONUS-based military forces thus would increase, a condition dictated by the need for flexibility and responsiveness. Greater European concerns as to world-wide threats to resources and political stability might make possible the withdrawal of additional U.S. troops from the Continent as compared to the "extrapolated" environment, thus making possible the fulfillment of this requirement within or near currently contemplated resource constraints. For the most part, given the expectation in this environment that the Soviets would be reluctant to become involved in major conflicts in distant regions because of their own domestic problems, incremental U.S. forces for Third World contingencies could be relatively light, mobile, and readily sustainable. The Marine Corps and other ready strike forces would be called upon frequently. Both airlift and fast sealift would have to receive a high priority, as would forces to protect lift assets enroute, and to operate with them if committed to action.

Terrorism would be a significant danger in this alternative environment, and substantial improvements both in international arrangements to combat such violence and in U.S. military capabilities to deal with it would be called for. Incentives to deal with terrorism at its source, particularly if terrorist elements appeared to be gaining access to nuclear capabilities -- which would be a very real danger in this environment, could be expected to be substantial. The U.S. military establishment would have to be prepared to implement any such policy decisively and effectively.

Specific implications for U.S. military planning of the "Disorder in the Third World" environment are listed below:

1. Strategic Forces

- a. Continued modernization of all three offensive components to maintain essential equivalence;
- b. Deployment of theater nuclear forces comparable to those of the USSR;
- c. Accelerated development of defensive technologies and, perhaps, initial deployments of a limited system.

2. Europe

- a. Continued adherence to NATO's agreed strategy of flexible response;
- b. Somewhat larger withdrawals of U.S. forces from Europe, as compared to the "extrapolated" environment;
- c. Continued evolution of NATO's military organization, to increase the European role, and doctrine, to increase the emphasis on maneuver and mobility;
- d. Continued emphasis on force modernization -- primarily in conventional forces, but also for selected theater nuclear capabilities;
- e. Greater deployments of European naval forces in Third World regions, along with renewed security assistance from some European nations to moderate regimes in Africa and Asia.

3. East and South Asia

- a. Somewhat greater increase in Japanese defense spending than in the "extrapolated" scenario, resulting in greater Japanese defensive capabilities -- anti-air and maritime defense;
- b. Larger U.S. naval presence in the Pacific and Indian Ocean (perhaps at the expense of Atlantic deployments);
- c. Enhanced U.S. air and ground presence in Korea, and accelerated U.S. security assistance to the Korean Government;
- d. Rapid deployment forces based in CONUS and trained for Far Eastern contingencies.

4. Middle East

- a. CENTCOM planning focussed on protection of oil resources from third nation and terrorist threats;
- b. Increased anti-terrorist capabilities, with particular attention to nuclear contingencies;
- c. Increased security assistance to remaining friendly governments.

5. Africa

- a. Rapid deployment forces based in CONUS and trained for evacuation and counter-terrorist missions;
- b. Larger U.S. security assistance role.

6. Latin America

- a. Improved counter-terrorist capabilities, with particular emphasis on nuclear contingencies;
- b. Increased security assistance to friendly governments;
- c. Rapid deployment force based in CONUS and trained for evacuation missions.

C. **ALTERNATIVE THREE: THE USSR RESURGENT**

The possibility that the USSR might break out of the systemic limitations which are the cause of the relatively passive role envisioned for it in both the "Extrapolated" and "Disorder in the Third World" strategic environments, thus posing far more severe challenges to U.S. interests and security, should certainly not

be ruled out. Much could happen within the Soviet Union during the twenty year period of this forecast. A rapid shift of power to a new generation of Soviet leaders, the consolidation of authority by one such individual and his successful implementation of reforms necessary to rejuvenate the Soviet economy and political system are all eminently feasible. With luck, such changes could lead to the rapid integration of modern technologies throughout the Soviet civilian sector, a substantial expansion in agricultural output, relatively rapid and sustained economic growth, and a new, outward-looking, and positive mood among the Soviet people -- to say nothing of a more confident and aggressive Soviet leadership.

Assuming that such developments occurred during the first half of the forecast period, the USSR could enter the 1990s and the early part of the next century with much greater strength and spirit. If aided by events in various parts of the Third World, and by ineffective or inadequate Western policies, the forecast period could witness substantial gains by the USSR in its global position and a much more severe challenge to American security.

The greatest potential prize is Europe. A more powerful Soviet Union should be able to exercise far tighter control of the recalcitrant nations of Eastern Europe. Dealing from a stronger hand in this scenario, Soviet leaders should be able to enforce greater discipline on the leaders and people of East European nations and assure greater conformity to the political and economic guidelines established by the USSR. If such persuasion were insufficient, the Soviet Union would be in a much better position to intervene directly with military forces to assure such conformity.

A Soviet position of strength in Eastern Europe, particularly if it had been attained without recourse to overt military intervention, also might make possible the partial accomplishment of long-standing Soviet goals in Western Europe. Specifically, in this alternative strategic environment we postulate the de-

militarization, neutralization, and re-unification of Germany. Building on the renewed sense of common identity so evident in Germany in recent years, and on continuing differences between German and American perceptions of the best policies to assure security in the nuclear age, one can imagine the emergence of powerful movements in both parts of Germany seeking the countries' withdrawal from NATO and the Warsaw Pact, and re-unification. A failure in the German economic recovery could contribute to such a development, particularly if it were juxtaposed against sustained recoveries in the United States and East Asia based on technological advances not available in Central Europe.

The Soviet Union certainly would encourage the emergence of such a movement in the Federal Republic as means of disrupting relations between the U.S. and West Germany. Whether or not the USSR, should the movement gain control of a German political party and eventually the West German Government, go along with its goal to the extent of permitting East Germany to withdraw from the Warsaw Pact and unite with the Federal Republic as a neutralized state (along the lines of the Austrian model), is obviously problematic.

Soviet leaders could see economic benefits from such a move -- particularly greater access to Western technologies and capital. They could see a relative military gain in that West Germany's contribution to NATO is far greater than is East Germany's contribution to the Warsaw Pact. They also could see considerable political benefit as the neutralization of Germany would constitute a very major step toward the destruction of NATO and the withdrawal of American power from Europe. This has long been a primary objective of Soviet foreign policy, and would create conditions in which the USSR would expect to dominate Europe politically.

On the other hand, the USSR's leaders would be concerned about the long-run implications of such a development. It can be assumed that Soviet leaders would never agree to the unification

of Germany unless the new state were effectively demilitarized. Even so, they would have some concern that any such agreement could not be enforced indefinitely; that eventually a united Germany would again turn into a powerful military threat to the USSR. The recent successful effort by Soviet leaders to force cancellation of the planned visit by the East German leader, Erich Honneker, to Bonn, demonstrates their concern about any moves toward German reunification. (Some West Europeans, notably the French, also might oppose German unification.)

In most circumstances, it would be extremely unlikely that the USSR would agree to permit the creation of a unified Germany. In the circumstances postulated for this strategic environment, however, it is not inconceivable that a renewed Soviet leadership, presiding over a surging Soviet economy and a newly consolidated Soviet position in Eastern Europe, might be willing to take such a gamble. In effect, Soviet leaders would be betting that the USSR's great military strength would permit it to dominate the newly unified German state politically, thus preventing any move toward the re-militarization of the new entity. They would be wagering further that the economic, military, and political benefits which would accrue to them from the decoupling of the Federal Republic from NATO -- notably, its implication for the eventual withdrawal of U.S. forces from the continent, would outweigh any long-term risk posed to their own security.

If West Germany did withdraw from NATO, the U.S. would have to reconsider fundamental elements of its security policy. As postulated in this strategic environment, we assume that the remaining members of the alliance would seek to fall-back to defensive positions focussed on France. The United States would continue to commit itself to the defense of Western Europe, and maintain substantial forces in Europe to make credible that guarantee, with the largest portion based in France and Britain. Faced with Germany's defection, it is assumed France would again integrate

its armed forces into the alliance's military structure and permit the stationing of American forces on its territory.

Beneficial events (from the Soviet perspective) also might occur on the USSR's southeastern border in this alternative strategic environment; in fact, the emergence of a less hostile, or at least less threatening China, would be a not unlikely development under certain circumstances. As noted previously, the course of events in China following Deng Xiaoping's rule is far from certain. Much would depend on how much time he had to install individuals in key party and government positions that share his pragmatic policy preferences and understanding that far-ranging reforms are necessary if China is to conquer its severe economic disabilities. Many other factors would contribute to the future course of events in China, including the effects of weather on the harvests, the success of the campaign to curb population growth, and the continuing tolerance of the Chinese Army with regard to the rate at which it receives more modern military equipment.

It is certainly possible, and more likely sooner rather than later, that the Chinese economy would fail significantly, leading to serious political unrest. Domestic turmoil could result from many other causes as well, including most importantly from a struggle for power among the Army leadership, government technocrats, and party officials in the aftermath of Deng's death. Who would emerge from such a struggle to rule China is far from clear. There clearly would be a possibility of the emergence of a pro-Soviet faction seeking both the re-building of ideological orthodoxy and the re-creation of close ties between China and the USSR. Indeed, the economic and political successes postulated for the USSR in this scenario could only increase the prospects for the ascendance of a pro-Soviet faction. Once in power, such a Chinese Government would likely quickly negotiate a border settlement that permitted the redeployment of large numbers of Soviet troops. Even short of such an eventuality, however, a tumultuous China, racked by

internal political conflict, uncertain of its economic future, and unable to play a commanding role in Southeast Asia, would constitute far less of a threat to Soviet interests and permit the USSR to devote greater attention (and resources) to other parts of the world.

Finally in this difficult scenario, we assume several significant opportunities for the aggrandizement of Soviet interests in various parts of the Third World. Most significantly, it is assumed that the past gradual moderation of the Arab-Israeli conflict is reversed -- probably because Egypt decides to step away from its peace treaty with Israel and resume an active role as a confrontation state. Several events might precipitate such a decision, including the development of a perception on the part of Egyptian leaders that they were losing control of the population to radical leaders, or actions by Israel toward the occupied territories which forced the issue of the future of the Palestinians. Regardless of cause, a renewal of Arab-Israeli conflict could provide substantial opportunities for the aggrandizement of the Soviet military and political position in the Middle East and concomitant dangers to U.S. security and economic interests.

A second danger spot in this alternative strategic environment could be southern Africa, where the emergence of substantial violence both within South Africa and between South Africa and bordering nations would be a distinct possibility, as described in Chapter III. Any such development could pose serious risks to Western sources of some strategic minerals.

The Caribbean and Central America offer a third region in which Soviet interests might be greatly enhanced in this alternative environment. In the absence of effective U.S. actions, there would be a possibility, according to the experts interviewed for this study, of major advances by Marxist-Leninist regimes in the region. In addition to Nicaragua, El Salvador, Guatemala, Honduras, Panama, Haiti and several additional Caribbean Islands conceivably

could fall victim to Cuban-supported revolutionary movements. If left-wing movements were successful in many of these countries, political instability also might spread to Mexico, with unpredictable results. Moreover, if the U.S. did not react decisively to these setbacks, Soviet leaders might be tempted to develop gradually their own military facilities in the region, something which they have avoided, so far, in the case of Nicaragua.

All in all, the strategic environment presented in this alternative would be a very dangerous one for the United States. It would provide a severe test, looking twenty years into the future, of U.S. general purpose and theater nuclear forces. In effect, the scenario envisions a Soviet Union poised to achieve its most important geo-political objective -- dominance of the Eurasian landmass -- as well as having substantial opportunities to enhance its position in regions of the Third World which are vital to American interests. All would not yet be lost to the United States if this strategic environment were to become a reality, but it would be a long and uphill struggle to regain a more secure position in world affairs.

Much would depend in this scenario upon the performance of the U.S. economy over the forecast period and the willingness of the American people to devote considerable resources to a sustained defense build-up. Given the defection of West Germany, preventing Soviet domination of the remainder of Western Europe would represent a severe challenge requiring substantial increases in the amount of resources devoted to NATO's defense on the part of all the remaining members, but realistically, also requiring decisive American leadership. Accelerated development of the emerging technologies described in Chapter II could contribute measurably to a satisfactory outcome, but it seems very unlikely that conventional forces alone would be sufficient to restore a credible deterrent posture.

U.S. leadership would be required also to maintain the alliance with Japan in this scenario and to prevent the renewal of close Sino-Soviet ties; strengthening the U.S. military position in Asia and the Pacific would likely be a prerequisite for effective action. Finally, dealing with Soviet inroads in the Middle East, southern Africa, and Central America could greatly stress U.S. naval and other maritime capabilities, placing additional demands on defense resources. These implications for U.S. military planning are spelled out in greater detail below.

Implications for U.S. Military Planning

It is obvious that in this strategic environment U.S. planning would have to re-focus on the Soviet Union and the greatly enhanced threats it posed to U.S. interests and objectives. Given the erosion of the U.S. position throughout the world, primary emphasis would likely be placed on assuring the security of the U.S. homeland, strengthening and modernizing strategic nuclear forces. Efforts to develop effective strategic defenses would probably be accelerated significantly. If the technology appeared promising, there could be initial deployments of the beginnings of a major system during the forecast period. The consensus of our technological experts, however, is that the necessary technologies are unlikely to be developed sufficiently to work effectively during the forecast period. In view of the likely squeeze on the defense budget in this strategic environment, this might mean a deferral of any deployment decision. Since dramatic changes would be taking place in both Europe and Asia, as well as in parts of the Third World, each of which would place demands for greater military capabilities, difficult decisions about priorities would have to be made even if substantially greater resources were allocated to the armed forces.

The neutralism of Germany would cause a basic rethinking of U.S. policies toward Europe. It is not at all inconceivable, perhaps even likely, that the realignment of German policy would

prompt the U.S. to embrace an isolationist policy, or to shift toward a strategy focussed heavily on the Pacific, leaving the nations of Europe to fend for themselves. Such a basic shift in U.S. strategy also could include a decision to rely more heavily on nuclear forces, perhaps in association with the eventual strategic defense of CONUS and key remaining allies.

France's willingness to resume the stationing of U.S. forces on French soil, however, and a commitment for greater resource allocations to defense by several European Governments, might induce the U.S. to attempt to maintain the NATO alliance. The use of French territory would make possible a defense in depth for NATO, but the French could not replace the FRG's military contribution to the alliance, particularly in ground forces. NATO might thus be compelled to pay increasing attention to nuclear strategies -- in effect compensating for its significant loss of conventional forces by raising the likely stakes of any new conflict in order to strengthen the deterrent value of the now smaller forces.

Assuming that the United States did attempt to maintain the NATO alliance, emphasis in U.S. military deployments would have to swing between Europe and Asia, depending on the situation at any one time. If Sino-Soviet ties improved and deepened over the years, the U.S. would be faced either with the freeing of substantial Soviet forces now deployed on the Chinese border for use elsewhere, particularly in Europe, or with a renewed Chinese threat to friendly nations and U.S. interests in Asia, or both. Presumably, the Japanese would allocate much larger amounts of resources to defense in this environment, making possible a significant extension of Japanese military capabilities.

As a result of these developments, the United States would have to recruit and equip larger general purpose forces. Given the fluidity of the situation in Eurasia, most of these forces

would have to be based in CONUS and provided with the capability to deploy rapidly anywhere in the world. Airlift, fast sealift, and sea control forces all would have to be strengthened measurably. Naval forces deployed in the Caribbean would have to be expanded as well. Since direct Soviet military intervention in virtually any contingency would be a far greater risk in this environment, both U.S. forces (and the equipment provided to U.S. allies) would have to be more sophisticated and capable of defeating a more advanced foe. The option of utilizing more lightly equipped forces for Third World contingencies would be more risky in this strategic environment than in the two described previously.

Terrorism would be a serious problem in this environment, as in the previous ones, but relative to the threats posed by the USSR the demands posed by terrorist contingencies would be minor. There likely would be a greater tendency within the United States towards unilateralism and isolationism, given the failure of our previous European policy. To compensate for this and to demonstrate that we were not cowed by Soviet expansionism, U.S. officials could well become more aggressive, thus placing greater demands on the military establishment. In the end, though, very difficult decisions concerning priorities almost certainly would have to be made. Unless the U.S. population (and allied nations) were willing to support the armed forces on an almost wartime footing, it is difficult to see how all U.S. commitments could be sustained in the face of such adverse developments in international political/military relationships.

Specific implications for U.S. military planning of the "USSR Resurgent" environment are summarized below:

1. Strategic Forces

- a. Enlargement and accelerated modernization of all offensive components in an effort to gain a measure of superiority;
- b. Accelerated and expanded deployments of theater nuclear forces in an effort to achieve escalation dominance;

- c. Accelerated development and, possibly, initial deployments of elements of a major ballistic missile defense system.

2. Europe

- a. Revision of NATO strategy to place greater emphasis on nuclear operations;
- b. Redeployment of some U.S. forces from Germany to U.K., Benelux nations, and especially France -- return of other U.S. units to CONUS, where they would be prepared for use in contingencies in Asia or Europe, together with incremental ground forces;
- c. Re-integration of France into NATO's military structure;
- d. Accelerated modernization of conventional and nuclear forces, with special emphasis on tactical nuclear capabilities;
- e. Increased emphasis on sea control capabilities.

3. East and South Asia

- a. Greatly expanded Japanese military capabilities, to include forces both for defense missions and to exert Japanese influence into the Indian Ocean;
- b. Expanded U.S. naval presence in the Pacific and Indian Oceans;
- c. Enhanced U.S. ground and air presence in Korea, and greater security assistance to the Korean Government.

4. Middle East

- a. Expansion and "heavying-up" of CENTCOM forces based in CONUS to defend oil resources from Soviet threats (see 2.b.);
- b. Expanded security assistance to moderate governments;
- c. Expanded naval presence in the Indian Ocean.

5. Africa

- a. Increased attention to light forces for evacuation and counter-terrorist missions;
- b. Expanded security assistance to moderate regimes.

6. Latin America

- a. Increased naval presence in the Caribbean and South Atlantic;

- b. Expanded political/military actions (exercises, temporary deployments) to restrict Cuban support for insurgent movements and security assistance to remaining friendly governments.

D. ALTERNATIVE FOUR: AN ANARCHIC ENVIRONMENT

The fourth strategic environment incorporates radical changes from the structure of international politics that has prevailed since the end of the Second World War. It is probably also the most dangerous environment, even though it postulates a greatly reduced threat from the Soviet Union. To construct this environment, we have assumed that the Soviet people would eventually lose patience with the many failures of Soviet leaders and the continual thwarting of their own national and human aspirations, leading to a condition of chronic turmoil and some violence within the USSR itself. Simultaneously, however, we also have assumed the break-up of the American system of alliances and the emergence of independent, nationally minded, and nuclear-armed industrial powers in Europe and Japan. According to the scenario, the trends now evident toward economic protectionism, the decline of international organizations, and nationalism continue and accelerate. The U.S. eventually returns to isolationist policies, renouncing most of its existing security commitments. With this complex and uncertain structure of relations, and with the tumultuous situations also envisioned in the Third World (see below), the possibility of major conflict eventually involving the United States has to be assumed to be extremely high.

Future events in Eastern Europe and the USSR would be particularly unpredictable. How long disorders such as those postulated in this scenario could continue in the Soviet Union without provoking some sort of desperate response on the part of the Soviet armed forces or political authorities is impossible to predict. During the period of unrest, the threat posed by the Soviet Union to other nations would probably be diminished greatly. None of

the experts interviewed for this study credited the commonly expressed theory that a besieged Soviet leadership might lash out in a move to divert attention at home and bolster the leadership's position with a military triumph. But radical external actions by Soviet leaders faced with a rapidly deteriorating domestic situation would have to be considered a possibility nonetheless.

Although relations between the United States and the new defense entity in Europe would not necessarily be adversarial, the French-led alliance would likely seek to demonstrate its independence of the United States, and pointedly, its neutrality between the U.S. and USSR, which could lead to economic and political conflicts, if not military difficulties. The European defense entity necessarily would depend on threats of immediate nuclear escalation as the primary element in its defense posture since it could not possibly compete with the USSR to maintain an adequate balance of conventional forces.

European factors on both sides of what might again be called the "Iron Curtain" would likely be maintained in a high state of readiness. The situation inevitably would be tense, with the possibility of a massive Soviet action to crush Eastern Europe -- thereby eliminating the primary inspiration of its own domestic dissidents -- a significant risk. Any such action, of course, could spill over easily into the West.

A similarly unpredictable situation would prevail in East Asia. Japan is postulated to re-arm, including the acquisition of nuclear weapons (not a completely far-fetched possibility according to the proliferation experts), and to pursue a foreign policy independent of the United States. Such a development would shatter the relative stability which now characterizes relations in the region. Both Sino-Japanese and Soviet-Japanese relations would be tense; were it not for the USSR's domestic troubles or those on its Western borders, one would expect a decisive Soviet action to nip the new Japanese threat in the bud -- perhaps by

imposing its own control over Korea, Manchuria and portions of northern China.' Nations on the margins of these great power struggles would seek protection somewhere. Whether they would ask the U.S. for security guarantees or try to develop a security relationship with one of their closer neighbors would probably depend upon how far U.S. isolationism had proceeded already and what the early consequences of this shift in American policy had been for other nations that depended on U.S. security guarantees.

The rest of the world would witness violence and bloodshed on a major scale. All nations would pursue whatever nuclear options might be available to them, and the likelihood that one or more nuclear wars might actually take place before the end of the century would be high. The U.S. might continue to support a few of its closest allies in the Middle East or Africa, but nuclear threats would likely be very close to the surface of any commitment we made abroad. More extensive U.S. involvement could probably be expected in the Western Hemisphere, but even here policy may well have to include a nuclear component, given the proliferation forecast for Brazil and Argentina.

It is likely that an environment such as that described in this "anarchic" scenario would be short-lived; the scope and intensity of likely conflicts are so great and the political instabilities so sharp that the pattern of international relations described here seems almost certain to be transformed into something else within a few years. One can imagine the creation of broader European and Asian coalitions, resulting in a sort of Orwellian tri-partite international system, as one possibility. Or, assuming that a strong leader finally emerged in the USSR and that major nuclear war had been avoided in Eurasia, one would suspect that eventually the Soviet Union could re-assert itself and, in the absence of U.S. power, gain dominance over the entire Eurasian landmass, perhaps including the Middle East. This would leave the two hemispheres -- one led by a renewed Soviet Union, the other by the United States -- as the only significant powers

in world affairs. Still other possible scenarios could be described, with a world-wide nuclear conflagration far from the least likely.

The United States' ability to defend its interests in such an international environment would depend on many factors. How quickly we could develop certain military technologies (and exactly how capable they might prove to be) would be particularly important. Technologies which promise effective defenses against nuclear-armed missiles would be the most important aspect of this uncertainty, but other military capabilities could be importantly expanded as well.

A second question would concern the willingness of the American people to sacrifice for their own defense. Although the withdrawal of American forces from Europe, Japan, and other areas would greatly reduce the cost of defense, the advanced technologies necessary for effective defenses would be extremely expensive to develop and deploy on a major scale. In addition, given the tumult which would characterize world affairs, one would expect a sharp decline in economic output. International trade would decrease. Such basic resources as petroleum could become more scarce and therefore more expensive. Fiscal and trade cooperation among the industrial powers would deteriorate. Debtor nations in the Third World and Eastern Europe would almost certainly repudiate their debts leading to the collapse of the international financial system. The result could be a severe economic crisis in this country, just as we were seeking to increase defense expenditures to deal with new threats to our security.

Implications for U.S. Military Planning

Political and military developments like those envisioned in this strategic environment would necessitate a major reorientation of U.S. military strategy. Demands for general purpose forces would be greatly reduced, particularly the major ground and air

forces now planned for contingencies in Europe. In their place, the U.S. could shift to a two tiered strategy.

First, there would be a crash effort, such as was the "Manhattan Project," to develop and deploy a spaced-based system capable of defending the United States from missile attack. In view of the emergence of additional nuclear-armed industrialized nations, the uncertain stability of relationships and the high risk of war among the great powers in Europe and Asia, and the United States' lack of effective military leverage in Eurasia itself -- all of which are postulated in this scenario -- the U.S. would essentially have no alternative to protect its security. Maintaining an effective and stable nuclear deterrent in a bipolar world is difficult enough. Attempting to continue to pursue a deterrent strategy in a world populated by four, five, or even six major nuclear powers would be a most uncertain (and insecure) course of action.

Thus, the U.S. almost certainly would do whatever were possible to accelerate the development and deployment of a major system. Whether such a crash program would be successful or not, of course, is unknowable. Almost regardless of its actual capabilities, however, there would be great pressures to deploy whatever type of system were available.

Initially, a defensive system might be deployed even if its capabilities were limited to defending against attacks by smaller nuclear powers and warding off the sort of ragged and limited attack that likely would result from accidental or unauthorized launches. The tremendous proliferation of nuclear capabilities and the break-down of alliances (and internal order in nuclear states) expected in this scenario could well make the deployment of defensive systems with even limited capabilities a prudent step, even if it could be taken only at great cost. Moreover, such a limited system conceivably could serve as a building block in the construction of a more extensive system capable of defend-

ing against more substantial attacks. Along with deploying a defensive system, of course, the U.S. also would likely pursue the expansion of offensive nuclear forces.

Second, the U.S. probably would pursue a largely maritime strategy to reassert its dominance over the Western Hemisphere, and also to protect its interests (narrowly defined) and back-up whatever security commitments were retained overseas. Heavily-armed and technologically sophisticated naval strike forces; lightly-armed ground units capable of rapid and decisive entry into troublespots anywhere on the globe; appropriate lift and sea control forces; and long-range, land-based strike aircraft all could contribute to such a strategy. To the extent that the use of these forces were considered in Europe or Asia, however, they probably would have to be backed with tactical nuclear capabilities -- at least as a deterrent.

The precise size and configuration of the U.S. force posture best suited for such a radically different international environment is a question that requires considerably more study. It might include the following elements:

1. Strategic Forces

- a. Continued modernization and expansion of all offensive components;
- b. "Crash" development and initial deployments of a space-based ballistic missile defense system;
- c. Deployment of substantial air defenses, civil defenses, and dedicated strategic ASW forces.

2. General Purpose Forces

- a. Substantial cut-backs in ground forces and re-orientation of most remaining forces toward missions involving the rapid insertion of relatively lightly armed units to protect specific national interests abroad, to evacuate nationals, and the like;
- b. Re-orientation of tactical air forces to two missions: (i) defense of CONUS, and (ii) use of long-range aircraft

- and rapidly deployable fighter aircraft for specific and time-limited contingencies in the Third World;
- c. Redeployment of naval forces and their eventual restructuring for four missions: (i) strategic ASW; (ii) defense of the sea approaches to North America; (iii) positive control over the Caribbean, South Atlantic, and zones proximate to the U.S.; and (iv) limited operations to project American power for restricted time periods on the margins of Eurasia and Africa.
 - d. Development of advanced types of tactical nuclear weapons for all three types of forces;
 - e. Greatly reduced security assistance focused narrowly on nations in the Western Hemisphere and what few U.S. allies remained in the Eastern Hemisphere.

E. ALTERNATIVE FIVE: AN OPTIMISTIC ENVIRONMENT

Finally, we might consider the military implications of a very optimistic, but still plausible scenario. In this case we assume that the United States maintains an activist foreign policy, continuing to deploy substantial armed forces in Europe and Asia in support of security commitments to the members of NATO, Japan, South Korea, and other nations. We assume, moreover, as in the "surprise-free" forecasts, that despite continuing political and economic differences among their members, and despite continuing fiscal and societal constraints on military options, that these alliances manage to muddle through -- maintaining military forces and a degree of cooperation with each other and the United States which, if not fully satisfactory in the eyes of defense officials, at least are sufficient to cause potential adversaries to prefer to avoid armed conflict in most circumstances.

We assume the "surprise-free" forecast in the case of the Soviet Union as well -- a continuation of the current stagnant economy, a paralyzed political system, and a disaffected society. The experts suggest that an even more negative projection of developments in the USSR may be plausible -- the aggravation of these problems to the point of sustained internal disorders. This likely would be an unstable configuration, however. On the one

hand it might lead to sharp reversals in Soviet economic and foreign policies along the lines of those adopted by the Chinese: Radical measures to decentralize the economic system and to create incentives for more productive individual behavior, as well as a moderation of foreign and domestic political policies so as to encourage Western trade with, technological transfers to, and even investment in, the USSR. Such actions might be taken cynically, with the long term plan of reverting to more aggressive policies once the economy had turned around, or they might represent a genuine change of heart among new generations of Soviet leaders. On the other hand, an acute crisis within the USSR might lead, of desperation, to the emergence of a strong traditional leader in the USSR able to consolidate his authority rapidly and to reassert a more aggressive foreign policy. In view of this second possibility, in terms of U.S. long-term security interests, a USSR continually on the verge of failure may be preferable to a USSR in which the failures of the economic and political systems were so overt as finally to compel decisive actions to reform current processes.

We do assume the most negative projection of events in Eastern Europe -- sustained economic and political disaffection leading eventually to violence in one or more nations. It can be assumed that in such an eventuality, the USSR -- despite its weakened domestic situation -- would intervene militarily to reassert control. Any such actions implicitly contain some risk of getting out of control and leading to an East-West conflict. Additionally, disorders in Eastern Europe would have two major implications for Western security interests.

First, a Soviet Union preoccupied with maintaining its military control of Eastern Europe and preventing the dissension prevalent among its allies from spreading more intensely to its own population is unlikely to pose overt or immediate threats to Western Europe, the Persian Gulf, or other regions of interest to the United States. There would be concern, of course, that a decaying

Soviet empire might lash out at its neighbors -- and preparations would have to be taken to deter any such desperate gamble.' But the physical demands on Soviet forces and logistics generated by the East European contingencies, the consequent preoccupation of Soviet decision-makers and policymaking processes, and the inevitable concern of Soviet officials that other nations -- e.g., China -- might take advantage of the situation in Europe for their own benefit, all argue that in such an environment the threat posed to Western interests by the USSR would be less demanding, not more.

The second implication sees that any new Soviet intervention in Eastern Europe might also result in greater support in Western Europe for more assertive policies and greater resource allocations for defense. In the past, Soviet interventions have had the effect of making the Soviet military threat more tangible and the concerns often expressed by Western defense officials more credible. Even the Soviet-inspired coup by the Polish armed forces and the institution of martial law in Poland in 1982 had the effect of turning opinion in France and other nations toward greater support of more tough-minded policies toward the USSR.

In East and South Asia we assume the "surprise-free" forecast with a small variation. China is assumed to remain stable internally, to progress economically, and to remain tacitly allied with the West. The troubled nations on the rim of the region are assumed to continue to develop economically and, moreover, to progress toward more stable political systems. Japan, too, is assumed to remain prosperous and allied with the United States. In addition, however, Japan is assumed to allocate significantly greater resources to defense, thus building up its conventional military power significantly while remaining in close association with the United States and other democratic nations. (The continuing close association with the United States presumably would preclude Japan's acquisition of nuclear capabilities.)

Although not suggested by the experts interviewed for this study, several knowledgeable commentators on previous drafts mentioned this possibility as being at least as plausible as a Japan which re-armed and struck out on an independent foreign policy course. Judgments as to the plausibility of such a development aside, it certainly would be beneficial from a U.S. perspective. Quite apart from the increment of military power thus added to the Western position in the Pacific, Japanese rearmament within such a context would ameliorate the otherwise likely negative effect of a more powerful Japan on the perceptions of China and nations in Southeast Asia.

The "surprise-free" forecasts are also assumed for the Middle East and Africa, both of which offer relatively benign environments for U.S. military planning. In Central America we assume that a vigorous U.S. policy manages to "roll-back" the previous trend toward the extension of Marxist-Leninist regimes in the region. Although not likely to extend to Cuba itself, and not the most likely case by any means, such a development is feasible according to our experts.

1. Implications for U.S. Military Planning

The "optimistic" strategic environment would offer relatively fewer and less demanding challenges to American security and thus would suggest the possibility of reductions in U.S. military forces. The projected greater contributions of European members of NATO and Japan would permit some reductions in U.S. forces deployed in those regions and, eventually, cut-backs in general purpose force levels. Favorable political developments in the Middle East, Southwest Asia, East Asia, and Central America would defuse situations which otherwise -- in the "extrapolated" environment, for example -- might pose incremental demands on U.S. general purpose forces. It might also be possible to reduce nuclear modernization programs and force levels in this environment, if the Soviet Union's

much weakened position made it possible to reach arms control agreements on relatively favorable terms.

Obviously, any reductions in U.S. forces could neither be taken rapidly nor proceed too far during the forecast period. This environment is not the millenium by any means; military power would remain the ultimate guarantor of the nation's security and a key instrument in support of its foreign policies. Events in several regions would remain unpredictable; prudence would dictate the maintenance of a strong force posture to assure the continued close cooperation of alliance partners, the deterrence of any Soviet adventures, and the continued favorable disposition of such key non-aligned nations as China. Moreover, there would continue to be threats in this international environment from terrorist groups and smaller hostile nations, such as Cuba and Iran, which would require specialized forces described below. Still, over time, if the international system described in this environment proved to be stable and lasting, it might be possible to negotiate formal political settlements to legitimize the evolution of events and a range of arms control treaties to build confidence among former antagonists and to assure mutual reductions in forces. If so, by the next century the world could well be a more peaceful and less dangerous place.

Specific implications of this environment for U.S. military planning are listed below.

1. Strategic Forces:

- a. Continued modernization of offensive components, including theater nuclear forces, on a selective basis, with reductions in force levels feasible if arms negotiations prove to be productive.
- b. Moderately paced research and development of defensive technologies, with the possibility of deployments in the next century.

2. General Purpose Forces:

- a. Modest withdrawals of U.S. ground forces from Europe and some cuts in overall force levels due to reductions in projected threats in Asia and Latin America.
- b. Continued modernization of tactical air forces, with the possibility of some cut-backs in force levels toward the end of the forecast period.
- c. Continued modernization of naval forces, with the possibility of some cut-backs in force levels as allies -- particularly Japan -- assume greater responsibilities.
- d. Continued security assistance as in the "extrapolated" strategic environment.

CHAPTER V

CONCLUSIONS

It is only prudent to be tentative and cautious in forecasts of international events, particularly forecasts with as broad and distant a sweep as those in this study. In all probability, none of the alternative strategic environments described in the preceding chapter -- not even an approximation of one -- represents accurately the full pattern of global political/military relations that will emerge at the turn of the century.

Twenty years is a sufficient period of time for completely new societal movements to be created and incubated, and to begin to exert major impact on events in particular nations or regions. No matter how many experts are consulted in preparing a forecast, nor how knowledgeable those experts may be, there is always the possibility that somewhere -- in the villages of South Asia or in the slums of South America or in the cities of Europe -- a new system of beliefs, or a new charismatic leader espousing an old belief system in new guise, may now, unknown to us, be gaining strength and influence. When such a movement matures, as did the Islamic Fundamentalist movement in the late 1970s, it can alter substantially the expectations of all outside observers, creating previously unthought of possibilities and uncertainties.

It also must be recognized that the five alternative strategic environments previously described represent "pure" cases and, as such, are unlikely to be realized fully. In effect, they constitute straight-line extrapolations of one or another of the more salient current trends over the full forecast period. In reality, events do not proceed in such a direct fashion. There is a self-limiting factor in world politics. Each action tends to create a counteraction. Each social force tends to create a counterforce. Cumulatively, over time, the impact of new forces tends to be blunted and diverted. Consider, for example, the current status

of the international trends which dominated world politics in the late 1970s:

(a) The successes of Islamic Fundamentalism led to the re-emergence of individuals espousing secular pragmatism and greater moderation in several Arab nations, resulting in the repression or co-option of more radical elements. What seemed five years ago to be an irresistible tide has at least been blunted, if not yet defeated.

(b) Oil power, in the 1970s the dominant force in the world economy and apparently a powerful political instrument, resulted in greater energy conservation, the accelerated development of alternative sources of energy, and a global economic recession which depressed the oil market and greatly weakened the influence of the oil producers.

(c) The expansion of Soviet influence in the Third World, seemingly unstoppable in the 1970s, resulted in fact in greater internal resistance to Communist subversion on the part of several nations, as well as more assertive U.S. policies and defense programs and, as pointed out in several of the regional sections, is now apparently being reversed.

Each new development thus altered the trendline, but also lead to the creation of counterforces which in turn impacted on events and patterns of relationships, causing the future environment to diverge less substantially from the original trendline than, at one point, might have appeared likely. Yet, while not taking events as much in the direction that the original social force seemed to suggest, such major developments as the Islamic Fundamentalist revolution or the advent of oil power clearly do make a difference. The emergence of counterforces typically is not sufficient to drive the trendline back to its original bearing; events move in some new, usually compromised, direction.

Forecasting the future, as compared to describing plausible alternative futures, thus requires that the analyst go beyond the identification and extrapolation of key trends. He or she must somehow integrate the consequences of many competing social forces and events, and forecast the net effects not only of those factors but also of the counterfactors that inevitably will emerge in response.

On the basis of all available evidence, the "surprise-free" forecast appears to this writer to be clearly the most likely of the five alternative strategic environments. Still, with the benefit of having contemplated all the experts' comments and also to have examined numerous projections of the various contributing variables, the "surprise-free" forecast seems somewhat too pat -- too similar to the present pattern of international politics. Somehow, intuitively, the "surprise-free" extrapolation seems to discount excessively the ultimate impact of extant economic, demographic, and technological trends on political relationships. If the reader will indulge, I would like to express a personal view of the likely future pattern of international relationships at the end of the century.

The "surprise-free" forecast does seem about right for the Soviet Union. From all available evidence, the USSR's internal problems are so severe as to exert major constraints on that nation's ability to pursue an effective or aggressive foreign policy for most, if not all, of the forecast period. At the same time, given the pervasiveness of the Soviet internal security system and certain attitudes of the Soviet people, it seems unlikely that these problems would lead to serious internal unrest and disorders. There are, of course, the twin possibilities of the early accession of a powerful new Soviet leader committed to fundamental reform of the Soviet political and economic systems, on the one hand, and a desperate attempt by any Soviet leadership cadre to override domestic problems by creating international

crises, on the other. In the writer's view, however, there is little empirical reason to consider either alternative to be more than a remote possibility.

The European forecast appears to the writer to be the most understated as concerns potential changes in fundamental relationships. There do seem to be very basic divergences in perspectives on foreign and defense policies emerging between Americans and West Europeans -- divergences which are accentuated when the attitudes of younger generations are examined separately from those of their elders. Moreover, the alliance seems to be moving into an ever narrowing space as concerns its strategic options; tightening financial and political constraints on NATO's defense choices seem to be hardening over time, making it more and more difficult for the alliance to define a credible posture. The Warsaw Pact faces even more difficult problems, as the resilience of East European nationalism portends continuing problems for the Soviet Union in defining a satisfactory relationship with its erstwhile allies.

The results of these trends are unlikely, in the author's view, to be as dramatic as the re-unification of Germany or the total withdrawal of American military power from the Continent -- at least not in the relatively short period examined in this forecast. Still, one can foresee a gradual loosening of military ties within the two alliances and a coincident dampening of the military competition between NATO and the Warsaw Pact.

One can almost imagine a "settlement" of the long post-war struggle for Europe. Such a settlement would include tacit recognition of the permanence of the formal demarcation of the Continent between opposing social systems, but co-incident tacit recognition of the necessity of maintaining a stable, peaceful, and permeable East-West boundary. In such circumstances, there could develop a very rich and complicated system of interconnections between East and West in Europe, and far greater independence for the nations

AD-A159 156

ALTERNATIVE STRATEGIC ENVIRONMENTS 1994-2004(U)
INSTITUTE FOR DEFENSE ANALYSES ALEXANDRIA VA
B M BLECHMAN JAN 85 IDA-P-1785 IDA/HQ-84-28746

3/3

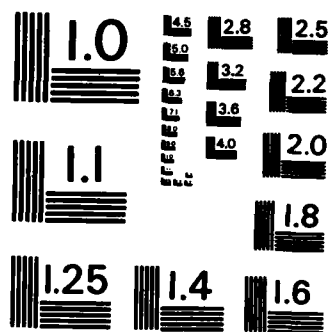
UNCLASSIFIED

MDA903-84-C-0031

F/G 15/7

NL





of Eastern Europe -- at least as concerns the economic policies they choose to pursue, and even as concerns their relative freedom to pursue their own national cultures and styles of political expression. Such a "settlement" also implies a reduction of American influence in the West, and the region's effective withdrawal as a source of contention between the United States and the Soviet Union. It does not, however, imply the Continent's "Finlandization," in the pejorative sense that term has come to be used. It means that within the formal system of alliances, Europeans will come to be the masters of their own fortunes, free to determine their own economic policies and internal political arrangements, with the influence of both the United States and the Soviet Union greatly reduced.

I would be far less optimistic about the future course of events in East Asia. Here, two grave uncertainties -- the future policies and orientation of China and Japan -- depend mainly on internal developments in those nations, but importantly also on the future effectiveness of American policies. None of the experts, and certainly not this writer, feels sufficiently confident to predict the future course of affairs in China. It must suffice to note that a substantial change in that nation's currently pragmatic domestic policies and relatively moderate foreign policies would have the most severe implications, not only for the future course of events in the region, but also for the most basic power relationships on a global scale. As for the future of Japanese policies, as in the case of Western Europe, one must wonder whether changing attitudes on the part of younger generations must not eventually lead to re-ordered national priorities -- in this case toward a greater emphasis on national military power. If so, then the question of whether such capabilities are developed within a framework of close U.S.-Japanese relations or in support of an independent Japanese foreign policy becomes crucial. In view of the trend toward greater economic and technological competition between the U.S. and Japan (and other nations in East Asia),

this writer has substantial concern that greater Japanese independence is more likely than not. And if that guess is accurate, then there is a potential for considerable discord in the future.

In South Asia there are a number of uncertainties with substantial potential for violent change. The strength of Islamic Fundamentalism in Iran and Pakistan, the continuing struggle between Iran and Iraq, the continuing insurgency in Afghanistan, the centrifugal forces in India, and Pakistan's continuing efforts to acquire nuclear weapon capabilities -- with their implication of an Indian-Pakistani nuclear arms competition within the forecast period -- all portend tremendous instabilities, radical political change, and -- should these trends lead to direct Soviet intervention or threaten the oil-producing areas -- the possibility of U.S. involvement in military conflict.

Elsewhere in the Middle East (including North Africa), I would agree with the experts that prospects are improving; there seems to be a trend toward pragmatism and moderation that can benefit the United States in important ways. The crucial variable here, though, is the future course of events in Egypt; as in the case of China and Japan, U.S. policies can make important contributions to assuring favorable outcomes.

The experts' forecasts also seem reasonable for other Third World regions: most of the nations of South America seem to be on the road toward more stable political systems and renewed economic development, with continued success in resolving the "debt crisis" and future events in Brazil being crucial. Africa, south of the Sahara, on the other hand, seems to be mired hopelessly in a deteriorating situation, with both economic and political prospects in much of the Continent seeming particularly grim. The situation in the south, moreover, weighs heavily on the future course of events in the region. Given the apparent attitudes of the majority of the white population in South Africa, it is difficult to foresee a peaceful resolution of the situation; a forecast

which, if accurate, can only suggest even more pessimistic economic and political prospects.

Such a strategic forecast has important implications for U.S. military planning. It suggests the possibility of a de-emphasis of strategic offensive forces (presumably through the vehicle of negotiated mutual reductions in U.S. and Soviet forces). It also suggests the possibility of substantial withdrawals of American troops from Europe and gradual reductions in U.S. general purpose forces intended for European contingencies. At the same time, this scenario implies substantial incremental needs for U.S. general purpose forces for South and East Asian contingencies. One need not foresee the actual involvement of the United States in military conflicts in those Asian regions to reach such a conclusion. If events develop in as calamitous a fashion as seems feasible in South Asia, substantial, applicable U.S. military power will be necessary simply to deter adversaries from taking advantage of the situation and to exert a certain amount of diplomatic leverage. And if developments in China and Japan should proceed adversely, a strong American military posture might be helpful in defining a new relationship among the great powers in the region which can help to protect vital American interests.

In general, in this writer's opinion, we are likely to observe over the next ten to twenty years a continuing diffusion of power. Despite its great military power, the Soviet Union will be unlikely to dominate events. And, despite not only its great military power but also its tremendous economic leverage, neither will the United States. If anything, there is likely to be a further leveling of national power. Most projections foresee the United States dropping from roughly 30 percent of the world's gross national products at present, for example, to about 20 percent in the year 2000. And, militarily, the continuing proliferation of nuclear weapons' capabilities and advanced conventional weapons' technologies must, over time, tend to restrict the abilities of the great

powers to dominate world events -- or at least to do so with impunity.

A recent trend toward accelerated international entropy has been frequently noted. And indeed it seems from this study, as well, that there is a tendency toward reduced international cooperation, toward a weakening of international institutions, toward economic protectionism, toward independent foreign policies, toward frequent recourse to military force. For better or worse, this trend seems likely to continue. It suggests that the world will continue to be a violent and dangerous place -- one in which military power continues to play vital and legitimate roles in defense of the nation's interests.

Appendix A

DELPHI PANELS FOR TECHNOLOGICAL AND PROLIFERATION FORECASTS

Modified Delphi techniques were used to develop the forecasts of both military technologies and nuclear proliferation. This method is used to elicit a consolidated view from a group of experts without subjecting them to the group dynamics which sometimes can prejudice the results of meetings.

In the Delphi methodology, forecasts are developed strictly through correspondence. Panel members are asked an open-ended question at first. The responses are tabulated and the aggregate results are sent to each panelist. Respondents are then given an opportunity to alter their response in view of the overall results or to explain their positions. The basic question can be narrowed at this juncture as well, by specifying particular assumptions that should govern responses.

A. MILITARY TECHNOLOGY

We asked 22 distinguished scientists and technologists, all of whom have had experience within the Defense Department or on defense advisory committees, "Which potential technological developments, in your opinion, would have a significant impact on U.S. national security?" The question was posed with deliberate vagueness so as to encourage wide-ranging responses, covering not only developments in military technologies, but also developments in other areas that could influence military planning.

The results of the first Delphi round were disappointing in the case of the technological forecast. Only two-thirds of the initial panelists responded, thus leaving gaps in the scientific specialties covered. Given this poor response, and the fact that the answers which were received were disparate in content and approach, a second round was foregone.

Consequently, the results of the written responses were supplemented with several interviews and studies that had been prepared previously to generate the forecasts described in Chapter II. A list of the individuals participating in both aspects of the process follows:

Anonymous -- a very senior American scientist interviewed for the study requested that he remain anonymous.

Paul Berenson -- Defense Science Board

Arden Bement, Jr. -- TRW Inc.

James Burnett -- TRW Inc.

Seymour Deitchman -- Institute for Defense Analyses

John Deutsch -- Massachusetts Institute of Technology

Sidney Drell -- Stanford University

Alexander Flax -- Institute for Defense Analyses

Charles Herzfeld -- ITT Corporation

Joshua Lederberg -- The Rockefeller University

Michael May -- Livermore National Laboratory

William Perry -- Hambrecht and Quist

Samuel Tennant -- The Aerospace Corporation

Leonard Sullivan -- Systems Planning Corporation

Charles Zraket -- The MITRE Corporation

B. NUCLEAR PROLIFERATION

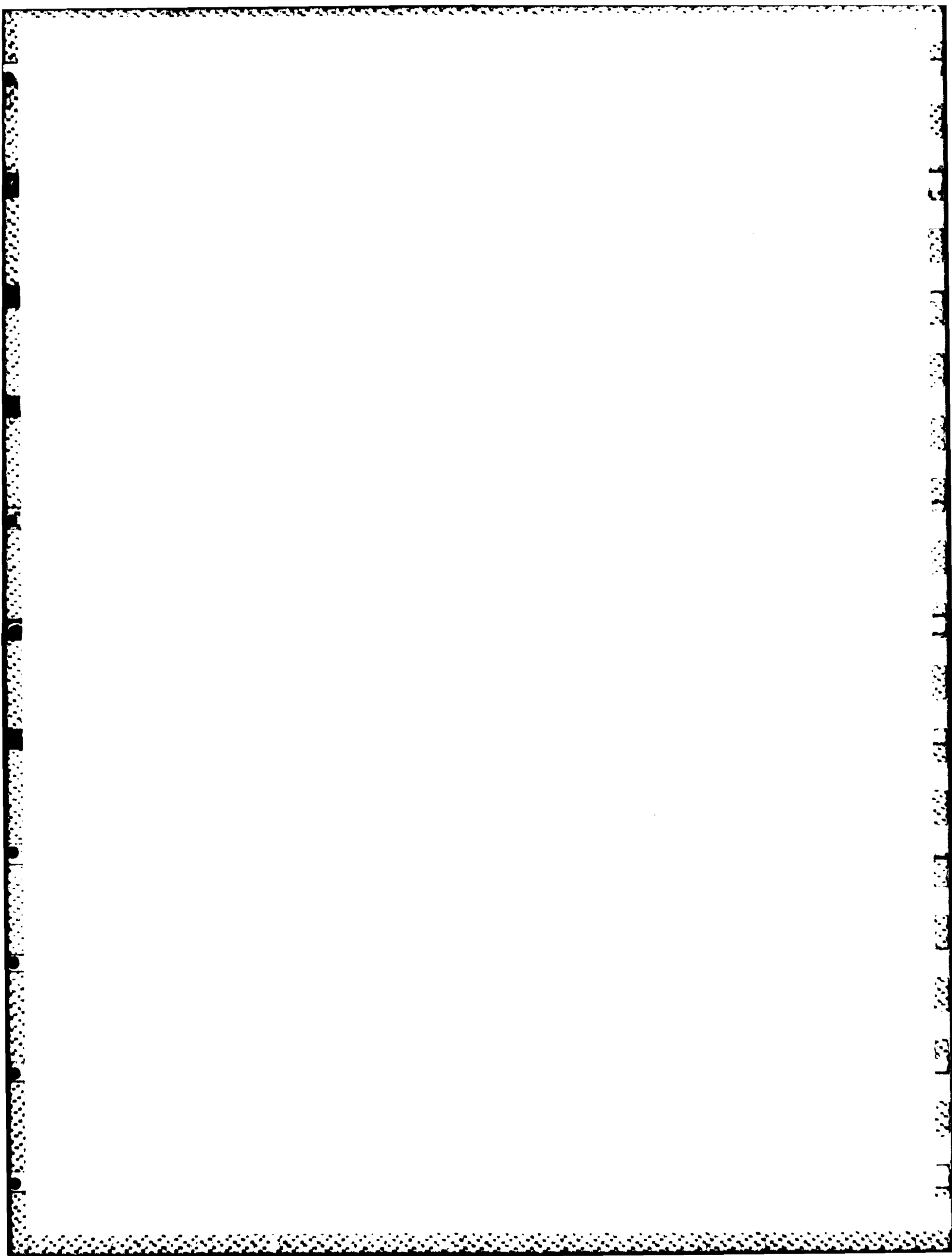
A panel of 15 individuals was established for the nuclear proliferation forecast. All are well known experts in the field; many have worked within the government on these problems. They were asked, "In addition to the five declared nuclear powers, by the year 2010, which nations are likely to have: (a) acquired a substantial nuclear stockpile (at least 100 weapons); (b) demonstrated a capability to detonate a nuclear device; and (c) achieved, but not declared, a nuclear capability.

All but one of the panelists responded in the first round, naming a total of 25 nations in one of the three categories. As

the panelists were quick to point out, however, proliferation forecasts depend heavily on assumptions concerning the parameters of the international environment during the period in question. The panelists were therefore sent the results of the first-round survey with directions to name countries in the second round that by the year 2000 were likely to fall in one of two categories: (a) achieved a nuclear weapons capability (with or without actually having detonated a device); and (b) accumulated a stockpile of at least 100 weapons. In addition, the panelists were told to assume that there would not be any sort of nuclear war before the end of the century and that the United States would continue to play an active role in world affairs. These two assumptions had been identified by the panelists in the first round as the most critical ones. Finally, a "nuclear weapons capability" was defined more precisely than it had been in the first round.

Thirteen respondents responded in the second round with the results that are summarized in Chapter II. The members of the proliferation panel are listed below:

Richard Betts -- Brookings Institution
Albert Carnesale -- Harvard University
Warren Donnelly -- Congressional Research Service
Rodney Jones -- Center for Strategic and International Studies
Myron Kratzner -- International Energy Associates
Steven Meyer -- Massachusetts Institute of Technology
Joseph Nye -- Harvard University
William Potter -- University of California at Los Angeles
George Quester -- University of Maryland
George Rathjens -- Massachusetts Institute of Technology
Robert Seldon -- Los Alamos National Laboratory
Gerard Smith -- Consultants International Group
Leonard Spector -- Carnegie Endowment for International Peace
Charles Van Doren -- Consultant
Kenneth Waltz -- University of California at Berkeley



Appendix B

EXPERTS INTERVIEWED FOR REGIONAL FORECASTS

Nearly sixty individuals were interviewed in the course of preparing the regional forecasts presented in Chapter III. Three asked to remain anonymous; all were promised that specific remarks would not be attributed to them.

A. GLOBAL PERSPECTIVES

Richard Barnet; Mr. Barnet, a commentator and writer on contemporary international issues, has long been affiliated with the Institute for Policy Studies in Washington.

Zbigniew Brzezinski; Assistant to President Carter for National Security Affairs, Mr. Brzezinski is now affiliated with the Georgetown Center for Strategic and International Studies.

William Cline; a senior fellow at the Institute for International Economics, Mr. Cline has written extensively on the international debt crisis and other economic issues.

Alexander George; Professor George worked at the RAND Corporation before joining the faculty of Stanford University.

Andrew Goodpaster; General Goodpaster has had a distinguished career in the U.S. Army, including service as Military Assistant to President Eisenhower, Director of the Joint Staff, and NATO Supreme Allied Commander in Europe. He is currently the President of the Institute for Defense Analyses.

Joseph Kraft; Mr. Kraft has been a nationally syndicated columnist for twenty-five years.

Edward Luttwak; an analyst of, and commentator on international security issues, Mr. Luttwak is now affiliated with the Georgetown Center for Strategic and International Studies.

Robert McNamara; Secretary of Defense during the Kennedy and Johnson Administrations, Mr. McNamara also served as President of the World Bank for ten years; he is now retired.

Harold Malmgren; an economist specializing in trade and technology issues, Mr. Malmgren runs a consulting firm in Washington.

Thomas Moorer; Admiral Morrer served as both Chief of Naval Operations and as Chairman of the Joint Chiefs of Staff during the 1970s; he is now retired.

Robert O'Neill; an Australian national, Mr. O'Neill is Director of the International Institute for Strategic Studies in London.

Nelson Polsby; a member of the faculty of the University of California at Berkeley, Professor Polsby is an authority on the U.S. political system.

James Schlesinger; Mr. Schlesinger has served, among other government posts, as the Director of Central Intelligence, Secretary of Defense, and Secretary of Energy. He is now affiliated with the Georgetown Center for Strategic and International Studies.

William Schneider; associated with the American Enterprise Institute, Mr. Schneider is an expert on U.S. public opinion.

W.Y. Smith; General Smith retired from the Air Force in 1983 after a career that included service as Assistant to the Chairman of the Joint Chiefs of Staff and Deputy Commander-in-Chief of the European Command. He is now affiliated with the Wilson Center of the Smithsonian Institution.

Cyrus Vance; now in private law practice, among other government posts, Mr. Vance served as Secretary of State under President Carter, and as Deputy Secretary of Defense and Secretary of the Army during the Johnson Administration.

B. EUROPEAN FORECAST

John Barry; Mr. Barry is a London-based, free-lance journalist.

Christoph Bertram; formerly Director of the International Institute for Strategic Studies, Mr. Bertram is now political editor of a German newspaper, Die Zeit.

Ian Davidson; Mr. Davidson writes for London's Financial Times.

Richard Davies; Mr. Davies is an editor of the London Times.

Anders Ferm; Ambassador Ferm represents Sweden in the United Nations.

Pierre Hassner; a scholar of European political affairs, Professor Hassner teaches at the University of Paris.

Stanley Hoffman; Professor Hoffman also writes primarily about European political affairs. He is a member of the faculty of Harvard University.

Joseph Joffe; formerly a German newspaper editor, Mr. Joffe is affiliated with the Carnegie Endowment for International Peace.

Catherine Kelleher; Professor Kelleher teaches at the University of Maryland and writes on European political affairs.

Gert Krell; a German national, Mr. Krell, at the time of the interview, was affiliated with the International Institute for Strategic Studies.

Robert Nurick; Deputy Director of the International Institute for Strategic Studies at the time of the interview, Mr. Nurick worked previously on European issues at the U.S. Arms Control and Disarmament Agency.

David Owen; Dr. Owen is currently the parliamentary leader of the British Social Democratic Party. He served as Foreign Minister during the last Labor Government.

John Roper; formerly a member of Parliament, Mr. Roper now edits the journal, International Affairs, for the Royal Institute for International Affairs.

Specialist; a high-ranking member of the French Government specializing in European political affairs.

Theo Somer; Mr. Somer is the senior editor of Die Zeit.

Helmut Sonnenfeldt; now a scholar at the Brookings Institution, Mr. Sonnenfeldt has held several senior posts on the staff of the National Security Council and at the State Department.

Karsten Voight; Mr. Voight is a member of the Bundestag and a defense specialist with the German Social Democratic Party.

William Wallace; Mr. Wallace is Deputy Director of the Royal Institute for International Affairs in London.

C. SOVIET UNION FORECAST

Jeremy Azrael; now at the Department of State, Mr. Azrael taught and wrote about Soviet studies for many years at the University of Chicago.

Coit Blacker; Mr. Blacker teaches at Stanford University.

Arnold Horelick; Mr. Horelick has worked for many years at the RAND Corporation. He served as NIO for the Soviet Union during the Carter Administration.

William Hyland; now editor of the journal, Foreign Affairs, published by the Council on Foreign Relations, Mr. Hyland retired from a long career in the U.S. Government as Deputy National Security Advisor in 1979.

Specialist; an expert on the Soviet Union working in the U.S. Government.

Strobe Talbott; Mr. Talbott writes for Time Magazine; among other publications concerning Soviet affairs, he translated Nikita Khrushchev's memoirs.

Edward Warner; Colonel Warner retired from the Air Force in 1982 and now works at the RAND Corporation.

D. EAST AND SOUTH ASIAN FORECAST

Harry Harding; formerly on the faculty of Stanford University, Mr. Harding now works at the Brookings Institution; he is primarily a China specialist.

Richard Holbrooke; now an investment banker with Lehman Brothers, Mr. Holbrooke served as Assistant Secretary of State for East Asian Affairs during the Carter Administration.

Thomas Robinson; formerly with the RAND Corporation, Professor Robinson now teaches at Georgetown University; he is an expert on Sino-Soviet relations.

Richard Solomon; Mr. Solomon served on the staff of the National Security Council during the Nixon and Ford Administrations; he is now chairman of the Social Science Department at RAND.

Specialist; an Asian specialist now working in the U.S. Government.

E. MIDDLE EASTERN FORECAST

Adhid Dawisha; an Iraqi national, Professor Dawisha was teaching at the time of the interview at the School for Advanced International Studies of the Johns Hopkins University.

Judith Kipper; formerly a journalist, Ms. Kipper is affiliated with the American Enterprise Institute.

William Quandt; Mr. Quandt served on the staff of the National Security Council during the Carter Administration; he is now affiliated with the Brookings Institution.

Harold Saunders; among other government posts, Mr. Saunders served as Assistant Secretary of State for Middle Eastern Affairs during the Ford and Carter Administrations. He is now affiliated with the American Enterprise Institute.

F. AFRICAN FORECAST

Helen Kitchen; Ms. Kitchen writes on African affairs at the Georgetown Center for Strategic and International Studies.

Donald McHenry; Mr. McHenry last served in the government as U.S. Ambassador to the United Nations. He is currently affiliated with the Georgetown School of Foreign Service.

Alex Rondos; a British national, Mr. Rondos is a free-lance journalist specializing in African affairs.

G. LATIN AMERICAN FORECAST

Mark Falcoff; Mr. Falcoff writes on Latin American affairs at the American Enterprise Institute.

Ed Gonzales; a Latin American specialist, Professor Gonzales teaches at the University of California at Los Angeles and also works at the RAND Corporation.

Robert Leiken; Mr. Leiken writes on Latin American affairs at the Carnegie Endowment for International Peace.

Robert Pastor; a member of the staff of the National Security Council during the Carter Administration, Professor Pastor now teaches at the University of Maryland.

David Ronfeldt; a Latin American specialist, Mr. Ronfeldt is on the staff of the RAND Corporation.

Viron Vaky; now retired, Ambassador Vaky last served during his career with the State Department as Assistant Secretary for Latin American affairs.

END

FILMED

10-85

DTIC