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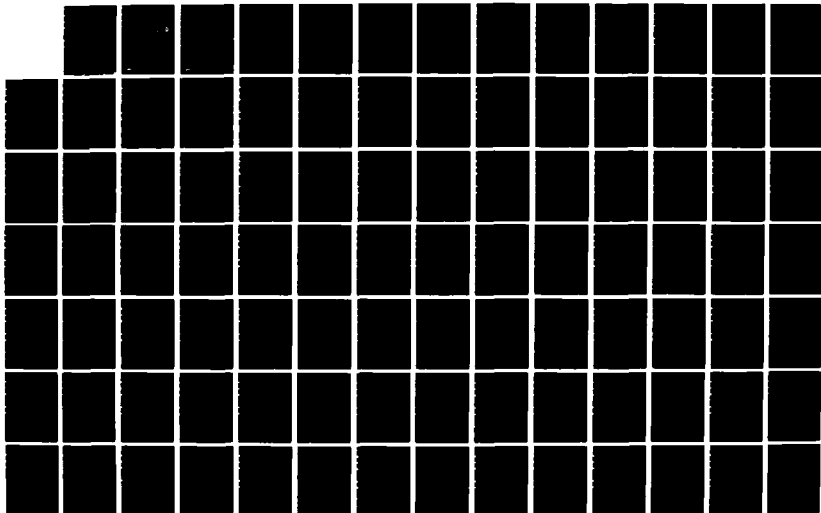
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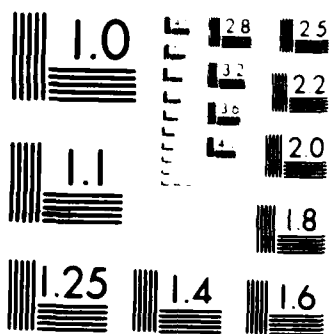
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PHASE III: THE ROLE OF THE NAVY AS AN INSTRUMENT OF NATIONAL POLICY

Final

September 1987

Technical Note
SSC-TN-2689-1

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By: William M. Carpenter
Richard B. Foster
Stephen P. Gibert
William R. Kintner
Hamilton A. Twitchell

Prepared for:

Office of the Assistant Secretary of the Navy
(Research, Engineering and Systems)
Washington, D.C. 20350

Contract N00014-86-C-0494

SRI Project 2689

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Approved:

William B. Bader
Vice President



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FOREWORD

This report was prepared by SRI International for the Assistant Secretary of the Navy (Research, Engineering and Systems) under contract number N00014-86-C-0494. This report is Phase III of a study program undertaken to forecast the international strategic environment beyond the year 2000 and to derive from this forecast the role of the U.S. Navy in U.S. national strategy.

The study was prepared under the supervision of Dr. William B. Bader, Vice President, SRI International. The leader of the project team was Mr. William M. Carpenter, Senior Consultant. Other members of the team were the following senior consultants: Mr. Richard B. Foster, Dr. Stephen P. Gibert, Dr. William R. Kintner and MG Hamilton A. Twitchell, USA (Ret.). Contributions to the study were made by Dr. Norman Friedman, Mr. Bradley Hahn, Dr. Igor Lukes, Mr. Norman Polmar, Dr. Loren B. Thompson and Dr. Scott C. Truver. Advisory input for the study was received from Mr. Michael McGwire, Dr. Clark G. Reynolds, Mr. Harold Silverstein, and Dr. Robert S. Wood. Mr. Derek E. Cross was an editorial assistant.

William B. Bader
Vice President
SRI International

ABSTRACT

This study forecasts the international strategic environment for the year 2000 and beyond and describes the role of the U.S. Navy in U.S. national strategy for the forecast period.

DISCLAIMER

The findings of this report are not to be construed as an official Department of the Navy position unless so designated by other authorized documents.

CONTRACTUAL TASK

This Technical Note is in fulfillment of Contract N00014-86-C-0494.

EXECUTIVE SUMMARY

As the United States and the U.S. Navy look to the international environment in the twenty-first century, there are both constant and varying factors to be considered. The principal stable factors are geopolitics, demography, and the characteristics of the regimes of the major powers. The U.S. is an insular, commercial, naval-maritime power, opposed by the Soviet Union, a continental, autarchic power. Freedom to use the world's seas is vital to the survival and well-being of the U.S. and its free world allies, and the U.S. has accepted the global responsibility--in concert with its allies--to maintain the freedom of the seas.

Neither the American liberal democratic system nor the Soviet Marxist-Leninist totalitarian system is likely to change significantly over the next three decades. The geography of each is fixed, leaving only space as the new physical frontier. The world's population, heavily concentrated in the nations that lie around the rim of the Pacific and Indian Oceans, will not change in its basic distribution, except that the populations of the less developed countries of the Third World will grow somewhat faster than those of the industrialized world. It will continue to be in the Third World where the interests and objectives of the two fundamentally different political systems of the U.S. and the U.S.S.R. will be in confrontation. A major challenge for the U.S. and its allies will be to contain and, if possible, reverse the trend of Soviet successes in expanding its sphere of influence into the nations of the Third World. Among the instruments being used by the Soviets in their expansionist strategy is the Soviet Navy, now capable of worldwide operations.

As the U.S. contemplates this challenging future, it must also reckon with the factors on the international scene that are changing. The early post-World War II era, dominated by the two superpowers, the U.S. and the U.S.S.R., is giving way to a more diverse, multipolar distribution of power around the globe, reducing the power of both the U.S. and the U.S.S.R. to manage or influence the behavior of the many nations within this multipolar world. This more complex world has the potential of benefitting the U.S. and the West. If the U.S. and its allies can stand firm in their common defense effort until the beginning of the twenty-first century, the complexity of the distribution of power among the many independent and economically viable nations will tend to inhibit the planners in the Kremlin from pursuing their expansionist strategy.

As the nations of the world have become more interdependent in the course of their quest for economic survival and growth, both benefits and problems have ensued. For example, while some nations, such as South Korea and Taiwan, have experienced spectacular economic growth, other struggling nations, such as Mexico, have incurred massive indebtedness. These huge debts threaten the stability of the world economy. Another impact of interdependence is the growing reliance of nearly all nations on imports of both raw and manufactured materials. The U.S. is importing a substantial portion of the semiconductors used in its

defense weapons systems, and there seems to be no prospect that there could be a return to complete autarchy in this field. Careful attention by defense planners to keep this kind of dependence within safe bounds, even at some economic expense, is mandatory, if critical shortages are not to be incurred in crisis or conflict situations, wherein overseas supplies might suddenly be cut off. At the same time, the character of U.S. industry is changing, e.g., in the steel industry, there are no longer a few "big steel" plants but a diversity of smaller, specialized product factories. These latter types have the advantage of flexibility; on short notice their computerized production lines can be changed to generate the different kinds of steel that may be required in war.

While the U.S. economy has seen its competitiveness decline in the world marketplace, this trend need not continue. The U.S. remains on the leading edge of scientific innovation, and if productivity can be restored, the ability to compete--at home and abroad--can become a reality. With the accelerating pace of scientific development, it is essential to remain in the forefront of acquiring this new knowledge and efficiently putting it to use.

A key factor of future change is in the area of nuclear deterrence. Nuclear weapons are on the threshold of fundamental change, as great as the earlier transition from fission to fusion warheads. With the advent of such new types as directed energy weapons, the trend is towards war-fighting weapons rather than weapons of mass destruction. Further, with the great variety of highly accurate weapons of all sizes, the line of distinction between small nuclear weapons and precision conventional weapons is being blurred. Accuracies of both nuclear and conventional weapons are already achieving the near-zero performances that only a few years ago were predicted not to happen until the end of the century.

Rethinking the political-military doctrine for the new and more complex world requires an interactive type of analysis; the systems analysis approach is no longer adequate, for example, in the design and description of the operational use of flexible U.S. global naval power. The Navy is in a position to take the lead in the world effort to rethink the U.S. strategic doctrine for the future; an excellent start has been made in conceiving The Maritime Strategy.

The impact of future arms control agreements could be major, and could call for enhanced naval roles in filling the gaps that changes in nuclear weapons deployments may cause. The very real possibility of acquiring a true strategic defense capability can move the U.S. out of the era of mutual assured destruction (MAD) and into mutual secured survival (MSS). Effective strategic defenses can mitigate the dangers of nuclear proliferation.

The multipolar world will not take away the need for free world alliances, and the contingency plans of the U.S. need to expand beyond the former concentration on Europe and Northeast Asia, to include the Middle East, Central America, Southeast Asia, and Southern Africa. The U.S. may well have to intervene in one or more of these areas where low-intensity conflict (LIC)

is the likely form of warfare to be encountered, and in the first order of response, the Navy-Marine Corps team is the logical instrument. Above all, the U.S. Navy must be able to engage and defeat the Soviet Navy, but must as well be prepared to engage in LIC-prone areas.

Peacetime consideration of mobilization requirements is urgently necessary if the U.S. is to be able to respond to contingencies and to sustain operations for a possibly extended period. The kind of limited mobilization that the U.S. effected in the Korean War is a useful model for contingency thinking, far better than repeating the unfortunate attempt to fight a war with a "business as usual" approach, as in the Vietnam War. The U.S. mobilization base, both in manpower assets and in industrial capabilities, is less than adequate unless serious attention is given soon to analyzing contingency requirements in the perspective of the future. Stockpiles of essential materials, for example, need to be planned for inclusion of such new items as composite materials. Energy requirements are changing; before the end of the century the U.S. will be more heavily dependent on imported oil, specifically more oil from the Persian Gulf.

In the course of carrying out a "competitive strategy" against the Soviet Union, there is a need for developing a concept of prolonged global war--possibly including use of nuclear weapons. Such a doctrine must include not only the operational conduct of the war but also war termination thresholds and procedures, and as well, a clear vision of the post-war world.

Although there are organizational and procedural difficulties within the existing structure of national security planning, the Navy has a strategic opportunity to take the lead. The Navy is the most globally ubiquitous military service, of necessity having an intra-service joint operating doctrine of its own (e.g., for coordinating the operations of submarines, carrier and land-based aircraft, surface ships, the Marine Corps, and in space), and is thus in an appropriate position to take the initiative in military analyses involving U.S. and allied operations in keeping the peace. The "competitive strategy" has an intellectual component: Western strategic thinking and doctrines become ever more important ingredients of long-term victory in the era of nuclear parity and superior Soviet land power. The naval role encompasses the full spectrum of future strategic requirements.

In sum, this study concludes that the world's geopolitical structure, the continuing Soviet bid for global hegemony, and the accelerating revolution in military technology make the U.S. Navy-U.S. Marine Corps team the forward arm of U.S. strategy. The Navy has the opportunity to take the lead in conceiving a national strategy that will "provide for the common defense" in the turbulent decades that lie ahead.

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I INTRODUCTION

This study is the third and final phase of a research program undertaken to prepare a strategic forecast for the U.S. Navy beyond the year 2000. Phase I, (SSC-TN-5344-1), completed in October 1983, analyzed the trends in Soviet national strategy and compared alternative U.S. strategies for meeting future challenges. Phase II (SSC-TN-7434-1), completed in November 1985, traced the foundations of U.S. national and naval strategy, described the Soviet threat, assessed the strategic impact of technology, and identified the essential elements of U.S. naval strategy relevant to U.S. national security requirements. This study, Phase III, expands the emphasis on the future, forecasting the strategic environment for the period beyond the year 2000, examining the trends in the comparative performance of the U.S. and the Soviet Union in the international arena and describing the role of the U.S. Navy as an instrument of national policy for the future.

The first two phases of the study series demonstrated that a maritime strategy is an essential element of future U.S. policy and strategy and that in a broader application, it makes a vital contribution to the preservation of security of the body of nations that comprise the free world. The U.S. Navy's Maritime Strategy is based on three key principles. The first is to frustrate Soviet strategy, denying to the USSR its preferred mode of attacking the United States and its allies, thus deterring Soviet aggression. The second principle is that of the forward positioning of U.S. forces, in coalition with U.S. allies in Europe and the Pacific, relying heavily on allied, and especially European, contributions to mutual defense; and third, to exploit U.S. technological advantages, geographical position, and naval warfighting experience to compensate for Soviet numerical superiorities. Thus the U.S. Navy, in conjunction with allied navies, intends to take the war to the enemy, destroy the Soviet navy and supporting elements, and compel the USSR to fight a protracted and global conventional war.¹

¹ See Admiral James D. Watkins, "The Maritime Strategy," U.S. Naval Institute Proceedings (January 1986); and Seth Cropsey, "Forward Defense or Maginot Line?," Policy Review (Fall 1986).

The prior analyses described the critical asymmetries between the U.S. and the Soviet Union, e.g., in the theory and practice of national strategy and foreign policy. The USSR makes a concerted and sustained effort to devise and pursue an integrated grand strategy, while the U.S. approaches the problem in an ad hoc, inconstant and reactive manner--often confusing our allies and failing to deter our adversaries. The depth and gravity of the confrontation of these two fundamentally different political systems is suggested in views expressed last year by Henry Kissinger:

Perhaps the principal threat to peace resides in the peculiar combination of Soviet expansionism and the instability of the Soviet system. Moscow has invaded Afghanistan and established bases in Vietnam. Cuban proxy troops are in Angola, Ethiopia and Nicaragua. Soviet arms fuel assault on the established order; Soviet money and intelligence services support too many guerrilla movements and too many terrorist groups... American resistance to this Soviet strategy is inhibited by many proponents of arms control who are so protective of their cherished goal that they resist linking it with any other issue--thereby unintentionally falling in with Soviet strategy.¹

Threat analysis essentially involves three components: the capabilities of the adversaries, the intentions of the adversaries, and the situational context in which the potential conflict arises. This study deals with all three components, primarily by extrapolating presently observed trends and developments. Such a method tends to be essentially conservative in that trend analysis does not presume sharp breaks from the immediate past and present; rather, incremental change is predicted. However, while pursuing this general approach of trend continuity, allowance is made for discontinuities in certain special areas, e.g., the portent of a "third generation" of nuclear weapons, and the possibility that effective strategic defenses may become a reality. Overall, however, trend analysis is valid, in terms of the main body of capabilities comprising the threat, given the long lead times for major weapons systems.

1 Newsweek, "Danger at the Summit," 13 October 1986, p. 39.

We anticipate, for example, that an aircraft carrier commissioned in 1987 will probably still be in service in the year 2020.

When one turns to political intentions, extrapolating trend lines into the future becomes more complex. However, one fairly straightforward approach has been effective: one takes the current foreign policy and military policy and the strategies for national security that are developed in support of foreign policy and uses them as a base case for forecasting likely variants. In the United States, current policy is summarized in a report of the President, dated January 1987, entitled National Security Strategy of the United States. Specific Department of Defense and Navy documents include the annual reports to the Congress by the Secretary of Defense, the Chairman of the Joint Chiefs of Staff, and the service secretaries and chiefs of service. For this study, the reports to the Congress by the Secretary of the Navy and by the Chief of Naval Operations are pertinent.

Following the exposition of the current national security policy and strategy and the subordinate naval policy and strategy, the forecast examines those trends, both domestic and international, that are likely to have an effect, both adverse to and in support of, the so-called base case policies. In examining trends, it is important to note that certain political, economic, social and demographic trends will not vary much within the twenty or more years this study peers into the future. The Soviet government, for example, has regarded the U.S. as the principal bulwark of capitalism--and hence a chief antagonist of the USSR--for at least the past forty years. And the Soviet system of government, along with an ideology of world communism, has endured now for seventy years. Tactical policy changes have, of course, occurred, but basic assumptions about the roles of the Soviet Union and the United States in world politics have not. One could multiply many instances of political situations that have hardly changed at all in the last two decades and are unlikely to in the next two--the Arab-Israeli confrontation, for example, or Pakistani-Indian hostility or Greek-Turkish rivalry. Contrary to popular belief, political change ordinarily occurs very slowly in international politics.

One critical political change this study anticipates is the continued erosion of the bipolar distribution of world power--politically, economically and, to a lesser extent, militarily. The enormous disparity between the two superpowers on the one hand and the rest of the world on the other was bound to diminish as Western Europe, Japan, and China recovered from the Second World War. New powers, such as India and Brazil are emerging as major world actors. As the world becomes more multipolar, alliances and alignments will become less stable and the U.S. and the USSR less able to control political events.

In the area of military confrontation, the key issues that will affect the outcome of the U.S.-Soviet strategic balance are: (1) the potential for nuclear arms control, particularly as it affects the conventional force balance; (2) the force relationships between conventional and nuclear, particularly as they are affected by nuclear arms control measures and the so-called conventional emphasis strategies in Europe; (3) the degree to which the U.S. and its allies have the potential for mobilization for a prolonged conventional war, both in manpower and materiel; (4) the criticality of energy and other imported minerals and resources and the dependence of these imports on freedom of the seas and access to world markets.

The stepped-up U.S. defense program over the past several years has been designed to redress a trend in global affairs that had begun to favor the Soviet Union and its allies. This threat to the U.S. and the free world extends from strategic nuclear warfare to the lowest levels of conflict; an alarming trend is the spread of violence in the kind of warfare now called low-intensity conflict. Terrorism, subversion and insurgency are as ancient as the history of man, but these forms of conflict are being employed by our adversaries and their surrogates with a new level of intensity and seemingly irrational unpredictability, made more threatening by the availability of new high technology weapons available on a worldwide scale. The United States Navy has been thrust into a heightened role of responsibility in this lower spectrum of conflict, in addition to its deterrent and defensive role in the higher categories of

warfare, all the way up to the strategic nuclear level. Keeping the sea lanes open by being able to thwart low-intensity conflict is as necessary as embodying the nuclear strategic reserve force.

In sum, while it would be possible to employ various quantitative methods, or to write alternative future scenarios, or utilize expert panel analyses such as employed in the Delphi technique, the authors of this study are confident that traditional political trend analysis will yield a reasonably accurate picture of the year 2000 and beyond, and of the Navy's role in that environment. There will be occasional surprises, such as the Iranian revolution. But it is quite unlikely that sufficient and far-ranging political and military changes will occur within the time frame of this study to alter substantially the conclusions reached. If serious argument with the findings of this study occurs, it is more likely to reflect disagreement with the interpretations of the authors than with the trends themselves.

As noted above, however, there is one important area where very rapid change is occurring and where important breakthroughs can appear with a suddenness that largely defies prediction. This is in the area of technological change. This phenomenon makes it even more urgent than in the past that the United States (and its allies) press on with greater efforts to lead the race on the frontiers of knowledge, for example, in superconductors. When breakthroughs occur, we must be there first.

Consistent with the above commentary, this study begins with a discussion of the future national and international environment within which U.S. national security policy will be formulated and executed. Subsequently, the future role of the U.S. Navy will be considered in three different situational contexts: nuclear war, conventional war, and low intensity conflict. The final conclusions chapter will summarize the most salient aspects of both the future strategic environment and the role of the Navy in the three types of military conflict, with the object of assisting Navy planners as they look to the year 2000 and beyond.

The two main powers engaged in global confrontation are fundamentally different in the natures of their regimes and in their geographic locations and configurations, the one maritime, the other continental. As Clark Reynolds described the implications of these differences:

For maritime nations, the navy has been the main strategic area of the nation's defensive structure, dominating the defensive policies of the home government, maintaining a generally offensive stance and operating mainly on the "blue water" of the high seas.

The U.S. Navy, a key element of the combined arms doctrine in U.S. national strategy, and a major factor in the U.S.-allied structure of international security, has a special opportunity to play a vital role in the formulation and the implementation of a grand strategy for the future.

¹ Clark G. Reynolds, Command of the Sea, (Malabar, FL, Krieger, 1983), p. 12.

II THE FUTURE STRATEGIC ENVIRONMENT

This chapter of the report is concerned with the political, military, economic and other aspects of the Year 2000 and immediately beyond within which U.S. national security policy must be formulated and implemented. The object is to describe the overall global environment which will confront U.S. national security decision-makers--and especially the Navy--in the Year 2000 and beyond.

Since only the Soviet Union can pose a significant threat within the timeframe of this study, this chapter begins with an analysis of Soviet-American relations at present and projects the future of this critical problem. Stress is placed on understanding the fundamentals of the superpower competition, which are relatively permanent, and on emerging basic trends rather than on particular policies toward various countries.

Subsequently, detailed attention will be given to four aspects of the environment likely to seriously affect U.S. national security planning and policy. These are: present trends and future technological developments, stressing those related to military capabilities; the world energy outlook; U.S. industrial and manpower mobilization problems; and domestic constraints which define limits on the formulation and conduct of U.S. national security policy. The future of the American alliance system and alliance strategy is so fundamental to the role of the U.S. in international politics that it is reserved for a separate chapter following this one.

A. Fundamentals of Soviet-American Relations

At the close of the Second World War all the historical natural barriers to Soviet Russian domination of the Eurasian continent no longer existed. In the West, Germany was destroyed and occupied, France was in near civil war and the United Kingdom no longer had the resources to remain a world power. In Asia, China was in civil war and Japan devastated by its

defeat and under occupation. Furthermore, as the result of territorial acquisitions in Eastern Europe and in the Far East, the Soviet Union controlled an area covering eleven time zones, from the tip of the Scandinavian Peninsula to the Kurile Islands north of Japan. The traditional balance of power on the Eurasian continent thus was destroyed.

Given this geopolitical situation, Soviet-American confrontation almost certainly would have occurred even had it not been for other factors, for only the U.S. could restore some semblance of the balance of power.

But there were other factors, of course; the Soviet Union has an ideology of world domination and is a totalitarian state with huge armed forces which, for the first time since the Napoleonic wars, are located in the heart of Western Europe. As if this were not sufficient to terrorize the West European people, the USSR was ruled by a feared and mysterious autocrat, Joseph Stalin.

It is important to understanding the past, present and future struggle between the Soviet Union and the United States to be sensitive to the fact that this is not an ordinary or typical conflict. Usually struggles between nations have been over disputed territory located on the borders of the two states or in nearby areas. Thus, while there have been some exceptions, usually wars have been fought by neighbors or states in some proximity to each other--France and Germany, Japan and China, Russia and Turkey, Turkey and Greece, Iran and Iraq, Mexico and the United States, Syria and Egypt and Israel, and so forth. In contrast, the Soviet-American struggle is a world-wide one, contested by two countries distant from each other, motivated by antithetical ideologies, opposed political systems, and very different national values. Thus the contest is not amenable to particularistic solutions, such as the cession of some territory, or the recognition of mutual spheres of influence or the good will or diplomatic skills of particular political leaders, or any of the other usual conflict resolution remedies. The struggle, therefore, will continue indefinitely into the future unless settled by war or unless one or the other side changes fundamentally in ideology, values, and system of government. All

negotiations with the Soviet Union must always be with this fact firmly in mind; despite good intentions, there will be no end to the cold war unless one of the two contingencies mentioned above is realized. As Revel put it, political democracy:

is under worldwide attack as it has never before been in its brief history. And that attack, which is being waged with unexampled vigor, scope and intelligence, is catching the democracies in a state of intellectual impotence and political indolence that disposes them to defeat and makes a communist victory probable, if not inevitable.

Marxism-Leninism, as it has evolved in the Soviet Union, is an amalgam of imperial Czarist Russia with Lenin's adaptation of Marx, to create a new Soviet state under the total control of the Communist Party. Under Lenin, and more completely under Stalin, by imposing totalitarian party control over the apparatus of the state and over the military, the new rulers transformed the Czarist empire into the Soviet empire. This new Soviet empire, moving in accordance with what was to be called the theory of "scientific communism", set about to fulfill its goal of triumphing over the enemy, the "imperialist" state system led by the United States.

This aim has been stated by countless Soviet leaders; one could marshal literally hundreds of quotes concerning the Soviet government's belief in an enduring struggle with the United States and the other capitalist countries. For example, to choose one quote almost at random, in April 1984, the Soviet Foreign Minister Andrei Gromyko, stated the Soviet view of the world with complete frankness:

The Soviet policy of peaceful co-existence is a specific form of socialism's class struggle against capitalism. This struggle is going on and will continue in the field of economics, politics and, of course, ideology, because the world outlook and the class struggle are irreconcilable.²

¹ Jean-Francois Revel, "How Democracies Perish", (Doubleday, 1984), pp. 3-4.

² Andrei Gromyko, "Lenin's Peace Policy", Moscow News, (22 April 1984).

It can be argued that Soviet leaders do not take the ideology seriously and statements such as those by Gromyko are mere ritualistic reaffirmations of a worn-out philosophy and have no operational significance. Revel may be too pessimistic about the survival capabilities and instincts of the democratic nations. But whatever the motivation, the Soviet government does present a serious challenge and the democracies are finding it quite difficult to rise to the task. It is simply inconsistent with the ethos of the modern democratic welfare state to sustain an alert and viable national security policy against a strong and determined foe. Yet that is what is required of the United States and the other democratic societies.

The Soviet effort to expand its influence around the globe is all the more impressive when one looks at the domestic side of the Soviet economy. Soviet agriculture is a disaster. Consumer goods and housing are far below western standards. George Feifer's article, "Russian Disorders",¹ claimed that food shortages, alcoholism, and corruption have marked the end of the Soviet dream. Feifer, who has written many articles and books about the country, wrote a devastating account of the fundamental and irreversible flaws in the Soviet system. Yet, according to Feifer, rarely has there been any active opposition to Moscow's foreign policy. Instead, Soviet domestic media distort world news so effectively that Soviet leaders can count on the blind obedience of the masses. Although the Soviet people realize how badly they have been treated, they accept their dismal life fatalistically.

Paul Kennedy, Professor of History at Yale University, offers an equally pessimistic appraisal of the Soviet Union. A very shocking fact is the

...steady worsening in life expectancy and infant mortality rates...poor standards of sanitation and public hygiene, and fantastic levels of alcoholism, death rates...have increased...the average Soviet man can now expect to live...some six years less than he

¹ Harper's (1981), p. 56.

could in the mid-1960s. Nearly as shocking has been the rise in infant mortality...to a rate three times that in the United States...

Other problems in the USSR include agriculture, which consumes thirty percent of total investment and twenty percent of the labor force (comparable figures for the U.S. are five percent and three percent); reliance on imported technology; shortages of hard currency; an inefficient and entrenched bureaucracy; and growing political discontent both within the Soviet Union itself and in the other Warsaw Pact countries.²

What all these and other problems add up to, according to Professor Kennedy, is that however "one assesses the military strength of the USSR at the moment, therefore, the prospect of its being only the fourth or fifth among the great productive centers of the world by the early twenty-first century cannot but worry the Soviet leadership, simply because of the implications for long-term Soviet power."³

Despite these problems, the Soviet government continues to put enormous resources into military strength. While it is difficult methodologically to determine the percentage of Soviet GNP allocated to defense, it is generally accepted that it is at least twice that of the United States and probably more. Thus the military production side of the Soviet economy presents a much different picture.⁴ While the Soviet domestic economy stagnates, the military-scientific industrial complex in the Soviet Union is continuing developmental patterns established in the

¹ The Atlantic Monthly, June 1987, p. 34.

² Even Pravda has complained in strident terms about the Soviet economy and Soviet life in general, referring to "bribe taking, profiteering and sponging, drunkenness and hooliganism...toadyism and servility." Quoted in T.J. Colton, The Dilemma of Reform in the Soviet Union (Council on Foreign Relations, 1986) p. 33.

³ Kennedy, op. cit., p. 43.

⁴ G.J. Greenwald and W.B. Slocombe, "The Economic Constraints on Soviet Military Power," The Washington Quarterly, (Summer, 1987), p. 128.

late 1960s. This sector has traditionally enjoyed individual incentives and decision-making prerogatives; Soviet weapons are designed in competitive systems similar to those of the West. The Soviets have acquired billions of dollars worth of western technology by purchase (legal or illegal), by theft, espionage and bribery, and from scientific exchanges and U.S. open literature. Using these techniques, the Soviets are able to introduce new technologies into their weaponry without costly R&D or trial and error. Western production methods and radar guidance technologies have been particularly useful to the Soviets. In addition, the Soviets continue to spend more than twice the U.S. outlay in research and development and to educate more than twice the U.S. number of physical scientists and engineers. The Soviets hope to close the technological gap with the West and possibly forge ahead by the end of this century.

The Soviet-American struggle for a new world order is political and ideological, although the actual competition is primarily a political-military one--indeed, the political-military component, including arms control, has been the principal mode of Soviet-American relations since 1917. Trade, cultural relations, people-to-people interactions--none of these has been consequential in the relationship between the USSR and the United States. This makes American national security policy with regard to the Soviet Union uniquely important. Unless and until this situation changes, Soviet-American interactions will depend entirely on such questions as strategic wisdom and coherence, maintenance of military parity, efficiency of the armed forces, strength of alliance systems, carefulness in arms control negotiations and, above all, the capability to sustain a viable, long-term national security policy.

At present it would seem that the Soviet government can manage to continue the military competition with the United States despite severe economic and social problems. And, because of political controls and because Soviet armed forces are so large that no expansion is needed to maintain some degree of military superiority over the United States, economic and social constraints are not likely to permit the U.S.S.R. to reduce its defense commitments. Another development is occurring, however,

which will work in the future in American favor and against the Soviet Union; this is the emergence of a multipolar world. President Nixon and Secretary Kissinger put forward the concept of a "pentapolar world" nearly two decades ago. They were premature but now that world is emerging and will impact on Soviet-American relations within the timeframe of this study.

As Nixon and Kissinger envisioned it, the gap in power--whether measured in political, economic or military terms--between the U.S. and the USSR on the one hand and Western Europe, China and Japan on the other was closing. This would have significant implications for the cold war. While in the first two decades of the Soviet-American confrontation only the U.S. stood between the Soviet Union and domination of the world, now (1970) Moscow faced four centers of world power hostile to it.

While this was a very important concept, as noted it was premature. Critics also pointed out that in strategic nuclear weapons the two superpowers still so overshadowed the other "power centers" that the situation still should be described as one of bipolarity. It was also noted that Western Europe as a "power center" was a fiction; rather Europe consisted of many states, even the largest of which, the Federal Republic of Germany, was still a small nation as compared to the superpowers. And, of course, China was (and is) essentially a Third World state. Japan, while emerging as an economic power was (and still is) very weak militarily.

These observations are still true today but are becoming less so each day. By the Year 2000, and almost certainly in the decade following, Western Europe, Japan, and China will continue to close the gap between themselves and the two superpowers. Since certainly Western Europe and Japan will remain opposed to the Soviet Union, its value system, its economic system, and to communism in general, the closing of the gap between them and the Soviet Union and the United States should assist the U.S. in its struggle with the USSR.

With regard to China, since it is a communist state, one can be less certain that its modernization will work to the advantage of the Western alliance. But it seems likely it will; nationalism, historical antipathy, and territorial irredentism are proving--at least to date--to be stronger than ideological affinity. While there is not now, nor is there any likely prospect of, a Sino-American alliance, Moscow must always "look over its shoulder" at China when confronting Washington.

One cannot, of course, translate such indices as gross national product and population into military power.¹ But that the potential of Western Europe and Japan together greatly exceeds that of the USSR is certainly correct. For example, Western Europe's population is larger than that of the USSR, and the "Big Four" alone--Britain, France, Germany and Italy--have a combined GNP about equal to that of the Soviet Union. Japan, with somewhat less than half the Soviet population, has about the same GNP. China's population is expected to stabilize at about one and one-half billion people even though China will remain an underdeveloped country within the timeframe of this study. Militarily, China, France, and Britain are improving their nuclear forces. While the USSR remains overwhelmingly stronger in conventional forces to the combined forces of Western Europe and Japan, nevertheless the Soviet Union confronts a difficult situation along its Chinese border and currently maintains about 51 divisions in the Far Eastern regions of the USSR.

Improvement of Japanese forces would add significantly to the military elements arranged against the USSR; Japan, while now an economic superpower, remains largely dependent on the U.S. for its security.

While various statistics in support of one opinion or another regarding a multipolar world can be presented, the overall trend is

¹ Data on world populations, GNP, armed forces, etc., appear in many sources. Several convenient ones include Lester R. Brown, et. al., State of the World 1987 (Worldwatch Institute, 1987); John Hein, The World Economy in the 1980s, (The Conference Board, Inc., Report 872, 1985); and International Institute of Strategic Studies, The Military Balance 1986-87, (London, 1986).

towards a more complex world; by the year 2000, and almost certainly by the year 2020, the U.S. and the USSR will still be the greatest powers in a world of a number of major powers, but no longer standing far above the crowd. This should work to American advantage even if the formal American alliance structure continues to deteriorate. Only one possibility could change this developing favorable picture--that is a genuine Sino-Soviet rapprochement. This seems unlikely, but it cannot be ruled out.

Other unfavorable but not necessarily fatal conditions include the neutralization of Europe and of Japan. Both of these contingencies are unlikely but possible. U.S. national security policy and diplomacy should be aimed at preventing either a Sino-Soviet rapprochement or the neutralization of Europe. If these two very unfavorable developments do not occur, and if Japan can be induced to improve significantly its armed forces, Soviet opportunities to extend its Moscow's influence or to coerce the Free World should be diminished by the Year 2000 and beyond.

In terms of Soviet global strategy, to a significant degree it appears to be still heavily influenced by geographical factors. To strengthen the connection between its western and eastern extremities, the Soviet Union has reinforced its rail and air transportation networks with a large and growing fleet of naval and merchant vessels. Soviet vessels are capable of navigating between Murmansk and Vladivostok, via the Arctic, for only a few months each summer. The southern sea lanes, via the Indian Ocean, can be used throughout the year, and Soviet expansionism has focused on the latter route.

Geography establishes critical naval choke points--those which might contain the Soviet Navy within coastal seas and those which are essential to Western commerce. These critical points determine the division of the Soviet Navy into four main fleets, which are based at Murmansk, in the Baltic and Black Seas, and at Vladivostok. The Soviet Union has attempted to neutralize countries adjacent to the seas which its fleet passes on its way to the oceans beyond. In the Northern and Baltic fleet areas, Sweden, Norway, Denmark and Iceland have been targets for Soviet pressure. The

presence of Soviet military power deployed in the Kola Peninsula is an intimidating factor. Iceland has been a target of Soviet attempts to disassociate it from the NATO alliance.

The Soviets must have assured passage from the Black Sea to the Aegean and then to the Mediterranean, and so Moscow has encouraged internal subversion within Turkey, and has sought to capitalize on the antagonism between Greece and Turkey over Cyprus. If there is a general war in the Middle East, it is likely that the Suez Canal would again be closed, leaving Gibraltar as the only Soviet exit from the Mediterranean.

The Soviet Government has attempted to break out of its encircled positions not only by pressures on countries adjacent to its four fleet bases, but also by "leaping over" the containment line. Thus, the Soviet Union has established three primary strategic positions far from its continental shores, in countries once aligned with the West. The Soviets acquired advance bases in Cuba in 1962, in the People's Republic of Yemen, (Aden) in the early 70's, and in the Socialist Republic of Vietnam in the mid 70's.

The Soviet Union is attempting to develop around the Cape, across the Indian Ocean, and through the Strait of Malacca, an assured maritime route to the Siberian Pacific coast. To reach Vladivostok, Soviet ships must transit the Sea of Japan. Soviet vessels sailing from Vladivostok to Odessa normally transit such strategic waterways as the Taiwan Strait, the Strait of Malacca, or other passages through the Indonesian archipelago, before reaching the Indian Ocean. Finally, these ships must cross the Indian Ocean before going through the Strait of Bab al Mandab and through the Suez canal to reach Odessa or sail around the Cape of Good Hope and past Gibraltar and the Dardanelles.

Justifying the crucial importance of the Indian Ocean to the Soviet Union, Georgii Arbatov, Moscow's leading U.S. specialist, once said that "for us the Indian Ocean plays the same role, as say, the Panama Canal does for the United States, being a seaway connecting the West and East of our countries."

The Soviet Union also seeks to develop close political ties with countries located along the lengthy Baltic-Black Sea-Vladivostok sea lanes. They have obtained facilities for both Soviet merchant ships and naval vessels, as well as for air transport and reconnaissance aircraft. When these facilities are linked by the Soviet navy, Moscow can use the facilities of potentially pro-Soviet states to secure their strategic goals. Soviet positions in the sea routes of the Indian Ocean can facilitate Soviet moves in Southeast Asia and a containment policy toward China at the same time. The Soviet Union, by establishing positions in the Indian Ocean and its littoral, may check Chinese expansion southward in much the same fashion as Britain once checked Czarist Russian expansion.

That geography still significantly influences Soviet policy, and certainly has been an important reason for the expansion of the Soviet Navy, is self-evident. This is not to argue, however, that the Soviet Union is only concerned with defending areas around the Sino-Soviet periphery and with making certain that the USSR has sea routes as well as land transportation connecting its western and eastern regions. On the contrary, Soviet policy is also offensively-minded, seeking to expel the United States and allied countries from strategically vital positions or to take advantage of vulnerable situations.

In the Pacific area the Philippines is a priority Soviet target. The 1986 collapse of the Marcos regime resulted in an ill-considered grant of amnesty to more than four hundred veteran members of the Philippine Communist Party who were imprisoned. President Aquino's assumption of leadership in no way affects Soviet determination to pursue the destabilization of the Philippines. The U.S. air base at Clark Field and the naval base at Subic Bay are of great strategic value to the security of the Pacific basin. The Soviet objective is the imposition of a Marxist or pro-Soviet government, hostile to America, which will expel the U.S. from its important Philippine bases and pose an additional threat to the sealines of communication.

That strife-torn South Africa is high on the Soviet strategy priority list can be seen in the statement issued by Oliver Tambo, leader of South

Africa's African National Congress (pro-Soviet, communist party) that he expected a request for more arms from the Soviet Union would be granted, "as usual."¹ Mr. Tambo met with Gorbachev and he told reporters at a press conference that the ANC, the most powerful underground movement fighting the white minority regime in Pretoria, would probably set up a mission in Moscow soon. The Kremlin has stepped up its activities in this vital area by moving on military, political, and diplomatic fronts, employing a wide range of methods--the establishment of correct diplomatic relations, proxy forces, propaganda, high level official visits, and the support of revolutionary forces. The prize for Moscow is influence over the vital strategic minerals of southern Africa, capability to threaten the Cape shipping routes, and the demonstration to the Third World that the Soviet empire remains capable of expansion.

With regard to the Persian Gulf, the primary objective would be control over oil in the event of a NATO-Warsaw Pact conflict.

Central America, although distant from the USSR, is a priority target for Soviet adventurism. Utilizing its Cuban proxy and base, Moscow has been able to contribute to the destabilization of the entire area, from Mexico to Panama. Mexico is already in a state of political, social and economic crisis. The advent of a Marxist-Leninist regime in Mexico would have consequences worse than disastrous on the United States.

Finally, the Soviet government under its new leadership has opened a diplomatic offensive centering around superficially attractive but dangerous arms control proposals. The United States must resist those which would increase the importance of the conventional military balance in Europe since it is in conventional military power that the USSR enjoys its greatest margin of superiority.

If the U.S. can manage to contain Soviet expansion and avoid war for the next several decades, it is certainly possible that a multipolar world will be one which will add to the security of the Free World and reduce the

¹ The Washington Times, (November 7, 1986).

opportunity for the Soviet Union to coerce the non-communist nations. But in order to get from a dangerous present to a more secure future, American national security policy must recognize that no genuine reconciliation with the Soviet Union is possible barring significant changes in the Soviet system itself. Therefore, a viable U.S. national security posture must be one which has broad support among the American people, is morally consistent with the values and ideals of the society, furthers realistic national self-interest, and is budgetarily sustainable over many years to come. At the same time, policymakers should not rule out the possibility--even if it appears remote at the present time--that the Soviet Union indeed may evolve into a society and a political system less threatening to the outside world. But until that time comes, preventing Soviet military superiority--and the political consequences which flow from that--must be central to American policy toward the Soviet Union.

B. Technology: Future Impact on National Security

1. The Technology Race

Throughout the post-World War II era it has been the constant thesis, in every administration, that the hope for the U.S. to prevail over the military threat from the Soviet Union lies in maintaining a technological lead; i.e., it would be the quality of U.S. armed forces rather than the quantity that would make the difference. This thesis moved technology into the front line of competition where it has remained. Technology will continue to be a race between the superpowers, and a costly one. The Soviets have for several years been spending approximately twice as much as the U.S. on military research and development, and the results of this effort are visible in the closing of the technology gap. In some areas the Soviets have surpassed the U.S., e.g., in building their ALFA class submarines with a titanium hull. Titanium is a very special metal, extremely difficult to process from its ore form, and thus it is clear that the Soviets have devoted several years at great expense to achieve the technological skills to fashion titanium into such a large structure as a submarine, producing a boat that can dive deeper than steel-hulled boats. Titanium gives other desirable characteristics to the hull, such as being

non-corrosive and nearly non-magnetic. The U.S., although making a variety of applications of titanium (such as the skin of the Blackbird, Mach-3 aircraft), apparently has decided it is not cost-effective to pursue the technological path leading to submarines, and thus has not invested in the scope of manufacturing capabilities that would be required to build a submarine with a titanium hull.

This kind of choice is one illustration of the difference between the U.S. and Soviet approaches to weapons systems development, notably in the submarine field, but seen in other categories as well. The Soviets build several variations of a weapon system and test them as operational units, enabling them to choose the best from actual performances. For example, the Soviets are currently "producing or testing nine classes of submarines."¹ The U.S. normally builds only one class at a time, going directly from the drawing board to a production line involving a series of boats. If there is a design flaw, it will be repeated several times in the first several boats of the line before there is a chance to detect it from operations at sea. It may be that budget restrictions will tend to force continuance of this method of design and construction, but the question will continue to arise as to whether the U.S. can keep ahead of the Soviets in this fashion.

The Soviets seek by all means possible to acquire U.S. and Western technology, taking advantage of the openness of free societies, but also not hesitating to employ all the espionage skills they possess. Although the free world industrial nations have subscribed to a system (COCOM) to prevent military high technology from getting into the hands of the Soviets or other potential adversaries, it doesn't always work. It recently came to light that a Japanese company (Toshiba), in cooperation with a Norwegian company (Kongsberg Vaapenfabrik), sold the Soviets a high-technology computer-controlled milling machine for making ship propellers.² This equipment, "high on the list of technologies that the Western allies and

¹ Soviet Military Power, 1987, Department of Defense, 1987, p. 82.

² New York Times, June 12, 1987, p. 1.

Japan bar from export to the Soviet bloc,"¹ enables the Soviets to make substantial progress in quieting their submarines. In his statement to the Congress on the FY 1988/FY 1989 Navy RDT&E budget, Assistant Secretary (RS&E) Melvyn R. Paisley said:

Our capabilities against today's threat are adequate. However, the quieting achieved by the Soviets in some of the newest classes of submarines will pose a serious threat to our ASW advantage.²

This is but one example of the problem of trying to prevent the spread of technology in a world of knowledge that is increasingly internationalized. If the U.S. tries to protect its scientific breakthroughs and to restrict to its domestic industry the converting of new knowledge into usable products, it will be, as Robert B. Reich points out, trying to practice the principle of "techno-nationalism."³ But Reich says:

Techno-nationalism faces three formidable difficulties...First and most obvious is the logistical challenge of confining new knowledge within national borders. Modern technology typically does not leak out in boxcars or briefcases. Instead, blueprints and designs flow out over the airwaves, by satellite, or one computer to another...The second challenge is...American universities, corporations, and even the Department of Defense are now international endeavors...The questions grow even more tangled when it comes to distinguishing between American and foreign companies...What's an "American" firm?...suppose that a large and growing minority of the firm's shareholders are foreign, and 40 percent of its employees live and work abroad. Does this firm qualify? (It's IBM.)

1 Ibid.

2 "Statement of Melvyn R. Paisley, Assistant Secretary of the Navy (Research, Engineering and Systems), on the FY 1988/FY 1989 Navy Research, Development, Test and Evaluation Budget," Department of the Navy, 1987, p. 20.

3 Robert B. Reich, "The Rise of Techno-Nationalism," The Atlantic, May 1987, pp. 63-69.

There are no easy answers to these problems (theft, giveaway and leakage through the system), but national security demands that the effort continue to be made to protect technology (knowledge and domestic production) that is vital to U.S. national security.

Beyond the problems of allowing scientific and technological (S&T) secrets to get away is the more basic problem of the ability of the U.S. to continue to compete in the worldwide S&T race. There is a growing fear that the U.S. is losing its economic and technical competitiveness to other countries. U.S. News & World Report put it this way:

Imports now account for 13.6 percent of the goods and services purchased in the U.S., up from 10.8 percent five years ago.

As recently as 1981, the U.S. shipped nearly 43 percent of the world's computers. By 1985, the share has slipped to just over 34 percent.

Though American workers on average earned twice as much per hour as their Japanese rivals in 1985, the Japanese needed only 80 to 100 hours to make a car. American companies required 150 to 160 hours to do the same job.

Over 70 percent of the value of components in an IBM personal computer is made in Japan and Singapore.

Japan's takeover of semiconductor chips, now 47 percent of world sales, raises the possibility that someday the Pentagon won't be able to buy the chips it needs for weapons from American companies. In a report to be released shortly, the Defense Science Board warns that the U.S. semiconductor industry no longer can "compete in its present form."¹

The New York Times made a similar report:

Recent reports by a Defense Department study group and by the Central Intelligence Agency found that the United States chip-making industry was in worse shape even than had been recognized.

¹

U.S. News & World Report, February 2, 1987, p. 18.

While many experts have wondered whether the American industry could maintain its technological lead over Japan, numerous authorities now say the lead has been lost in many areas. The question now being asked is whether the American makers of semi-conductors--the tiny silicon chips that are the heart of computer and other electronic devices--will survive at all, and in what form.

The draft of the report prepared for the Defense Department, for example, concludes that the United States industry may "very soon, in fact, be competitive only in very small 'specialty' segments of the overall market." And the assessment by the C.I.A. concludes: "We believe the U.S. semi-conductor industry is at a crucial turning point in its history. It fundamentally cannot compete in its present form."¹

As Reich reports, attempts are being made to restore the U.S. lead in the computer world, for example:

The Semiconductor Industry Association, a trade group of American chip makers, is now joining forces with a congeries of giant American computer firms to create an ultramodern chip-production facility... 'This is our last chance,' the president of the trade group told me not long ago. 'If we lose the ability to make this equipment in America, we might as well fold up the tent.'²

2. Changing Technology and the Future of the Maritime Strategy

The basic U.S. strategy of maritime superiority is based on three fundamental assumptions:

- 1) That the highway aspect of the sea remains paramount, at least within NATO.
- 2) That the sea remains so vast that the use of choke points and forward operations remains vastly preferable to hunting enemy sea denial forces in the open ocean, and that a concentrated battle fleet, capable of

¹ New York Times, January 5, 1987, p. 1.

² Reich, op cit., p. 66.

projecting force into the Third World, remains viable in the face of Soviet maritime forces.

- 3) Finally, the basic strategy assumes that it is possible to provide threats, largely in the form of a survivable battle fleet, which can be met only by a concentration of Soviet sea denial forces. This concentration in turn should tend to limit the effective threat to the sea lanes.

The first point motivates the maritime strategy. The second explains why some form of main fleet strategy is needed. The last assumes that it is viable. Finally, the bait/trap concept defines the tactics--and the likely near-term technology--of the maritime strategy.

Much depends on whether the Soviets can somehow split off the means of neutralizing the threat presented by the U.S. fleet from the means of achieving sea denial. At present it seems that neutralizing the prospective U.S. threat is a central motivation of Soviet naval development. The sea denial threat is actually largely a consequence of this development: whatever the initial set of Soviet naval priorities, the Soviets could be motivated to shift to sea denial in the course of a protracted non-nuclear war. Hence, the early destruction of Soviet protective forces denies the Soviets that important later sea denial option.

For the future, however, one might speculate that the Soviets, facing the possibility of a protracted non-nuclear war, would ultimately come to consider sea denial an extremely valuable option in its own right. Would they develop a distinct sea denial force which would not respond to the kind of bait/trap tactic which is characteristic of the maritime strategy? That in turn would depend on whether the Soviets could develop what would amount to a more economical coast defense force. Given past Soviet

practice, the most likely mechanism would be a dedicated land-based missile force.¹

The future of the maritime strategy depends on two quite distinct questions. The first is whether the central assumptions will remain valid. Given the form of the maritime strategy, they combine technological and political aspects. The second is whether new technology will radically alter the form of naval forces. At both levels, the most important technologies are probably information gathering and processing (ultimately artificial intelligence) and stealth, which one might think of as information denial. Their relationship is already obvious in ASW, stealth being represented by silencing. At a secondary level, one might observe that, at least in air warfare, speeds are noticeably increasing, and will probably continue to do so in the near future.

These two technologies seem most important because so much of naval warfare turns on information. Navies are fundamentally stealthy (whatever the size of their ships) because it is so difficult to locate and identify specific ships against the vastness of the ocean. As a consequence, naval tactics are designed largely (though not entirely) to supply just that information, often by reducing the alternatives open to an enemy fleet (e.g., by occupying a choke point through which it must pass).

¹ There are indications that the Strategic Rocket Force (SRF) tried to take over the naval defense role, claiming that IRBMs could be used to attack carrier groups. For example, it is sometimes suggested that SS-11's in the southern Soviet Union were assigned specifically to attack naval targets in the Mediterranean. Admiral Gorshkov specifically criticized this kind of assignment, and it is difficult to imagine how very long-range missiles could function in a non-nuclear context. Very long range would be essential, first to attack before the carriers could launch their aircraft, and second to realize reasonable economy. There is little question but that some form of defense against anti-ship ballistic missiles could be erected. However, from a strategic point of view the significance of a Soviet shift to land-based anti-ship missiles would be to separate the anti-carrier from the sea denial roles, and so to neutralize the bait/trap strategy. It would seem, then, extremely important for the United States to deny any such economy to the Soviets.

On the tactical level, there is another important question. To what extent can we depend upon cooperation between widely separated elements of a naval force? Clearly weapon and platform speeds are increasing, and one might argue that battle volume must increase commensurately. For example, the faster the attacking bombers, the further out they must be intercepted. It might be argued further that the larger the battle space, the greater the benefit to be achieved by linking individual widely separated units together. For example, if bombers must be intercepted beyond a ship's horizon, then the interception itself is best controlled by airborne radar aircraft relatively far from the ship. They in turn may guide aircraft (as at present) or very long-range shipborne missiles (as sometimes proposed).

If the battle space becomes very large, then assets integral to the mobile fleet may no longer suffice, and the fleet may come to depend in part on very long range reconnaissance systems reporting to a higher-echelon commander on land. There is clearly a trade-off between the capability (and cost) of the deployed fleet and the combination of long-range sensor capability and the security of the communications links providing their output to the fleet. One might think of some fraction of fleet capability as insurance against the failure of long-haul communications or of sensors feeding them.

For example, a battle group at sea must carry with it sufficient fighters to deal with some level of bomber attack. The size of the fighter force in turn depends upon the degree of early warning to be expected. The better the warning, the greater the degree to which a limited force can be concentrated against the attackers. The less accurate the warning, the greater the dispersion of the fighter force, to deal with an ill-defined threat axis. Really early warning might allow battle group fighters to fly out towards the attacking bombers, far beyond the range at which they can hope to drop their missiles. Similarly, SOSUS warning of a submarine concentration in the path of the battle group might translate into a pre-emptive attack by S-3's from the carrier. For a given degree of security against submarine attack, the alternative to reliable early warning would be increased numbers of close-in escorts, or perhaps better terminal defenses.

Success at sea then may come to depend in large part on the speed, security, and reliability of the long-haul communications links, both within the fleet and between fleet and land-based sources of information. Such communication can reveal the fleet's position. Its channels, such as satellites, can be vulnerable either to physical destruction or to jamming. Given this vulnerability, a fleet can be designed for a greater or a lesser degree of autonomy.

For example, under most circumstances a carrier's F-14's are controlled by an E-2C radar airplane perhaps a hundred miles away. The F-14 radar is powerful enough that it can retain some considerable effectiveness even in the face of heavy jamming. An alternative system, "forward pass," has often been proposed. Very long-range missiles would be fired by a distant surface ship, and controlled by the radar airplane. The advantage of the system is that it can deal with very numerous targets, since the ship can carry many more missiles than the F-14's. However, forward pass requires extremely reliable long-haul communications, over much greater ranges than those inherent in the F-14/E-2C system. Moreover, failure of communication between the E-2C and the missiles completely negates the system, whereas the F-14's retain some capability even if they cannot guide their own long-range missiles.

This type of issue may determine the future of the large-deck aircraft carrier. Forward pass has been proposed several times, but it has never been practical, because of the complexity of the communications involved. If it became practicable, large surface ships loaded with very long-range surface to air missiles could take over the outer air battle anti-bomber

role currently assigned to the carriers. It is even conceivable that the forward radar role could be taken over by satellites.¹

The West as a whole is still very much a seaborne empire, and transportation across the seas remains vital. Indeed, as manufacturing diffuses through the world, it may become entirely impossible for any Western nation to afford self-sufficiency, even as an ideal, and transportation across seas may become even more important.

In wartime, moreover, it is almost impossible for the West to project power against possible targets except by moving that power over seas. It is true that the European NATO nations are contiguous to the most likely enemy, the Warsaw Pact. However, they are not altogether self-sufficient, and sustained warfare in Europe would require material support from overseas, not to mention troops from abroad. Any attempt to outflank the Warsaw Pact would almost have to be seaborne.

Technologically, the current situation is that communication within land masses along developed highways and railroads is relatively easy; coastal shipping fleets, at least in the developed world, have declined quite sharply over the past three or four decades.² However, it is still quite difficult to move rapidly over land in directions not yet prepared by road or railway.

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Martin-Marietta proposed exactly this kind of system to fulfill an Outer Air Battle requirement. A very large surface ship loaded with numerous long-range cruise missiles and powerful SAMs could be equated with the carrier, in the bait/trap role. It would not be as flexible as a carrier, particularly in a limited war or cold war role, when it would be extremely important for possibly hostile aircraft to be positively identified. At present, moreover, it would take about 4,000 cruise missiles to equal the offensive firepower of the carrier. The claimed advantages of the system are reduced manning and reduced costs (since the expensive aircraft are eliminated). It is by no means clear that this would represent a worthwhile bargain, but it seems useful to describe it in some detail.

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However, that relatively easy communication is quite expensive in terms of fuel, which often does have to come from overseas.

Moreover, only ships can easily move masses of heavy materiel overseas. No technology in sight can materially improve matters. Airplanes are still very limited in payload, and they require (and will continue to require) excessive amounts of fuel per ton of payload per mile. Airships can lift heavy weights at a limited cost in fuel, but at a very great cost in bulk, which presumably means manufacturing cost, as well as operational difficulty.

The second key is the effect of the vastness of the sea, or, more precisely, the difficulty of scanning that vastness rapidly enough to find specific ships within a reasonable period of time. This applies both to surface ships and to submarines, although the technologies involved are radically different. Sea denial (not necessarily sea control) would become much easier if all the potential targets could be continuously tracked, since they might be attacked by long-range land-based weapons.

It might be imagined that this problem has already been solved in the case of surface ships, because they are detectable by radar aboard aircraft or satellites. However, to detect a ship in, say, the North Atlantic is not to identify it as the target. At any one time, several thousands of ships are at sea. The number of worthwhile targets is much smaller, perhaps in the hundreds or even in the tens or units. The problem, then, is to select them out of the mass of irrelevant data (in the sense of information theory, noise). At present, the Soviets approach the problem by relying initially on signals the targets themselves make, such as unique radar emissions. As a result, it is reportedly possible for entire battle groups to "disappear" from the Soviet fleet plot for days or even weeks at a time.¹

¹ This situation is, then, not so very different from that in December 1941, when the Japanese carrier strike force managed to vanish from U.S. plots by cutting off all radio traffic. The U.S. Navy, like its contemporaries, relied heavily on a series of high-frequency radio direction finders.

The case of sonar is not so very different in principle. It is theoretically possible to cover the entire world ocean with short-range (i.e., high-reliability) sonars, which would, in theory, detect every submarine. However, that would be prohibitively expensive. Similarly, it is possible to search the world's ocean using moving sonars or air-dropped sonobuoys. Again, because reliable range is relatively short, search would be extremely, prohibitively, expensive. Claims that "the ocean will soon be transparent" generally translate into a claim that some future exotic sensor will be capable of searching the volume of the ocean very much faster than is currently possible.

Some figures will make these statements clearer. The Pacific, the largest ocean, has a surface area of about 50,000,000 square nautical miles, and the world ocean covers about 104,000,000 square nautical miles altogether. Current active sonars have a reliable range, in deep water, of about 5 to 10 nautical miles; one high-powered low-frequency active sonar should, therefore, be able to survey about 75 to 300 square nautical miles. The situation is much worse in shallow water and under adverse acoustic conditions, but even at best it would take well over 300,000 or more active sonars to maintain continuous coverage of the world ocean, so that no submarine could expect to operate undetected at any time.¹

What is possible is to lay large numbers of short-range sonars to cover a particular area, such as a choke point, so that there is a high probability that any submarine passing through is detected and attacked. However, from a strategic point of view, that is only a new version of the existing choke point idea, which itself is a response to the problem of the scale of the ocean, and the impossibility of reliable ocean surveillance.

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Convergence zone detection does not count, because the convergence zone is only a ring around the sonar: there is a substantial gap between its inner edge and the outer edge of solid (direct path) detection. Other exotic propagation phenomena, such as bottom-bounce, can extend sonar solid-coverage range, but only under special conditions.

SOSUS operates on a different principle: it stares continuously at a large swath of the ocean, so that there is a fair chance that any submarine entering that swath will be detected. However, because it depends on sounds emitted by the submarine, it is subject to silencing improvements--just as the Soviet ocean surveillance system is subject to tight control of radio and radar emissions by the ships it is supposed to track.

There is no evidence that anything like complete worldwide detection coverage against submarines is within reach. Even were it to come to fruition, it is not clear that submarines (particularly strategic ones) would immediately become obsolete, because they would still be moving targets. If a moving satellite could record by means of sonobuoys or other devices a submarine's position at some point, there would necessarily be a time delay while its information was sent home for processing and then for use. Most likely such a satellite would be associated with a land-based ballistic anti-submarine weapon, representing the minimum time delay between detection and attack. One might imagine that the total delay would be of the order of an hour, during which a submarine would move 20,000 yards at 10 knots. That error might be tolerable if the weapon carried a large nuclear warhead.

The current reality is that submarines are becoming quieter (stealthier) and that not only are they becoming more difficult to detect (by passive means), but also they are finding it more difficult to detect other quiet submarines. It is not clear whether improved signal processing will reverse this trend. If it continues, then at some point it will no longer be clear that submarines are effective ASW weapons, since they will be unable to detect their targets passively. Platforms which can use active sensors, such as active sonobuoys, may become more important, especially in home area ASW. This possible development would have serious consequences for the maritime strategy, since the Soviets would no longer be compelled to use their own submarine force to hunt down U.S. submarines operating in their home areas. The submarine element of the bait trap strategy might be much less effective, even though the U.S. submarines would still expect to detect and kill numerous Soviet craft. This conclusion is not altogether certain, because submarines have both quiet

and noisy operating regimes. If the tactical situation forces them to move at high (noisy) speed, they are detectable at long ranges.

Radar satellites can detect surface ships at ranges of several hundred miles. However, they are limited by the sheer number of ships at sea; they need some means of picking out the ships of interest. The satellite radar must record enough details of the ships under surveillance to pick out the important ones. It can, for example, measure the length of the ships it sees, and reject all ships below a given size. Aircraft carriers are large, but they are not much larger than big container ships, some of which may travel at carrier speed; and they are significantly smaller than big oil tankers. Moreover, with the advent of surface-ship-launched deep strike weapons such as Tomahawk, it may be necessary for the satellites to detect, identify, and track much smaller ships, perhaps half or even a third the length of a carrier.

If length is not enough, then a sufficiently sophisticated satellite can observe the silhouette of the ship it detects. It (or its ground station) might then compare the silhouette to a computer library, and thus decide which ships were worth attacking.

It is conceivable that some future development in artificial intelligence would somewhat simplify these tasks, e.g., by substantially reducing the amount of data which the satellite would have to transmit down. However, that would not eliminate the basic problem, that there are a relatively few targets immersed in a mass of fairly similar ships. The ratio of targets to non-targets matters because substantial resources must be concentrated to destroy any one target; resources cannot lightly be wasted on non-targets.

This very elaborate system, moreover, is subject to simple countermeasures. In both World Wars, the Royal Navy converted old merchant ships to resemble its major capital ships, specifically for strategic deception. Relatively simple electronic countermeasures aboard ship could so change the perceived silhouette as to throw off even the most intelligent satellite-based reconnaissance system. Moreover, it is

possible that the satellite would have to operate its radar at very high frequencies, to package a usable antenna into the available space. It may, therefore, be subject to weather effects, and to jamming by corridors of chaff. It seems likely that "stealth" materials will be most effective at very high frequencies, and therefore that it will be easiest to use them to modify the signatures of ships as they are perceived by future radar imaging satellites.

Thus, although the situation for surface ships is not as easy to predict as is that for submarines, it seems unlikely that the vital tactical considerations imposed by the vastness of the sea will soon be overcome.

The problem of visibility versus stealth has led some to suggest that future ships should all be submersible. There are three counter-arguments. First, the fleet exists to carry out some mission, not merely to survive. Submergence may be inimical to that mission. Second, submarine communications with and beyond the surface are inherently poor. Third, submarines have an inherent limit on internal volume, hence on what they can carry per unit volume, or per unit cost. The usable volume of a submarine is equivalent to that of a surface ship of about 30 to 40 percent its displacement, because the surface ship has most of its volume above water, and because its deck area is usable. This one consideration has killed off numerous projects for submersible aircraft carriers.¹

¹ For example, about 1956 BuShips developed a series of radical new submarine projects. It soon concluded that a 20,000 ton submersible carrier--which could make all of 12 knots underwater--could carry no more than two or three aircraft, which would have to take off over a ski-jump, as it was unlikely that a submersible catapult would become available. It was easier to build a submarine to launch one-way nuclear missiles, as such a carrier could never efficiently launch non-nuclear attacks. A modern equivalent might be faster (reactors are now more compact), but it would not accommodate materially more airplanes.

Regarding the viability of surface ships, once they have been detected, weapons are becoming faster (which reduces reaction time), and they are becoming more intelligent (which may make countermeasures more difficult). A 10,000 ton surface ship can accommodate a much greater weight of electronics, including countermeasures, than can a hundred-ton bomber or a five hundred ton fast attack boat. Any single weapon carried by the bomber or attack boat must balance electronics (such as counter-countermeasures), propulsion (for high speed, to overcome defenses, and for long range, so that it cannot be destroyed before launch), and the sheer size of its warhead within a relatively small envelope. For example, Western submarine torpedo tubes generally limit weapons to a diameter of 21 inches and a length of about 21 feet. Moreover, should fast-reacting defensive weapons such as directed energy beams become a reality, it should be possible to accommodate them aboard ships.

It seems unlikely that stealth technology, a combination of special shaping and special countermeasures, will radically change these conclusions. In either case, stealth is more likely to be effective against short- than long-wavelength radars. The size of ships makes it practicable to provide them with high-resolution low-frequency radars, either on masts or on the hulls themselves (with electronic scanning). Similarly, a stealthy missile would use some form of low-probability-of-intercept radar. A ship could accommodate sufficient electronics to have a reasonable chance of detection. Moreover, a coordinated fleet would enjoy the advantage of multiple detectors and multiple receivers, and therefore a higher net probability of detection.

Stealth has, however, another interesting survivability aspect. It seems unlikely that a large ship can be made to vanish. However, it is probably possible to reduce its signature to that compatible with a much smaller ship, so that a remote sensor cannot distinguish, say, a carrier from an escorting cruiser, or a carrier from a suitably rigged merchant ship. That raises interesting possibilities for cover and deception. A highly centralized Soviet-style command structure should be particularly susceptible to such tactics.

It is also possible that radar signatures can be deliberately altered to guide missiles into relatively unimportant parts of a ship's structure. The larger the ship, the better its vitals can be dispersed (or duplicated), and the easier it is for the designer to arrange to guide missiles away from the vitals. For example, some analysts of the designs of recent Soviet surface ships suggest that radar-homing missiles would tend to concentrate on their massive tower masts, the insides of which contain the waveguides of their radars. Hits would tend to blind these ships--but not to sink them.

Stealth will probably first be applied to shipboard aircraft. The efficiency of a carrier as an attack weapon depends upon the survivability of its aircraft: if they can all shuttle their weapons from ship to shore and return, they can deliver massive tonnages at a relatively low fixed cost. If stealth means survivability, then stealth should greatly enhance carrier capability.¹

In a larger sense, the central question is whether detection and attack need necessarily mean the destruction of a ship. That would certainly be the case with nuclear weapons, but (despite considerable advertising) even the smartest non-nuclear bomb cannot be compared with them. Current missiles strike above the waterline, causing direct destruction and fire. If they hit a large magazine, they should (in theory) cause it to explode, probably sinking a ship.

Countermeasures are certainly feasible. In a large enough ship, it should be possible to armor against incoming weapons. That would extend

¹ It seems likely that stealthy anti-ship bombers and missiles will suffer because they will have to use active radars to locate their targets. Such radars may in turn give away their presence. A stealthy airplane attacking a fixed land target could rely on totally passive sensors: inertial guidance and perhaps (if it flew at high altitude) stellar navigation. It seems unlikely that anti-ship weapons could rely entirely on command guidance, e.g., by a radar satellite, or on passive sensors (e.g., IR).

to shaped-charge warheads (as in Soviet weapons). Tanks are now armored against shaped charges, and they are much smaller than warships. Other countermeasures would include very rapid flooding arrangements (to fight magazine fires) and the use of insensitive munitions.

Torpedoes either strike the hull of the ship or explode under it. In the former case, the designer can provide sufficient subdivision to contain flooding, as long as the ship itself is large enough. The only catastrophic case is an explosion in or very close to a magazine. In a small ship, such an explosion tends to flood the magazine and thus need not be fatal (although it may be so large that the hull structure is destroyed). In a larger ship, the structure of the ship tends to contain a magazine fire, and explosion is quite possible.

The under-the-keel case is more difficult, as the torpedo explosion creates an expanding sphere of gas, which bounces off the bottom of the ship. The hull tends to flex at each bounce, and after a few flexes it may break in two. The countermeasure is obvious: if the bottom is soft enough, the sphere will break through it, and the hull will not flex at all. The ship will flood, but that generally reduces the problem to that of the contact torpedo already described. The prerequisite for this kind of response would be to distribute the strength of the hull in such a way that destruction of the keel itself (which would of course be broken) would not be catastrophic.

All of this is not intended to show that warships can be made unsinkable; that has never been true. It is, rather, to suggest that large ships can still be hardened, almost certainly without destroying their efficacy. Thus, the continued viability of a fleet strategy need not rest on expectations that the present ratio between defense and offense will continue forever. Rather, it would seem that surface ship technology will offer some considerable margin of defense.

A promising new technology is automated generalized production. It is now possible to design a factory which can shift from one product to a very different one, by reprogramming its software (and changing the material delivered to it). Ships can be built from modules which such factories can manufacture; the U.S. Perry class frigate is a good example. A specialist yard is still needed, but the modules need not spend much time there. Thus, existing yards can enormously expand their total capacity by making use of nominally non-naval manufacturers--if proper preparation has been made. This technology would seem to apply particularly to merchant ships, which are so much simpler than warships.

Data busing is a related future ship production technology. At present, outfitting, particularly wiring, is a major, specialized, and time-consuming aspect of warship construction. Further wiring is required whenever a ship is refitted. However, high capacity data buses could easily accommodate the current wiring functions, leaving sufficient capacity for future growth. Individual sensors and weapons could tap the data stream flowing through them, just as they tap ship power supplies. Because they would be physically concentrated, data buses would probably be relatively easy to protect. Protection in turn should become more attractive in the context of the sort of protracted war implicit in the maritime strategy. In a short war, ships which are severely or perhaps even moderately damaged are as good as lost, since they cannot participate in later stages of the conflict. In a long war, it is probably well worthwhile to repair even major damage, and a ship's ultimate survival will often depend upon how well its combat system can withstand minor damage.

It may now be easier to mass-produce escorts, because the new towed-array sonar systems can function even in relatively noisy hulls, as they are towed well astern of most of that noise. That means that a merchant hull can be converted into an austere escort by fitting it with a specialized towed array, perhaps containerized, and also by equipping it with a helicopter (to prosecute array detections). The result will be far from satisfactory, but it will probably work. If appropriate preparation

is done in peacetime, then, it might actually be possible to overcome the current drastic lack of escorts.¹

This last approach requires the existence of large Western merchant fleets, to provide enough surplus hulls for escorts. Unfortunately, the Western fleets are declining rapidly. Partly that is because it is difficult to attract crews at competitive wages. Partly, too, it is because owners have chosen to transfer their ships to flags of convenience, largely in the Third World. It is a matter of some controversy whether NATO governments will be able to force multinational corporations to make their ships available in time of war. Similarly, one might wonder whether the government of a flag of convenience state falling under Soviet domination (or becoming violently anti-Western) would not be able to prevent NATO from using ships nominally under its control.

The merchant ship mobilization issue also arises in mine countermeasures and in coastal ASW. In both cases, the Third World boundary condition on the maritime strategy prohibits vast investment in peacetime, as such craft are not useful in the naval presence mission. They could be improvised in wartime from existing coastal craft, assuming appropriate prewar preparation. That is the basis of the U.S. COOP (Craft of Opportunity) harbor mine countermeasures program. The problem is that coastal fishing fleets are limited, and declining in the face of foreign competition, both in the United States and in Europe.

Even given these somewhat pessimistic caveats, mobilization promises to change wartime strategy in a protracted war--assuming that the standing fleet, at the outset, is able to achieve at least temporary sea control. It seems extremely unlikely that mobilization production could be

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This approach might become less attractive as Soviet submarines become quieter, since existing towed arrays are passive. Several systems now under development associate a towed array with an active sound source (sometimes also towed), and therefore could continue to function even against very quiet submarines.

initiated in time to affect the earliest stages of a future war. However, it could begin at the outbreak of war, and it could be extremely important after the first few months--if appropriate preparation is made. That in turn requires a wider appreciation of the possibility that future war would be protracted and non-nuclear.

In the past, mobilization has entirely changed the nature of conflict. For example, the United States Navy studied the problem of war with Japan from about 1907 onwards. It developed a plan, but it could not really meet the material and manpower requirements which flowed from it. As a result, versions of this ORANGE plan developed in the late 'thirties became more and more pessimistic. Mobilization--the mass production of ships and the mass enlistment of men, both in the Navy and in the Army which was actually projected overseas--totally changed the situation, and made ORANGE altogether feasible.

There are some technologically-related factors which might threaten the viability of the maritime strategy.

First among them must be the prospect of nuclear war at sea. For a number of reasons, neither side would seem particularly anxious to escalate to the use of nuclear weapons. Moreover, sea control would become far more difficult in the face of nuclear attack, as even a single weapon might well destroy or disable numerous ships.¹ There is one obvious and ominous exception. NATO doctrine is to fire a nuclear "warning shot" before initiating large-scale tactical nuclear escalation. It is entirely

¹ It is true that in the 'fifties the U.S. Navy did plan formations designed to minimize nuclear damage. However, they made sense only because large nuclear weapons were relatively scarce. For example, it is perfectly possible to disperse a three-carrier formation so that two will survive if one is hit or near-missed. However, nuclear weapons are now relatively plentiful, and it is not difficult to imagine an enemy using one or two per carrier, thus largely defeating the defensive (not the deceptive) aspect of dispersal.

possible that NATO statesmen will imagine that such a shot could be fired at sea, thus avoiding damage to or near their own soil. At present U.S. policy is to deter the Soviets from initiating nuclear war at sea, and the Soviets presumably are willing to avoid such use because (1) they do not so highly value naval assets and (2) they much fear escalation to the land. NATO initiation at sea would entirely remove this bar.

Second must be the possibility that the Soviet army would seize so much of the NATO coastline that the current geographical advantage of NATO would disappear. For example, the Soviets might be able not merely to fly their bombers further into the open ocean, but also to escort them in their attacks on battle forces. That would not merely vastly increase the number of air targets. It would also cut down the number of defending fighters, particularly if the Soviets were able to mount successive waves of fighters and then bombers. This potential threat might be met by increasing outer air battle killing power, for example through providing large numbers of very long range ship-launched missiles.

A third adversity would be for the Soviets to abandon their bastions altogether, on the theory that they were indefensible. That seems unlikely, given past Soviet practice, but it is possible. In that case forward deployed submarines would still be useful, but they would only be another means of attrition, attacking submarines transiting outbound, or returning for repair or rearming. Convoy would probably become much more important, and much would depend on whether convoys and their escorts could be shielded from Soviet bombers, the one open-ocean threat that they could not really counter. The battle force idea, then, would probably remain important, but the nature of the ASW battle would change. Matters would be particularly difficult because SOSUS and the barriers would lose much of their effectiveness in the face of significantly quieter Soviet submarines.

The other potential danger would be an effective mine offensive, not only in coastal waters but also in the strategic straits which the battle force must transit. Future rising mines might be almost impossible to hunt or to sweep, yet they might embody torpedoes capable of severely damaging

large ships. Moreover, it seems unlikely that existing types of mine countermeasures craft could be carried with a high-speed fleet.

This threat can be overstated, as to Soviet use of mines. Mines do not generally incorporate any sort of IFF, so they probably would not be laid in areas the Soviets may wish to transit. The Soviets might eschew surface use of a strategic strait, but it would be much more difficult for them to avoid submarine use. However, the use of mines by other nations, including Third World regimes who are able to acquire a variety of types of mines, cannot be predicted. Thus, the threat of mine damage can arise in many places; the 1987 Persian Gulf mining incidents illustrate this problem.

Existing mines can upset amphibious operations, an effective element of the overall maritime strategy. There are two current countermeasures. One is to use vehicles which are largely immune to mines for over-the-beach delivery of men and materiel: air cushion vehicles and helicopters. The other is to mount the assault from well offshore. Even though the seabed (say) fifty miles offshore can be mined, one might argue that it would be uneconomical or extremely difficult to do so over the very large area from which an over-the-horizon assault could be mounted.

Finally, the potential positive benefits of technological change for the maritime strategy depend upon the ability of the U.S. technological-industrial base to respond, i.e., unless the U.S. can reduce lead time between concept/needs and actual capabilities, technology can be a liability rather than an asset.

C. The Energy Outlook

The collapse of oil prices in 1986 which were triggered by OPEC and the possibility that a more active role by the superpowers to maintain freedom of navigation in the Persian Gulf, could lead to an expansion of the Iran-Iraq war, have underscored the wide range of economic and national security implications of the dependency of the U.S. and its allies on oil imports from the Persian Gulf. Oil will continue to be the largest single

source of world energy well into the next century. Assured access to oil will be an important factor in the overall strategic balance between the East and West. From the viewpoint of the oil producing nations, the "oil weapon" will be the principal instrument to achieve their national goals.

The consequences of the precipitous drop in oil prices are in a sense a reversal of the implications of the price surges in the 1970s which contributed to the economic recessions in 1974-75 and in 1978-79, but which eased U.S. concerns about oil supply and the national security implications of dependence on oil imports. The lower oil prices that have prevailed since 1986 have been beneficial to the overall U.S. and global economy; however, not everyone has benefitted. The U.S. petroleum industry has suffered one of its most severe setbacks in its history. The lower oil prices have already contributed to reduced U.S. petroleum production and to increased oil consumption and imports. Domestic drilling and exploration have been curtailed and the oil service industry has been particularly hard hit. During 1986, domestic oil production dropped about 800,000 barrels per day (B/D), U.S. oil demand increased by 2.5 percent, and imports increased about a million barrels a day to 5.3 (MMBD). Of the 5.3 (MMBD) some 900,000 B/D (about 17 percent) come from the Persian Gulf.

Of the known oil reserves that can be recovered economically with current technology at today's prices, some 63 percent are in the Persian Gulf; the other OPEC countries possess another 13 percent, leaving only 24 percent in non-OPEC countries of the world's known reserves.

The Department of Energy estimates that currently there are about 10 MMBD of surplus production capacity in the non-communist world and the Persian Gulf producers account for about two-thirds of this amount with most of the remaining one-third in other OPEC countries, primarily Libya, Nigeria and Venezuela. With this amount of excess production capacity and with demand for oil expected to rise only slightly in the near term, world prices could remain in the \$15-20 per barrel price range for some time.¹

¹ Department of Energy Report, Energy Security, March 1987, p. 20.

The price of oil is affected by political as well as economic factors, and there are many uncertainties in attempting to predict the future trends in petroleum production, consumption and imports. Among the more significant uncertainties are the growth rate of the world economy, particularly that of the OECD countries, from now until the year 2000; the future of OPEC, its cohesiveness, its policies and strategies and its ability to carry them out successfully; and the political situation in the highly volatile Middle East especially the Gulf. If the Iran-Iraq war should escalate prices could skyrocket.

A number of studies and surveys have been conducted during the past year to determine the likely trends in U.S. and world oil consumption, production, and imports between 1985 and the year 2000 on the basis of price and other economic assumptions. Although various studies are based on different assumptions and methodologies, they are for the most part in general agreement on the basic trends: they expect U.S. oil production to decline, consumption to increase, and imports to rise substantially during the next decade.¹

Among the studies and reports reviewed in connection with the outlook for energy are: the report by the Secretary of Energy to the President concerning "Energy Security" (March 1987) and the report by the National Petroleum Council to the Secretary of Energy regarding "Factors Affecting U.S. Oil and Gas Outlook", (Feb. 1987).

In projecting the nature and scope of U.S. energy security concerns, the DOE selected two "principal scenarios" which might be considered reasonable and which would bracket a range of U.S. oil imports and OPEC production. The oil prices assumed for both scenarios are relatively low compared to prices experienced in the early 1980s.

The "Higher Oil Price Case" (HPC) assumed that the world price of oil would rise to about \$23 per barrel in 1990 and to about \$28 per barrel in

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American Petroleum Institute, "Domestic Petroleum Production and National Security", p. v.

1995. It also assumed an average annual GDP growth rate in the U.S. of about 2.5 percent and an energy/GDP growth rate of about 0.5.

The "Lower Oil Price Case" (LPC) assumed that oil prices of about \$15 per barrel would continue until 1990, after which the world oil price would increase gradually to about \$22 per barrel in 1995; that the GDP would grow at an average annual rate of 2.7 percent and an energy demand/GDP growth ratio of about 0.6.¹

The National Petroleum Council examined the effect on oil demand and supply under two price scenarios which were provided by the Department of Energy and which were intended "to suggest a range of plausible prices." The upper price trend assumes the price of oil starting at \$18 per barrel in 1986 and rising at 5 percent per year in real terms to \$36 per barrel in the year 2000. The lower price trend starts at \$12 per year in 1986, rising at 4 percent per year in real terms to \$21 per barrel in 2000.

There are no significant differences in the scenarios of the two reports and in their analyses. In addition to providing the assumptions, the DOE provided basic data to the NPC and both the DOE and the NPC were dependent upon basic information from the petroleum industry.²

Based on the two principal oil price scenarios in the DOE report, U.S. net imports are projected to increase from 4.5 MMBD in 1985 to between 8

¹ Energy Security, op. cit., pp. 21-22. In addition to the two principal scenarios, the following two variations of the lower price scenario were also examined: "A Price Ratchet Case" in which prices would rapidly increase in the 1990s, and a "Price Collapse Case" in which oil prices would fall again to \$10 per barrel in mid-1987.

² The report by the DOE and the NPC served as the principal references for the projection of likely trends in petroleum production consumption and imports. In this regard, the American Petroleum Institute (API) noted in its study, "Domestic Petroleum Production and National Security" that the projections prepared by the National Petroleum Council in its Interim Report on U.S. Oil and Gas Outlook (Oct. 1987), were representative of the outlook reviewed by the API.

and 10 MMB/D in 1995--about one-half or more of total U.S. consumption (see Table I next page). Similarly, the imports of its OECD partners are projected to grow from 12 to 15 MMB/D in 1995--some 65 to 75 percent of their total consumption.¹

As discussed earlier, nearly all of the world's current surplus production capacity is in the OPEC countries--70 percent of which is in the Persian Gulf. If the United States and other countries increase their oil imports between now and 1995 to the levels indicated above OPEC's share, production is projected to increase from 37 percent in 1985 to between 45 and about 60 percent in 1995 and that of the Persian Gulf to some 30 to 45 percent.

In the past, OPEC has raised its oil prices when it utilized more than 80 percent of its capacity. Under the lower price case OPEC production would increase from about 17 MMB/D in 1985 (approximately 60 percent of its capacity) to 25 MMB/D in 1990 (about 80 percent of projected capacity and to about 30 MMB/D in 1995 (Approximately 90 percent at that time). As OPEC uses more of its capacity, prices could be raised again.

Based on its price scenarios the National Petroleum Council projects U.S. oil imports increasing to between 7.9 and 11.4 MMB/D (47-60 percent) in 1995 and from 9.1 to 13.6 MMB/D (52-68 percent) in the year 2000. The NPC report also points out that the share of oil supplied to the non-Communist world by the OPEC Gulf States could increase from 21 percent in 1985 to 25-32 percent in 1990; to between 30 and 40 percent in 1995, and 35-46 percent in the year 2000; and that OPEC could again be producing at 80 percent of its capacity before 1990. In order for the lower price trend to

¹ Western Europe's net oil imports are projected to increase from 7.4 MMB/D (63 percent of consumption) in 1985 to 8.2 to 9.9 MMB/D in 1995 (69 to 76 percent) in 1995. Japan imports virtually all of the oil it consumes. Net imports are projected to increase from its 4.3 MMB/D level in 1985 to between 4.4 and 4.6 MMB/D in 1995. Canada is currently a net exporter of oil. Under the higher price assumptions, Canada's net exports are expected to decline from their 1985 level of 0.4 MMB/D to 0.3 MMB/D in 1990 before returning to their 1985 level by 1995. Under the lower price assumptions, however, Canada would become a net importer, with net imports projected to reach 0.2 MMB/D in 1990 and 0.4 MMB/D by 1995.

TABLE I
ENERGY SECURITY
OIL PRICE SCENARIOS: UPPER AND LOWER PRICE CASES

		Higher and Lower Price Cases				
	<u>1985</u>	<u>1986</u>	<u>1990</u>		<u>1995</u>	
<u>WORLD OIL PRICE</u>			<u>HPC</u>	<u>LPC</u>	<u>HPC</u>	<u>LPC</u>
1985 CIF \$	27.03	14.23	22.51	15.49	27.51	21.51
<u>CONSUMPTION (MMBD)</u>						
UNITED STATES*	16.00	16.39	16.03	16.97	16.67	18.01
CANADA	1.48	1.53	1.55	1.67	1.58	1.81
JAPAN	4.34	4.42	4.48	4.65	4.44	4.82
WESTERN EUROPE	11.67	11.97	12.16	12.85	11.95	13.14
OPEC	3.40	3.40	3.66	3.66	4.16	4.16
OTHER COUNTRIES	<u>9.56</u>	<u>9.81</u>	<u>9.98</u>	<u>10.60</u>	<u>10.26</u>	<u>11.02</u>
TOTAL FREE WORLD	46.44	47.53	47.85	50.40	49.07	52.97
<u>PRODUCTION (MMBD)**</u>						
UNITED STATES	11.20	10.90	10.08	9.22	8.89	7.57
CANADA	1.84	1.82	1.80	1.52	2.00	1.41
WESTERN EUROPE	4.27	4.41	4.49	3.70	3.73	3.22
OPEC	17.21	19.35	20.06	25.35	22.00	30.02
OTHER COUNTRIES	9.37	9.44	10.59	9.51	11.70	9.49
CPE NET EXPORTS	<u>1.80</u>	<u>1.70</u>	<u>1.00</u>	<u>1.60</u>	<u>0.50</u>	<u>1.60</u>
TOTAL FREE WORLD	45.68	47.62	48.03	50.90	48.83	53.30
<u>NET IMPORTS INTO UNITED STATES (MMBD)</u>						
50 STATE AREA	4.29	5.23	5.66	7.53	7.54	10.19
U.S. TERRITORIES	<u>0.27</u>	<u>0.29</u>	<u>0.32</u>	<u>0.30</u>	<u>0.29</u>	<u>0.29</u>
TOTAL UNITED STATES	4.56	5.52	5.98	7.83	7.83	10.48
<u>NET STOCK ADDITIONS AND STATISTICAL DISCREPANCY (MMBD)</u>						
	-0.76	0.09	0.18	0.50	-0.24	0.33

* Includes about 0.3 MMB/D of consumption in U.S. territories
 ** Includes crude oil, natural gas liquids (NGLs) and refinery gains

Source: Energy Security (March 1987), Department of Energy, adaptation from Tables A1. and A2., pgs. A-11 and A-12

persist beyond 1990, OPEC would need to develop additional capacity before 1995 in order to meet non-communist world demand.

Oil's share of total energy has declined in recent years and this trend is expected to continue with such other fuels as coal, natural gas, nuclear power, and renewable resources increasing their share of U.S. and world energy consumption. However, oil will remain the largest single source of world energy (about 43 percent), and its consumption is projected to be between 49 and 53 MMBD in 1995.

The projected increase in U.S. imports by the U.S. and other OECD countries coupled with the likelihood that most of the imports will come from the Persian Gulf implies certain economic and national security risks resulting from supply disruptions brought about by political decisions by the OPEC countries or as a result of revolutions, regional wars or external aggression. The increasing capacity to export oil by pipelines and thus by-pass transiting the Persian Gulf should help to reduce the risk of disruption. In addition, the stockpiling of oil by the U.S. and certain other OECD countries should enable the importers to respond to any future disruptions more effectively than they were able to do so in the 1970s. The U.S. strategic petroleum reserve currently contains over 515 million barrels of oil and is being built towards a goal of 750 million barrels. Japan, Germany, and other OECD countries are expected to draw on up to 1.5 MMBD from their stocks. If the programs are carried out and if the systems are able to meet emergency demands promptly and efficiently, the consuming countries could respond effectively to the type and levels of supply disruptions experienced in the past. Larger disruptions experienced could result in large oil price increases and could have serious economic and national security implications.

The U.S. consumed more oil than any other nation in 1985 and it accounted for one-third of the total world consumption. Although it is the second largest producer, the U.S. has only 4 to 5 percent of the world's proved reserve (about 30 to 35 billion barrels). As of 1986, about 80 percent of the wells drilled world-wide have been drilled in the United States. Most of the very large U.S. oil fields have probably been

discovered and the amount of crude oil per well has been declining. Finding and producing oil in the U.S. is much more expensive than in most other countries and with the recent drop in oil price there is little incentive to invest and explore for new oil. The best prospects for finding large new oil fields in the U.S. are off the California coast and North Alaska. However, these would be costly to develop and the Alaskan field would take up to 10 years to bring into production. There is also an estimated 300 billion barrels of crude oil remaining in the ground which would become a critical source of U.S. oil production if the costs of enhanced oil recovery could be reduced. Approximately 30 billion could be recovered by employing enhanced oil recovery (EOR) techniques that are already being used or tested by the petroleum industry. The remaining 270 billion barrels would require the development of new EOR techniques.¹

The Congressional Research Service report on "The World's Conventional Oil Production Capability Projected Into the Future By Country", May 1987, concludes that "OPEC has the capacity to underprice all but a minor amount of unconventional oil production, while still raising the price of world oil. Therefore, it has the capacity to control the world oil market well into the next century."

The following are among the principal findings of the report.

Scientific assessments indicate that about one-third of the world's original recoverable, conventional, crude oil has already been produced and that less than one-quarter remains undiscovered. Only an estimated 21 percent of the remaining recoverable, conventional crude oil in the world is located in the Western Hemisphere. Thus, almost four-fifths of the world's remaining conventional oil is believed to be in the Eastern Hemisphere, and over half of this in the Persian Gulf region. OPEC countries control over half of the world's remaining conventional oil, while less than one-quarter of the world's oil is located in non-OPEC free market countries. Saudi Arabia contains an estimated 17 percent of the remaining world's oil, compared to about 13 percent in the Soviet Union, 7 percent in the United States, and 5 percent in China.

¹ Energy Security, op. cit., pp. 54-56, 65 and 66.

The United States may be the first major producing country unable to sustain current oil production levels because of declining resources. However, it is expected to be closely followed by the United Kingdom, currently an important exporter of crude oil. Other countries judged to be unable due to reserves and resource constraints, to sustain current production into the next century are: Peru, Brazil, Colombia, Argentina, Egypt, Canada, the Soviet Union, Australia and New Zealand, India, and Malaysia and Brunei. At the other extreme, Kuwait, Iraq, Iran, Saudi Arabia, the United Arab Emirates, all Persian Gulf OPEC countries, are projected to be able to sustain current (1986) oil production well beyond 2075. The longest sustainable crude oil production projected in non-OPEC exporting country is slightly beyond 2066 in Norway and slightly beyond 2036 in Mexico.

The only non-OPEC countries that are estimated to have sufficient oil reserves and resources that have the potential to increase production after year 2000 are Mexico, Norway, and Tunisia. Mexico and Norway each have a substantial amount of estimated remaining oil, and therefore the capacity to double current production. However, in both of these countries such an expansion of production would be very expensive and even if achieved would amount to less than half of the total projected oil production losses in the countries expected to experience resource-induced declines. It appears that only OPEC countries have the reserves and resources capacity to increase production to provide the additional oil necessary to sustain current world production levels to the end of the century.

Worldwide, OPEC accounted for about one-third of the nearly 20 billion barrels of crude oil produced in 1986. In the year 2000, if an average world production of about 20 billion barrels continues to be sustained, OPEC will have to supply at least 40 percent and perhaps as much as 50 percent of the total, depending upon the extent to which Norway and Mexico are willing or able to contribute. The increased OPEC production will have to come mainly from Persian Gulf countries. Increased OPEC production would also mean that the OPEC portion of world crude oil export trade would rise from just over half to about two-thirds by the end of the century.

While the major deposits of heavy oils, bitumen, and oil shales are located in the Western Hemisphere, they are much more costly and technically difficult to extract and process than are conventional oils. Also, they must be produced at much slower rates, often with considerable environmental disruption. Thus, OPEC has

the capacity to underprice all but a minor amount of unconventional oil production, while still raising the price of world oil. Therefore, it has the capacity to control¹ the world oil market well into the next century.

To date, the United States and the other OECD countries have been primarily concerned over the economic and national security implications of the location of larger amounts of proven reserves of conventional crudes in the Middle East--particularly, the Gulf. However, there is a need to examine the question of energy security from a broader and longer term perspective.²

At the present rate of world oil consumption of about 21 billion barrels (1986), estimated conventional recoverable oil would last about six decades--not for centuries.³ Accordingly, it becomes important to examine the energy security risks in terms of the transition from conventional oil to the heavier oils and to alternative fuels.

As evidenced in Tables II-VI, with the possible exploitation of conventional crudes, especially enhanced recovery techniques and the heavier oils, the predominant role of the Middle East is significantly reduced. Although the economic costs of making the transition to heavier oils and alternative energy sources are expensive by today's oil prices, the longer term costs--economic, political and military--will become much greater if the United States and its allies continue to deal with the issue on a relatively short term basis.

¹ Riva, Joseph P. Jr., "The World's Conventional Oil Production Capability Projected Into the Future By Country", May 1987, Congressional Research Service, The Library of Congress, Washington, D.C.

² Conant, Melvin A., "Energy Security", Geopolitics of Energy, May 1987, (Conant and Associates, Washington, D.C.) pp. 3 and 4.

³ Charles D. Masters, Chief and David H. Root, Associate, The World Energy Resources Program, U.S. Geological Survey, Reston, Virginia, Geopolitics of Energy, March 1981, (Conant and Associates, Washington, D.C.) pp. 1-4.

Table II
Proven Reserves of Conventional Crude (end 1986)*
(billion barrels)

North America	43	
Mexico	49	
Venezuela	55	
Europe	26	
Japan	0	
U.S.S.R.	61	
Middle East	398	(56% World Total)
Others	76	
TOTAL WORLD	708	

* BP Statistical Review of World Energy, 1986.

Table III
Recoverable Heavy Oil (Proven Reserves)*
(billion barrels)

North America	19	
Europe	8	
Japan	0	
U.S.S.R.	7	
Middle East	115	
Venezuela	278	(62% of World Total)
TOTAL WORLD	450	

*Extracts from Joseph P. Riva, Jr. (Congressional Research Service), *Encyclopedia Britannica*, Volume 19, 1987 Edition

Table IV
Recoverable Tar Sands (as of 1986)*
(billion barrels)

United States	43	
Canada	2655	(75% of World Total)
U.S.S.R.	78	
TOTAL WORLD	354	

*Joseph P. Riva, Jr. (Congressional Research Service), *Encyclopedia Britannica*, Volume 19, 1987 Edition

Table V
Recoverable Shale Oil (as of 1986)*
(billion barrels)

United States	626	(59% of World Total)
Canada	16	
South America (Brazil)	300	
Europe	2	
U.S.S.R.	42	
TOTAL WORLD	986	

*Joseph P. Riva, Jr. (Congressional Research Service), *Encyclopedia Britannica*, Volume 19, 1987 Edition

Table VI
Proven Reserves of Conventional Crude
Heavier Oils, Tar Sands, and Shale Oil

	(billion bbls)	% World
North America	974	44
Europe	36	15
Middle East	400	18.3
Japan	0	0
U.S.S.R.	188	8.5
South America		
(Venezuela and Brazil)	604	27.7
	2,202	100.0

Geopolitics of Energy, Conant and Associates, May 1987 (Revised)

The DOE's report on "Energy Security" recognizes the need for "planning purposes to explore some longer term developments at least in general terms",¹ but the report restricts its outlook to the period between now and 1995. In view of the lead times required for the research and development, the build-up of the necessary industrial capability and the time required for consumers to switch from conventional oil to other energy sources it is important for the U.S. Government--both the Administration and the Congress--in conjunction with its current review of U.S. energy policy and strategy to examine the issues from a broader and longer term perspective.

In light of the prospect that U.S. dependency on Persian Gulf oil will increase as the Year 2000 approaches, the U.S. Navy's role in protecting access to this energy resource will be vital to U.S. security.

D. Mobilization

1. Forces

One of the objectives of the National Security Act of 1947 was to provide a planning and decision making framework to assure that there was a balance between strategy and resources. However, commencing with the adoption of "massive retaliation and, subsequently, flexible response" in the mid-fifties, mobilization was gradually discarded and increasing reliance was placed on deterrence and forces in being. Less and less attention was given to mobilization for force expansion and sustainability over the next two decades.

In the late 1970s the growing awareness of the adverse shift in the strategic nuclear balance and the relentless buildup of the Soviet forces, their direct or proxy presence in Angola and Ethiopia, and the Soviet invasion of Afghanistan led to a renewed interest in mobilization. A series of mobilization studies and exercises in the late 1970s and early 1980s highlighted the unsatisfactory state of mobilization preparedness.

¹ Energy Security, op. cit., p. 31.

Confronted with the increasing Soviet threat to U.S. security interests the Reagan Administration embarked on a program to increase U.S. defense capabilities including programs to achieve a credible conventional defense capability.

The continued buildup of Soviet military power and its projection beyond Soviet borders places a premium on the ability of the U.S. to rapidly reinforce its forward deployed force in Europe and Korea and to respond promptly to a broad spectrum of contingencies in other areas which are of strategic importance to the U.S. The timely response of U.S. forces and the provision of adequate support could require at least a partial mobilization at the outset--a situation which the U.S. has never confronted in the past.

The reserve forces constitute approximately 45 percent of the total force structure and they play a role in the implementation of U.S. strategy. In an effort to hold down defense costs while increasing force structure the Administration and the Congress have placed growing reliance on the Reserve Components.

The Army Guard and Reserve provide one-half of the Army's combat power. Additionally, the Reserve Components provide about 80 percent of the Army's logistics, service support, and wartime medical capability. Modernization of the Naval Reserve continues and by the 1990s more than 50 ships of the emerging 600-ship Navy will be in the Naval Reserve. Modernization of Naval Reserve aviation includes the addition of more modern fighters and attack aircraft. The Marine Corps Selected Reserve provides roughly one-quarter of the Marine Corps' wartime force structure. The Air National Guard and Air Force Reserve provide 34 percent of the Air Force tactical fighter capability and 58 percent of tactical airlift. Additionally, the Air Reserve forces provide about 50 percent of our strategic airlift capacity and 20 percent of strategic air-refueling capacity.¹

¹ Secretary of Defense, Annual Report to the Congress, FY 1988, (GPO, Washington, D.C., 1987) p. 222.

Although the readiness of Reserve Components has improved, shortages of equipment and low levels of individual skill qualification and training limit unit readiness. One of the most critical factors in achieving force readiness in the reserve is the inability to meet Selected Reserve personnel requirements--both in quality and quantity. In addition, there are critical shortages--personnel shortages and equipment shortages--in medical Guard and Reserve units.¹

The Joint Chiefs of Staff in commenting on increased reliance on the Reserve Components point out that:

Recent trends have placed increased reliance upon RC forces to perform many missions that would be required in the initial stages of a crisis. However, these forces are not fully responsive because of legal constraints to their recall. Before continuing to increase our reliance on Reserve forces, the economic and strategic advantages of the current mix should be measured against the impact of expansion on peacetime presence, military strategy, and capabilities to perform warfighting missions in a timely manner.

Existing legislation can provide only limited early access to RC capabilities. Recent analysis conducted by the JCS concluded that the 100,000 Selected Reserve ceiling available to the President under his callup authority should be raised to 200,000. This increase is essential to meet the needs of the unified and specified commands and to prepare the CONUS mobilization base for further expansion.²

The availability of strategic intertheater transportation is critical to the successful implementation of timely deployment. There are substantial shortages of air and sea lift.³ In this regard the other NATO nations and other nations have agreed to contribute a number of ships and aircraft for

¹ Annual Report of the Reserve Forces Policy Board FY 1986, DoD, op. cit., pp. xviii and xix.

² The Organization of the Joint Chiefs of Staff, Military Posture, FY 1987, p. 63.

³ Reserve Forces Policy Board, FY 1986 Annual Report, op. cit., p. xviii.

a U.S. reinforcement of their region. The Republic of Korea will also make a smaller number of ships and aircraft in the event of a Korean conflict.¹

There are serious imbalances in the posture of U.S. Forces. In this regard in March 1986 General Bernard Rogers in discussing the "Readiness and Sustainability of U.S. forces in Europe, stated:

The Alliance nations recognize that they must ensure appropriate readiness and adequate sustainability for forward stationed and early reinforcing units. For example, NATO Defense Ministers have agreed upon a Conventional Defense Improvement Program which will give special emphasis to overcoming the main deficiencies of our conventional forces. Thanks to Congressional support of previous DoD efforts, the U.S. forces in Europe are now more robust and operationally capable than at any time in recent memory. The sustainability of our forces has improved, but we still have shortages of critical spare parts, major end items and preferred ammunition which reduce our ability to exploit fully the forces assigned.

I urge Congress to maintain the momentum which has developed in the readiness and sustainability programs. The value of the U.S. contribution to the Alliance rests with our sustaining our forward deployed forces as well as fulfilling our commitment to reinforce Europe with six additional divisions by M+10 day. We cannot meet that commitment today because of a lack of POMCUS stocks and insufficient strategic lift. The U.S. contribution also requires sufficient Combat Support/Combat Service Support (CS/CSS) forces for its forward deployed and reinforcing units. The manpower shortage for Army CS/CSS units required on M-Day in Europe today runs into the many thousands. In addition, these support forces lack sufficient equipment. A large proportion are not combat ready. Finally, the majority of the units are in CONUS and cannot be₂ deployed rapidly into the European theater...

¹ SECDEF, Annual Report FY 1988, op. cit., p. 230.

² General Bernard Rogers, CINCUS European Command, Statement to the Senate Armed Services Committee, Washington, D.C., 12 March 1986, pp. 5 and 6.

2. Defense Industrial Base

The report by the Defense Industrial Base Panel of the House Committee of the Armed Services, "The Ailing Defense Industrial Base: Unready for Crisis," (December 1980) points out:

...The issue of the defense industrial base and its ability to respond to the demands of a crisis or war were brought into sharp focus during the post-Vietnam War era. The health of the defense industrial base and, indeed, the total industrial base, was being questioned. This heightening of interest led to a number of steps within the Federal Government and the military services to obtain a clearer picture of the problem and its implications.

This growing concern for the faltering health of the defense industrial base was highlighted in a report prepared by a Defense Science Board Task Force on Industrial Readiness in 1976. The Task Force concluded that '...the United States is presently deficient in the extent to which the defense industrial base is postured to provide materiel support to the forces in being in response to the full spectrum of potential conflict situations upon which our national security plans are based.'

The extent of mobilization problems was perhaps most sharply demonstrated during the "Nifty-Nugget" mobilization exercise in the fall of 1979. It revealed major weaknesses in the machinery of the Federal Government for coordinating mobilization efforts.

The panel finds that:

--the general condition of the defense industrial base has deteriorated and is in danger of further deterioration in the coming years;

---the defense industrial base is unbalanced; while excess production capacity generally exists at the prime contractor level, there are serious deficiencies at the subcontractor levels;

---the industrial base is not capable of surging production rates in a timely fashion to meet the increased demands that could be brought on by a national emergency;

--the Department of Defense has neither an on-going program nor an adequate plan to address the defense industrial base preparedness issue; Department of Defense inaction in enhancing industrial base preparedness, coupled with instability within the five year defense program, weapon system procurement stretchouts, inadequate budgeting and inflation, has contributed to the deterioration of the U.S. defense industrial base, and as a consequence, jeopardizes the national security;

--a shortage of critical materials, combined with a resulting dependence on uncertain foreign sources for these materials, is endangering the very foundation of our defense capabilities. These shortages are a monumental challenge to the Congress, the Department of Defense, the defense industry and the civilian economy;

--present policies and procedures for the procurement of property and services by the Department of Defense are excessively inflexible and discourage the use of contract types that would promote the best interests of the United States; as a result, many procurement contracts cannot be written that would promote stability, encourage capital formation and lead to efficiencies that would result in savings to the government.

Although many of the generic problems highlighted in the panel's report remain in varying degrees, the situation has been improved. Between FY 81 and FY 86 DoD's procurement budget increased from \$62 billion to more than a \$100 in constant FY 87 dollars. The production rates of a large number of equipment items have improved and a significant number of new pieces of equipment and weapons are being produced. In addition DoD has taken a number of measures to revitalize the responsiveness of the defense industry and to improve industrial planning.

Numerous organizations have studied DoD's Industrial Preparedness Planning Program. These include DoD, the services, the Industrial Advisory

Defense Industrial Base Panel of the Committee of Armed Services, House of Representatives, 96th Congress, "The Ailing Defense Industrial Base: Unready for Crisis," (December 31, 1980), Washington, D.C., pp. (1), 9 and 11.

Council, the Joint Logistics Review Board, the American Defense Preparedness Association, the Defense Science Board, the National University Industrial College and the Mobilization Center, and the Institute of Defense Analysis. The following are major problems noted frequently in these studies.

- Industry's data is based on unrealistic assumptions regarding availability of equipment, raw material, long lead time components, and subcontract support;
- Little is known about second- and third-tier subcontractors' support capabilities because planning does not extend that far;
- The industrial base cannot respond within the timeframes required because industrial preparedness measures have not been identified and/or funded;
- Reliance on foreign sources for raw materials, component parts and labor;
- The economic and security implications of dependency on such sources and the measures to reduce U.S. vulnerability to supply disruptions or cut offs;
- The implications of a third country (Japan or Western Europe) gaining a technological edge on the U.S.

Secretary Weinberger in his remarks last April to the Electronics Industry concerning technological leadership and the industrial base made the following points:

Key sections of our industrial base have diminished. Studies, including the recent Defense Science Board report on the semiconductor industry, show how America is losing its edge in research and development, and in industrial capability.

...Reversing this dangerous trend is a slow process. Even though President Reagan doubled our investment in defense R&D between 1980 and 1986, we are still severely challenged by the Soviets. Our assessment of the twenty most important on-the-shelf basic technologies reveals relative equality between the Soviet Union and the U.S. in six vital areas; six areas where they are quickly reducing our lead; and, fortunately, several areas where the U.S. is clearly ahead. Still, the trend toward reduced technical superiority is a cause for grave concern.

...The need for investment in research and development is especially important in manufacturing technologies and processes. Failures in this area are manifest in low productivity and reduced industrial capability.

Semiconductor technology presents an especially critical challenge for defense, especially with respect to electronics. While much of the technology is spent in electronics, we must be able to obtain some segment of the electronics market. Consequently, we must ensure the success of American companies in the world market in order to sustain the production lines that are essential to national security and economic growth in the event of mobilization.

In this regard, there is a particular need for the electronics industry to meet its requirements for surge production in order to be able to meet such requirements until the entire electronics base is converted to war production.

The recent report by the Defense Science Board Task Force on "Semiconductor Dependency" highlights the impact of dependency of the military on foreign sources for semiconductor devices. In his forwarding memorandum to the Secretary of Defense the Chairman of the Defense Science Board pointed out that:

- All of our advanced military systems make use of sem devices;
- The most significant finding of the Task Force is that U.S. technology leadership in this critical area is rapidly eroding and that this has serious implications for the nation's economy and immediate and predictable consequences for the Defense Department;
- The report concludes that:
 - While our current dependency on foreign sources is modest today, semiconductor manufacturing trends indicate that we will become highly dependent in the future if immediate actions are not taken;

- Retain a domestic strategic production base;

Maintain a strong base of expertise in the technologies of device and circuit design, fabrication, materials refinement and preparation, and production equipment.

- In summary, this DSB report focuses on a critical national problem that at some time in the future may be looked upon in retrospect as a turning point in the history of our nation. The implications of the loss of semiconductor technology and manufacturing expertise for our country in general and our national security in particular are awesome.

The recommendations of the task call for cooperative government, industry, and university actions:

- support the establishment of a Semiconductor Manufacturing Technology Institute which would develop, demonstrate, and advance the technology base for efficient, high-yield manufacture of advanced semiconductor devices, and to provide facilities for production of selected devices for DoD needs;
- establish under the Department of Defense a Government-Industry-University forum for semiconductors to provide a common meeting ground for assessment of technology program and to facilitate joint action on problems of semiconductor research, development, and production of specific interest to national defense.

iv. Future Trends

a. Force Structure

The geopolitical trends in the growing multipolar world over the next two decades will place increasing importance on the ability of U.S. forces to deter threats to U.S. security interests and to provide a credible response to any type of aggression. A strategic arms control agreement

offered by the Under Secretary of Defense for Acquisition, Report of Defense Science Board Task Force on "Defense Semiconductor Dependency," Washington, DC, February 1987, pp. 11, 13.

will have an important impact on U.S. force structure and the balance between strategic forces and conventional forces. Barring a major crisis, there is little likelihood that additional resources will be allocated to defense needs--at least in the near term. In such an event, the determination of the allocation of resources to force structure and modernization on the one hand and to readiness and sustainability on the other, will be critical factors in the posture of the conventional forces and in the roles, missions and structure of the reserve components.

As noted above, recent trends have placed increased reliance on the reserve components to perform many missions which would be required in the initial stages of a crisis. Any further such requirements should be carefully balanced against the time and readiness limitations imposed by the part-time nature of reserve duty.

b. Manpower Trends

The projected U.S. male population from age 18 to 21 indicates that the downward trend in youth cohorts which started in 1981 will continue, from 7.8 million in 1985 to 6.6 million in 1995, a 15 percent decrease. The trend will then turn upwards until 2010. Minority groups will constitute an increasing proportion of the youth population, which will affect the number of young males which are expected to qualify for military service. The female 18 to 21 year-old-cohort decreases at the same rate, reducing the total prime population from about 15.5 million to 13 million.

Many young people do not qualify for military service because of mental and/or physical inadequacies or other disqualifying factors. Consequently, the armed services must now take one out of four qualified high school graduates on an annual basis to maintain a quality force. The question arises as to the impact of a 15 percent reduction in the prime cohort on the capability of the armed forces to maintain quality during the next decade and later years. Martin Binkin estimates the military will

have to take about half the available and eligible high school graduates to meet enlistment projections for the early 1990s.¹

The armed forces will have to increase their compensation inducements over the next decade or accept a lower quality recruit. In his examination of the relationship between military technology and manpower over the next decade, Binkin points out that if the trend toward more complicated weaponry continues, by 1990 the armed forces could be caught between a growing need for skilled technicians needed to handle sophisticated systems and a diminishing supply of recruits able to absorb complex training. Accordingly, he advocates emphasizing measures to better fit the machines to the forces by producing less complex or more reliable systems and to better fit the forces to the weaponry by upgrading training concepts and exploiting training technologies. This situation not only has potential implications for the voluntary enlistment program but also for the mobilization of conscripts and the readiness of reserve forces, because a balance between the increasing complexity of operation and maintenance of high technology weapons and the ability of military personnel to absorb the necessary technical training must be found.

c. The Industrial Base

Trends in the U.S. economy and in the composition of U.S. industry will affect the adequacy and structure of the defense industrial base. A healthy growing economy is required to provide resources for defense. If the real per capita output of the economy is not growing, there is likely to be pressure to reduce resources for national defense in order to increase the living standards of the American people or of particular segments of our society.

The shift of the American economy from traditional manufacturing towards services may be at variance with maintaining a strong, self

¹ Martin Binkin, Military Technology and Defense Manpower (The Brookings Institution, Washington, DC, 1986) p. 81.

sufficient industrial base. National security requires an industrial base which can produce the military systems necessary for the nation's armed forces. Certain segments of the industrial base produce goods which are in demand by both the military and the civilian economy and would consequently do well in an economy which is prospering. However, other industries which are or might be required to produce military systems have seen the demand for their products decline as changes occurred in the civilian sector of the economy. Many of the industries producing output considered vital for DoD, e.g., steel, machine tools, shipbuilding, etc., are no longer competitive either domestically or overseas; rather, they survive by virtue of a variety of protectionist measures, or imports supply a large part of U.S. (including military) demands. In addition certain technologies and systems will remain so critical to our national security interests that we must maintain domestic control over their disposition and use. How best to "protect" key defense interests and to what extent DoD should depend upon foreign sources are vital policy issues.¹

1. National Defense Stockpile

The process of developing new and improved materials is most more rapid than in any prior period. Consequently, qualitative and quantitative requirements for stockpiles must be identified as early as information is available. Successful attempts by DoD to acquire the technology and equipment for the stockpile program have been limited by the fact that the program is not a high priority for the Department of Defense and the Department of the Army.

¹ See, for example, the report of the Joint Committee on Defense Production, "The Defense Production Act of 1950," House Report No. 1045, 81st Cong., 1st Sess., 1949, and the report of the Joint Committee on Defense Production, "The Defense Production Act of 1950," House Report No. 1045, 81st Cong., 1st Sess., 1949.

² See, for example, the report of the Joint Committee on Defense Production, "The Defense Production Act of 1950," House Report No. 1045, 81st Cong., 1st Sess., 1949, and the report of the Joint Committee on Defense Production, "The Defense Production Act of 1950," House Report No. 1045, 81st Cong., 1st Sess., 1949.

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E. U.S. National Security and the Domestic Environment

It will be difficult for the U.S. Government to fashion and sustain an activist and vigorous U.S. national security policy between now and the end of the century. Understanding the basic reasons for this condition may aid policymakers to devise appropriate remedies or where this is not possible, to cope with the constraints which this section of the report describes. Four critical factors, among the many which could be mentioned appear to be most important. They are: the absence of a national security consensus and the rise of the "Imperial Congress;" the structure and pattern of electoral politics which makes divided government the norm rather than the exception; the decline in the vitality and competitiveness of the American economy, and the investigative and adversarial character of the media, especially television.

It is generally agreed that for approximately twenty years following the announcement of the Truman Doctrine in March 1947 there was a broad consensus within the Congress and among the American people as to the objectives and strategies of U.S. foreign and defense policy. Symbolic of this consensus was the American adherence to NATO, the first peacetime membership in a military alliance; the signing of mutual defense treaties with 21 different countries; entrance into the Korean and the Japanese and Japanese resolutions; the forcing of Soviet missiles out of the Middle East; and the spending of billions of dollars in both military and economic aid to friendly nations.

The Vietnam conflict effectively ended this consensus, symbolized by the loss of the Kennedy Presidential campaign in the spring of 1968 and the withdrawal of U.S. troops from Vietnam and poor showing in public opinion polls. President Lyndon B. Johnson's announcement in March 1968 that he would not seek re-election, while some trust in government and a belief in the need for continued support for a activist American foreign policy were restored during the Reagan presidency, it is clear that the trust in the White House and the government nearly automatically placed in the hands of the media and the national security field have not been restored. The trust in government which has some time to come.

As a result of the shattering of the national security consensus, the imperial presidency described by Arthur Schlesinger, Jr.¹ seems now to have been replaced by the imperial Congress, which seems determined to wrest as much control over foreign policy as possible. Illustrative of this were the Hughes Ryan Amendment (restrictions on intelligence operations), the Case Amendment, the Arms Export Control Act, the Church Committee investigation of the CIA, and above all, the War Powers Act of 1973. These Congressional actions go far toward crippling the Executive's capability to conduct any sustained foreign policy and certainly make it exceedingly difficult for an American President to credibly threaten military action in cases short of perceived dire threats to the national interest.

The problem of an "imperial Congress" is exacerbated by the structure and pattern of American electoral politics which has emerged since the Second World War whose effect has been to make divided government in Washington the normal rather than the exceptional case. In the 29 elections from 1930 through 1986, the Democrats won the House of Representatives 27 times, thus having a majority in 54 of the 58 years through 1988. In the Senate, the Democrats won 24 of the 29 elections, thus having a majority in 48 of the 58 years stretching between 1930 and 1988. But since 1946, extending through 1988, Republicans have controlled the Presidency in 24 of the intervening 42 years. In two years, 1947 and 1948, Republicans controlled the Congress while Democrats held the Presidency. In only 20 of the last 42 years (through 1988) has the same political party controlled both chambers of Congress and the Presidency. In only two of those twenty years--1953 and 1954--did Republicans control the Presidency and both houses of Congress; the other 16 years represented Democrats in power. But in recent years, Republicans have won four of the last five Presidential elections yet have not prevailed in both houses of Congress in the last seventeen Congressional elections. The conclusion is inescapable: divided government has become the pattern of American politics; most observers expect this trend to continue.

¹ Arthur Schlesinger, Jr., The Imperial Presidency.

Of course the requirement that two-thirds of the Senate must concur on treaties means that a bipartisan foreign and defense policy would be necessary even if divided government were not the usual case since there has not been a single year in the 42 years since World War II when the majority party in the Senate had 67 seats; the usual division in the Senate is about 54-46 and never as much as 60-40. As long as a consensus existed on America's role in world politics this situation did not cause serious difficulty. Once the consensus was weakened, the constitutional requirements for treaties and the pattern of electoral politics began to impinge more severely on the President's capability to conduct a sustained and consistent foreign and defense policy.

This inherently difficult situation has been worsened by the weakened authority structure within the Congress and especially within the Democratic Party which, as noted above, has ordinarily been the Congressional majority. Two factors are at work. First, various "reforms" have weakened the seniority system of leadership selection in the Congress, especially in the House. Second, the rise of two-party politics in the southern region of the United States means that the Democratic Party no longer has a leadership core of very senior people, especially in the Senate. These developments have led to a decline in coherence in the Congress; the leadership is no longer able to coordinate with the President and deliver the necessary Congressional votes. It is not too much of an exaggeration to say that every "backbencher" in the Congress is willing and able to challenge the President in the conduct of foreign and defense policy; the President and Cabinet now have to "lobby" virtually every Congressman in order to prevail on contentious issues. This situation tends to promote only incremental alterations in policy direction even if there is general agreement that significant policy change is required.

Perhaps an even more severe constraint on U.S. national security policy is the decline in the vitality and competitiveness of the American economy. While the preeminent position of the United States in the world economy was bound to erode as the rest of the industrial world recovered from the Second World War, trends in the last two decades have been much

worse from the American perspective than had been predicted. The U.S., as is well-known, has now become the world's largest debtor nation, with massive trade deficits, lower productivity, a decline in the real standard of living, an agricultural sector facing increased export competition from abroad, and increasing difficulties in translating research and development into commercially competitive industrial products. Low savings rates and taxation policies that favor consumption over investment result in American dependence on capital inflows from abroad to finance the massive federal deficit. Interest on the U.S. federal debt has risen from 7 percent of the Federal budget in 1977 to 14 percent in 1986, and discretionary funds have diminished from 24 percent of the Federal budget in 1977 to 14 percent in 1986.¹

As the Japanese case illustrates, human skills in an age of capital and technological mobility are much more critical to industrial success than are bountiful natural resources. But most Americans no longer stay in the same job category throughout their working lives; moving from job to job translates into lower skill levels, even if the average skill level has not declined and there is some evidence that it has. This insecure work force is "commanded" by chief executive officers drawn from law and business schools, who know little about industrial productive processes. In contrast, workers in Japan enjoy life-long security, develop a high degree of job skills, and are led mostly by executives trained in the engineering sciences.

American economic difficulties lead to the conclusion that either substantial changes in American society must occur or there will be a reduction of American commitments to social welfare at home and to defense commitments abroad. Given the political obstacles to economic reform, it is likely that before the year 2000 the U.S. will reduce its commitments to the defense of the noncommunist world. Questions of priority will prevail,

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Washington Post, 26 January 1986, citing Office of Management and Budget data.

resulting in a policy of selective rather than universal commitment to foreign and defense policies intended to contain communist aggression and other movements inimical to democracy.

Finally, the adversarial stance of the public media, especially television, has compounded the difficulties of conducting national security policy, certainly where the employment of force is concerned. There is broad agreement that the "bringing of the Vietnam War into American living rooms" was a significant element in the declining public support for that conflict. For various sociological reasons, national television is dominated by more liberal elements in American society who tend to be opposed to an activist and interventionist U.S. national security policy. Few would question that, on the whole, the television networks did not present an objective picture of the Vietnam War. On balance, the media was inclined to emphasize problems on the American and South Vietnamese side and to pass more lightly over the transgressions of North Vietnam and the Vietcong. Whether this bias was a reflection of ideology or whether it was simply that television had more access to the non-communist side--and hence were more aware of non-communist difficulties and political and military mistakes--is a debatable point; what seems to be beyond challenge is that the bias existed.¹ And observers of all political persuasions agree that the harping of TV commentary on the Iranian hostage crises and the spotlight which television has focused on terrorist incidents has made intelligent policy more difficult to achieve. Because, however, press freedom, buttressed by the First Amendment, is central to American democracy, no acceptable solution to the problem has been possible.

In summary, domestic constraints in the United States which impinge on the conduct of national security are serious and appear to be worsening. It is urgent that this situation be addressed and remedial steps undertaken. At least one remedial step has already been taken, in the

¹ For a detailed documentation of this point, concentrating on CBS Evening News, see Ernest Lefever, TV and National Defense.

Goldwater-Nichols Department of Defense Reorganization Act of 1986. The heart of this law is the increased authority given to the senior military officers who serve in the unified and joint organizations within the DoD structure. The objective of the law is to harness the parochial interests and energies of the individual services into a common cause directed at a more effective national security policy. The previous senior military leadership by committee rule (The Joint Chiefs of Staff) is replaced by the added authority given to the Chairman of the JCS; he becomes the principal military advisor to the Secretary of Defense and the President. It is the Chairman's responsibility to develop strategic and contingency plans, and to do this he has been given greater authority over the Joint Staff. His authority is not absolute nor have the individual service chiefs been shorn of all power; each member of the JCS still has access to the President to make known any disagreement he has with the Chairman's advice to the President.

The Navy, with its heavier responsibilities for U.S. national security arising out of the trends in the global strategic environment, has the opportunity to make the most effective use possible of the new JCS structure. Joint duty should be aspired to by the naval officers who are able to articulate the maritime strategy in its key contribution to national strategy. Joint duty should be no bar to advancement and promotion of the best who come up in the Navy ranks, i.e., the Navy should send its best and brightest into the joint arena where national and Navy interests will not be at odds but rather synonymous and reinforcing.

III THE FUTURE OF THE U.S. ALLIANCE SYSTEM

The Maritime Strategy is intended to frustrate Soviet strategy, denying to the USSR its preferred mode of attacking the United States and its allies, thus deterring Soviet aggression. The concept is to defend by taking the offensive. U.S. forces are to deploy to forward positions, and in coalition with U.S. allies in Europe and the Pacific, make the strategy one that involves allied, and especially European, contributions to mutual defense. The method is to exploit U.S. technological advantages, geographical position, and naval warfighting experience to compensate for Soviet numerical superiorities. Thus the free world naval forces will take the war to the enemy, attack and destroy the Soviet navy and supporting elements, and compel the USSR to fight a protracted and global conventional war.

The logic of maritime strategy appears sound, and were the war to occur now or soon, it would seem to be the optimum mode of conducting it. But as one looks to the year 2000 and beyond, one cannot be certain of a critical aspect of the strategy--coalition defense with strong allied partners. It appears to be the case that the NATO alliance, which has been the principal vehicle of U.S. containment of the Soviet Union for nearly forty years, and which is a vital element in the Maritime Strategy, is gradually being drained of meaningful military content. While it might survive in a formal sense until the year 2000 and beyond, unless fundamental changes are made it may not retain either its deterrent or warfighting capability. As the chairman of the Senate Armed Services Committee stated four years ago, "The NATO alliance is now in need of major repair--militarily, politically, and economically."¹ This statement is even more descriptive of the alliance today. While other U.S. alliances are not as vital to the Maritime Strategy as is NATO, it is unfortunately the case that U.S. relations with other allied nations are also increasingly unsatisfactory and efforts must be made to arrest these trends.

¹ See, for example, "NATO: Saving the Alliance," Washington Quarterly (Summer 1977), p. 19.

The purposes of this chapter are as follows: first, to explain why the NATO alliance is in decline and why this situation is likely to continue unless remedial measures are taken; second, to examine the present and likely future trends in the U.S. Pacific alliance framework; and finally, to suggest specific measures to restore alliance vitality and credibility.

A. The Erosion of NATO

1. Economic Factors

How to reconcile common security needs with economic competition and divergent commercial interests is a central problem for US-NATO relations. In the mid-1950s, the U.S. was the preeminent industrial power of the world, with a trade surplus, an unparalleled industrial base, low inflation, a skilled workforce and the capability as well as the necessity to underwrite the defense of the Western world against the Soviet Union and its East European satellite states. To use Marxist terms, the economic substructure permitted an American-dominated policy superstructure in which the U.S. was able and willing to bear the burdens and pay the costs of collective defense, and the U.S. could do so without serious economic strain.

This underlying economic condition has drastically altered, but, contrary to Marxist analysis, the resulting political arrangements have not reflected these changes in a major way. U.S. economic dominance over Europe has been replaced with economic competition; common commercial goals have been replaced with divergent interests; Europe's priority position in trade and investment relations has eroded in favor of East Asia.

Specifically, four economic issues can be identified which collectively represent serious economic strains in the alliance. Near the top of the list are trade problems; the U.S. has its second largest trade deficit with Europe. The U.S. position is that the Europeans are discriminating against U.S. products, particularly agricultural exports. This trade imbalance, in turn, is directly related to the second major economic problem, the erosion of the U.S. industrial base. Conventional wisdom

holds that free international trade confers more benefits than liabilities on the trading nations; however true, the distribution of such benefits and liabilities may be very unevenly spread. Also, conventional economic analysis rarely takes into account the national security implications of an eroded U.S. industrial base. As greater awareness spreads of the decline of U.S. capability to fulfill the role, in a future conflict, of the "arsenal of democracy," the purely economic benefits of a liberal trade policy may be modified. This, in turn, will lead to greater U.S.-NATO economic friction, further imperiling the alliance.

Given U.S. trade deficits and declining industrial base, more and more questions are being raised concerning the third major economic problem, the unequal costs of the alliance to the United States and the entire problem of burden-sharing. This issue is seen in both moral and economic terms; there is in the United States a sense of being treated unfairly by its NATO allies. This moral issue is expressed by an American demand that alliance costs be redistributed so that each nation contributes its "fair share" of the costs of collective defense.

There can be no doubt that the NATO commitment involves not only heavy defense costs for the United States but also one which is disproportionately burdensome as compared to that of other NATO nations. The essential facts, even if somewhat imprecise, are well-known: about 72 percent of U.S. forward deployed non-nuclear forces are in the European theater; approximately 60 percent of U.S. defense spending is related to NATO defense; among the six major NATO nations, the U.S. represents 57 percent of the GNP and 48 percent of the population but contributes 70 percent of the defense spending and 55 percent of the active military and civilian personnel; and, finally, in FY 1986 the U.S. spent about twice as much on defense as the rest of the NATO nations combined.¹ U.S. per capita defense spending is

¹ These estimates are from Leonard Sullivan, "The Defense Budget," in George Hudson and Joseph Kruzel (eds.), American Defense Manual, (Lexington Books, 1985), pp. 72-75.

about ten times that of Japan, three times that of Germany, nearly three times that of France, and two and one-half times that of Britain.¹

Of course these figures do not tell the entire story. It is difficult, for example, to measure the psychological costs to Germany of having stationed in its territory U.S. Army troops plus their dependents in their country which is about the size of the state of Oregon. And U.S. defense costs could not be reduced--and might be increased--if some of these Army forces were withdrawn and stationed in the United States. Still it is not entirely impossible--to justify the present arrangements. The Defense Department's present plan to ensure pre-positioning of equipment for a reinforcement of its force in Europe on D-Day² (assuming adequate crisis warning) can be questioned in the light of relatively abundant Western military manpower. Relatedly, it would be difficult, should war occur in Europe, to argue persuasively that American soldiers should defend the continent, which is Europe, not the United States, which is America. Persian oil will, American dependence on imported oil, will, as it slowly increases, and the U.S. could be dependent on Persian oil as early as the year 2000, or even earlier.

It seems reasonable to fear that U.S. defense budgets will be increasingly constrained for some years to come, barring a very major crisis with the Soviet Union. In addition, the U.S. allocates the resources to maintain its superiority over the USSR, to further modernize strategic defense forces, and to continue the Strategic Defense Initiative,

¹ Department of Defense, Report to the Congress on Allied Contributions to the Common Defense (Washington March 1986). Figures are in 1984 constant dollars.

² 1986 Annual Report, FY 1988, pp. 111, n. 119.

reductions in defense spending elsewhere must be undertaken. The prime candidate for such cost reductions is the disproportionate amount of the defense budget allocated to European defense.

Finally, the likelihood that U.S. resources allocated to NATO defense will be the area where reductions will occur is further accentuated by the relative decline of Europe from both an economic and security point of view as compared to East Asia. China alone has more than one-fifth of the world's population; Japan's GNP is slightly greater than that of France and Germany combined; in South Korea the U.S. has a battle-hardened ally which has an army larger than that of any European country, including France and Germany. By almost any measure Western Europe is gradually being replaced by East Asia in American consciousness. That this trend will further erode the value of the NATO commitment to the United States, in the eyes of the American people, seems undeniable, even though, of course, Western Europe will remain a very important area of the world. In sum, all of the economic factors argue for the gradual erosion of the NATO alliance as we move toward the year 2000 and beyond unless remedial measures are taken to arrest current trends.

2. Political Factors

Just as economic factors suggest some decline of NATO in the future, so do political aspects. Two overriding political strains may be identified: detente, and the divergence of U.S. versus European NATO approaches to East-West relations; and NATO "out of area" problems.

The Reagan administration took office in 1981 convinced, as indeed the Carter administration was after the Soviet invasion of Afghanistan, that Soviet-American detente was dead or perhaps had never lived in the first place. This contrasted sharply with the European, and especially the German, view of East-West relations.

Many factors combine to make the eastern policy of the Federal Republic of Germany the determining aspect of European NATO's detente policy. Thus, despite the increase in tensions between the Soviet Union

and the United States resulting not only from the Afghan war but also from the treatment accorded the Solidarity movement in Poland, the attempted assassination of the Pope, the collapse of arms control talks in 1983 and the shooting down of the Korean airliner, the FRG remained committed to detente and the furthering of Ostpolitik. Ironically, the Federal Republic concluded that popular support for supporting the deployment of the Pershing II missile and the ground-launched cruise missiles (GLCMs) was contingent upon the perception among the West German people that nuclear modernization would not harm detente and the developing ties between the two Germanies.

From the American perspective, the broader question is whether the FRG's intense desire to cultivate closer relations with the German Democratic Republic will affect negatively NATO security and the German-American military posture toward the Warsaw Pact. The question is being raised as to whether the Kohl government can, on the one hand, firmly commit itself to detente and, on the other hand, support such U.S. measures as the Strategic Defense Initiative and U.S. arms control policy. In short, will the inter-German relationship begin to impact significantly on security questions?¹

The divergent American and German policies with respect to detente may be one reason why German images of the United States have to some degree deteriorated in the last few years. For example, in a 1980 poll 65 percent of the German respondents agreed that the Soviet Union only "frequently disregards interests of its allies" while only 14 percent agreed that both the USSR and the United States were guilty of this policy. By 1983, just 34 percent criticized only the USSR in these terms; those who said both the U.S. and the Soviet Union could be so described rose from 14 percent in 1980 to 42 percent. The percentage who thought the Soviet Union only was "a danger to world peace" dropped from 71 percent in 1980 to 32 percent in 1983. Conversely, just 14 percent of the German respondents thought both

¹ A. James McAdams, "Inter-German Detente: A New Balance," Foreign Affairs (Fall 1986), p. 151.

superpowers were "a danger to world peace" in 1980 but rose to 64 percent in 1983. Other polls also show some, although not as severe, decline in favorable images of the United States among the German people.

To date, despite some misgivings, the United States has not opposed this inter-German detente. However, there are signs that the FRG's ultimate goal is to persuade other European countries, especially France, that there is no longer a satisfactory military solution to the defense of Europe. Thus NATO's military insufficiency requires the resort to nonmilitary instruments such as arms control, East-West trade and other economic ties, and political gestures intended to avoid giving the Soviet Union any excuse to attack Western Europe.¹ These policies may, sooner or later, isolate the U.S. politically within NATO on the question of relations with the Warsaw Pact countries which, in turn, will further erode alliance cohesion. As a European analyst puts it, "But as some of the basic problems of Western strategy will find a genuine solution, the framework (of NATO) will eventually become an empty shell."² Perhaps this is too pessimistic an appraisal but it is one increasingly shared by many analysts, both European and Americans.

In comparison to the deleterious effect of the fundamental contradictions between U.S. and West European views with regard to detente with the East, the "out of area" problems of the alliance are exasperating to Americans but relatively minor, at least in peacetime. This is not because there are not serious discrepancies in European and American views with regard to Arab-Israeli relations and Israeli security policy generally, on policy toward Libya and state-sponsored terrorism, and on Central America. In general, it may be said that the NATO countries believe much more firmly

¹ Gebhard L. Schweigler, "Anti-Americanism in Germany," *Washington quarterly* (Winter 1986), p. 76.

² Pierre LeLanthe, "Does NATO have a Future? A European View," *Washington quarterly* (Summer 1982), pp. 48-49.

³ *Ibid.*, p. 48.

...the kind of enormous scale involved in the project. Moreover, it is geographically remote from the United States, and it is an immense effort to acquire the requisite military capabilities.

III. Military Effects

By the mid-1980s, despite continuing NATO's strength as the mainstay of the West's American-backed guarantee to Europe. Since the mid-1970s, NATO's strategy, partly and possibly from NATO's earliest days, has been to assume that the Alliance could tolerate conventional force parity in Warsaw Pact forces because the U.S. had nuclear superiority. As a result, and subsequently some degree of Soviet nuclear superiority, there were only two logical solutions: first, to maintain a strategic nuclear effort to regain lost superiority; or second, to upgrade NATO's conventional force posture so that the Warsaw Pact's conventional advantage was sharply reduced, thus enhancing deterrence. Another option was taken: first, the Alliance relies on a strategic nuclear capability for deterrence, despite its illogicality and the Soviet unwillingness to renounce both sides of the Atlantic as to what would happen if the USSR attacked Europe conventionally.

The 1985 superpower summit conference in Iceland produced a new strain in European NATO relations. At that conference the Reagan administration agreed to a treaty to limit the number of American and Soviet heavy intercontinental weapons. This would have removed the U.S. missiles and SS-20s and the Soviet SS-20s from Europe west of Russia's far borders, with the Soviet shells permitted in the Asian Soviet Union. However, the U.S. insisted on linking this agreement to halting U.S. efforts with regard to strategic defense. Had the Soviet government accepted the Reagan government proposals, three very unfortunate results would have resulted. First, the West Europeans would have seen this as an additional attempt by the United States to "decouple" its security from that of its NATO allies; second, deterrence would have lost additional reliability. Second, it would have undermined the flexible response doctrine, leaving Western Europe vulnerable to Soviet conventional forces superiority. And finally, permitting 100 Soviet SS-20s in Asian Russia

would have been viewed in China and Japan as an attempt to purchase European security at Asia's expense.

The Iceland proposal was clearly a mistake on Washington's part; deciding to reject it was clearly a mistake on Moscow's part. It will be politically very difficult for the U.S. to repudiate its own proposal but it should be done. Otherwise, an agreement such as that proposed in Iceland will hasten NATO's erosion as a viable alliance. Future arms records must always be considered in the light of their impact upon the U.S. alliance system.

In sum, all factors--economic, political and military--point to a relative decline in NATO's role as the principal Western anti-Soviet security community.

3. The Pacific Alliances

Unlike in Europe, the U.S. alliance system in the Pacific is primarily bilateral rather than multilateral in character. The two most important U.S. allies in the Pacific are South Korea and the Philippines. Japan, while the most important friendly nation in Asia, does not acknowledge that it is in "alliance" with the United States; rather, it is in a "mutual security relationship." Other nations with which the U.S. has formal ties are Australia and New Zealand, through the Anzus Pact, and Thailand. The U.S. has military installations and significant forces in the Philippines, South Korea, and Japan.

It is well known that the Anzus Pact is losing its utility and may not exist in the year 2000. The basic problem is the desire on the part of New Zealand and to a lesser extent on the part of Australia--to bar nuclear weapons, including U.S. ship visits provided they are nuclear-armed--from their territories. Since the U.S. government has a policy of refusing to confirm or deny whether a U.S. ship is nuclear-armed, American and New Zealand ties are eroding. Australia, while it has not adopted such a policy, might do so. The U.S. should make serious efforts to retain the alliance with Australia.

The issue in the Philippines concerns U.S. bases--Clark Air Force Base and Subic Bay Naval Base. The post-Marcos regime has not decided as yet what its policy on the U.S. bases will be. However, it is possible that a decision to terminate the U.S. base structure will be taken before the year 2000. This would be disastrous for the U.S. and Pacific security; strong efforts must be undertaken to prevent this from happening. There are simply no--repeat no--satisfactory substitutes for the vital Philippine bases.

Should the U.S. alliance structure in the East Asian area begin to crumble, it would affect drastically U.S. naval strategy. The defining component of geopolitics in East Asia is the immensity of the Pacific Ocean. The U.S. meets its forward defense requirements through a "dual anchoring" policy. The two "anchors" in the Western Pacific are the Yokosuka, Sasebo and Okinawa bases in Japan and Subic and Clark bases in the Philippines. Thus East Asia is divided into two principal operational arenas, Northeast Asia and Southeast Asia. The two sets of bases are widely dispersed, unencumbered by chokepoints, and provide for secure interior lines of communication which facilitate the rapid transfer of forces from north to south and vice versa.

Each U.S. base area has its anti-Soviet naval mission. In the south, it is to hold at risk the large Soviet base at Camranh Bay in Vietnam and to prevent a Soviet threat to the sea lines of communication leading from the Persian Gulf area to Japan and Korea. In the north, the U.S. bases are intended, with Japanese assistance, to prevent a Soviet breakout through the three Japanese straits into the Pacific.

Finally, U.S. forward bases in the Pacific are important to the U.S. maritime strategy concept known as "horizontal escalation" since they make it feasible to mount attacks on the Far Eastern portion of the USSR and on the Pacific fleet, now the largest of the Soviet four naval fleets.

Yet, despite its criticality, it is certainly possible that the U.S. alliance system in East Asia will not endure in its present form beyond the

end of the twentieth century. As in the case of NATO, the issues are burden-sharing, "out of area" problems, trade imbalances, and doubts about the U.S. credibility of U.S. conventional and nuclear guarantees.

The U.S.-Japanese "alliance" can hardly be expected to remain viable under the present circumstances. Japan will not acknowledge the mutual security relationship as an alliance, will not acquire meaningful military forces, and will not undertake a mutual security obligation to assist the United States in the event an attack occurs on the United States outside of Japanese waters. There is, in fact, some ambiguity concerning Japan's defense obligations to the United States even if an attack on U.S. forces occurs in Japanese waters, provided Japanese forces were not attacked. As the most recent Japanese Defense Agency White Paper observes,

...the government is of the view that the use of the right of self-defense as permissible under Article 9 is authorized only when the act of self-defense is within the framework of the minimum necessary for the defense of this country. The government, therefore, believes that exercise [sic] the right of collective self-defense exceeds the minimum limit and is constitutionally not permissible.

Given these circumstances, the relationship with Japan provides only one significant asset--the bases alluded to above which permit the U.S. to deploy its forces far forward. In short, Japan is, as Prime Minister Nakasone described it, an "unsinkable aircraft carrier." Whether this feature is enough to sustain the U.S.-Japan mutual security relationship for many more years is highly problematical. And, even more so than in the case of Europe, Japanese-American trade relations are so tense that it is appropriate to refer to the situation as a "crisis." This problem must be solved if the security relationship is to endure.

Unlike the U.S.-Japan relationship, American-Korean military cooperation has been close, productive and reciprocal. There are signs, however, that change may be coming. In the past, the talk of removing U.S.

¹ Defense of Japan 1985, (Tokyo: Japan Defense Agency, n.d.), p. 248.

forces from South Korea all emanated from Washington. Now, however, the same views are beginning to be expressed in Korea. There appear to be two reasons for this. First, generational change; many South Koreans moving into positions of authority are too young to feel the sense of loyalty to Americans for U.S. assistance in the Korean War that their elders have. Second, and probably of greater importance, at least some South Koreans are beginning to think in terms of a kind of Asian version of West Germany's Ostpolitik. The FRG needs to be conciliatory toward the Soviet Union and to the GDR if West German and East German people-to-people relations are to expand and if the goal of eventual German reunification is to be kept alive. Hence detente, with all that that term implies, is an overriding FRG priority. Some South Koreans are beginning to think along similar lines; as long as Seoul remains tightly committed to the U.S. alliance and without diplomatic relations with the PRC or the Soviet Union, it will be difficult to develop South Korean - North Korean people-to-people relations or to keep alive the faint hope of eventual Korean reunification. Thus many South Koreans would like to establish diplomatic relations with the PRC and terminate them with Taiwan. To date it is PRC reluctance--not South Korean--which has prevented this from happening. Likewise, South Koreans are beginning to want to improve relations with the USSR. Seoul hopes that better relations with the two Communist great powers will permit the same processes to occur between the two Koreas as has occurred between the two Germanies.

As the century draws to a close, it seems possible that South Korea will be somewhat less and less enthusiastic about its present extremely close ties with the United States. Just as Egypt learned it must put some distance between itself and the Soviet Union if it wished to regain Israeli-controlled Egyptian territory and as West Germany has learned it must be the strongest Western detente advocate if it is to keep alive the German reunification issue, so South Korea may believe it necessary to have closer relations with both Beijing and Moscow. This will not lead to a termination of the South Korean alliance with Washington but may lead to some lessening of the present very close cooperative military relationship. Finally, unless South Korea is able to contain rising political instability and achieve an orderly transition to a more democratic policy,

there will be some pressures on the U.S. to take advantage of the Korean economic success story, to loosen American ties.¹ This development must be resisted to ensure the security of East Asia.

C. The Future

The U.S. strategy of containment requires a strong military presence both the Western and eastern hemispheres. The U.S. military presence extends from Norway in the northwest, across Europe, the Middle East and Southeast Asia to Korea and Japan in the northeast. The containment policy required a strong alliance system, the strategic nuclear forces, and permits a strategy of conventional superiority. The key element is the alliance structure but that system is crumbling.

While there are many reasons--as pointed out earlier--why the system is occurring, the central reason is undoubtedly a lack of confidence in Europe and Asia that the United States will take the necessary steps to restore the vitality of containment and the alliance structure. The West Europeans and the Japanese have responsibilities to maintain their defense forces. But they are not superpowers and neither can they fill this role is one that can be filled only by the United States. The main implication is that the most useful measure the United States can take is to restore belief in American determination to contain Soviet expansionism. This, in turn, requires above all else that the U.S. maintain strategic nuclear parity with the Soviet Union and that allied political leaders, as well as Soviet leaders, perceive American forces and the will to use them if required as bedrock principles of U.S. defense policy.

The defense buildup during the Reagan years and especially the attainment of a 600 ship navy have contributed to some restoration of confidence in the United States. Offsetting this to some extent,

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The concessions by the South Korean government in the summer of 1987 towards more democracy in Korea have reduced pressure on the U.S. Congress to take actions inimical to U.S.-Korean relations.

...are the obvious weaknesses in the U.S. economy, especially the large trade deficits, and the exposure of the arms-for-hostages deal. Solving its problems will not only be healthy for the United States but will also help reverse the erosion in the alliance system. It is not expected that the U.S. fulfil the role it played in the Cold War as the "arsenal of democracy," a weak U.S. economy cannot inspire allied perceptions that the U.S. is in decline. In sum, the U.S. must see how successfully containing the USSR can endure to go on and beyond unless the United States conveys by both word and deed its determination to maintain both economic and military strength and to restore allied confidence that the future does not rest with the Soviet Union. If this occurs, it seems likely that the allied nations will make greater defense efforts themselves, thus alleviating the strains on the alliance and hence maintaining the peace. The U.S. must encourage these "voluntary" efforts by putting unremitting emphasis on the constraints of the language of diplomacy, of the West Europeans, Canadians and Japanese to make larger contributions.

...While there are significant strains in NATO and in U.S. relations with other allies, only in the case of Japan can the situation be described as at crisis proportions. In all the other cases--and in the case of Britain in Europe, Turkey in the Middle East, and Korea in East Asia--alliance problems are not serious enough to cause alarm and such differences as exist can be resolved without the need for drastic measures. In Japan's case, however, trade and security issues are of such magnitude that far-reaching negotiations must be undertaken as soon as possible. Both Japan and the U.S. must acknowledge the problems and undertake coordinated efforts to eliminate economic and security differences. It must be recognized in both Washington and Tokyo that the status quo is no longer acceptable. To establish in both the trade and security areas a spirit of cooperation and fairness between Japan and the United States will be essential for the security of East Asia and indeed for the non-communist world.

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STRATEGIC FORECAST: US NAVY BEYOND THE YEAR 2000 PHASE

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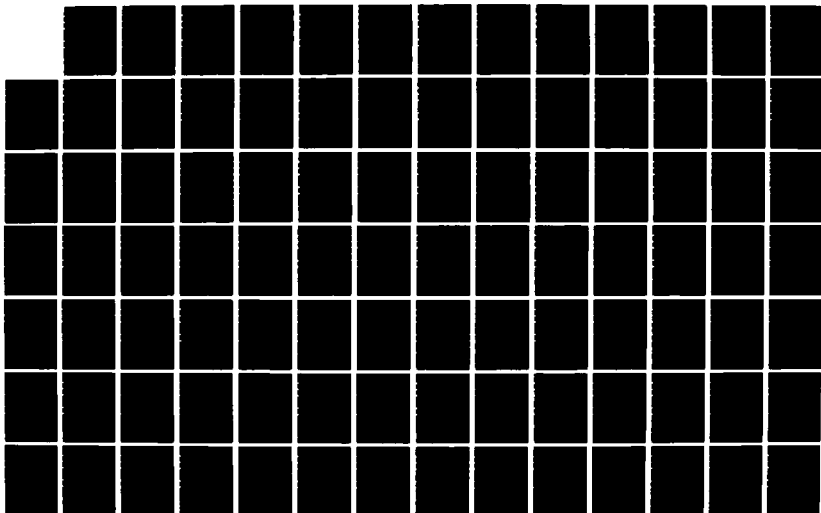
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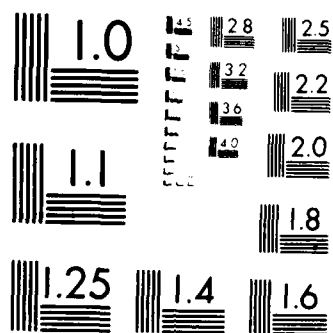
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IV FUTURE NUCLEAR STRATEGY, DETERRENCE, AND ARMS CONTROL

A. Introduction

1. General

The interactions of the U.S./Soviet nuclear relationship, i.e., technology (including modernization efforts on both sides), new weapons initiatives, the current "zero-zero" INF arms control negotiations and past agreements (particularly the ABM treaty in 1972), and the new possibilities of deterrence based primarily on a balance of strategic offenses and defenses (i.e., a shift from assured destruction to uncertainty of outcome as a major factor in deterring nuclear attacks on the U.S. or its allies), are now more complex than ever. These issues are compounded by differences about alliance defense strategies in the U.S., brought about by budget problems, disputes about the feasibility of the SDI, INF arms reduction negotiations, and other arms control proposals. Combined with U.S. and Soviet nonproliferation policies, these issues and disputed policies place a considerable burden on the U.S. because of the continuing requirement to provide a nuclear deterrence umbrella to allies in Europe and Northeast Asia. There are other growing contradictions in future U.S. nuclear policies and nuclear strategies, exacerbated by attempts to reach new types of bilateral arms control agreements with the Soviets directly affecting our allies, as in the "zero option" INF negotiations currently underway. These problems are incapable of quantitative systems-analysis type solutions. The doctrinal, psychological, political, moral, and even religious attitudes in the West that have been treated almost cavalierly in the past are now central concerns. New methods of strategic analysis are needed to encompass these larger factors not susceptible to quantification.

2. Major Strategic Issues in Future Nuclear Policy

Key issues that affect future U.S. nuclear policy and the strategic doctrines consequent upon those policies are examined in this chapter.

a. Bipartisan Nuclear Policy

The last years of the Carter administration laid out new policies for targeting U.S. strategic forces, for continuity of government in nuclear war, for enduring and survivable communications, for a secure reserve force, and for civil defense, so that the U.S. could, if necessary, fight a prolonged nuclear war in order to deter the Soviets from attempting a quick victory.

b. Shift from MAD to MAS: the SDI Proposal

The Reagan administration adopted and adapted the Carter nuclear policies outlined above and added a new dimension--the Strategic Defense Initiative (SDI) and local theater defenses (the ATBM)--in order to achieve a balance of offense and defense. The SDI, if successful, will permit a radically different concept of nuclear deterrence and nuclear defense against ground-air attacks on allies. The strategic objective would then shift from mutual assured destruction (MAD) to mutually assured survival (MAS).

c. Arms Control Proposals

The current ABM treaty, narrowly interpreted, prohibits tests of SDI components in space, and there is the additional danger that the SDI will be used as a bargaining chip in arms control negotiations with the Soviet Union. The current "zero-zero option" on the INF (both LRINF and SRINF) weapons also removes U.S. options to deter a massive Soviet conventional combined arms tank attack on NATO allies and on the Republic of Korea.

d. Nuclear-Conventional Force Relationships

Soviet conventional superiority in Europe creates a major threat to U.S. allies. Current NATO doctrine (MC 14/3) comprehends this threat by keeping a "first use" option of nuclear weapons. The "virtual attrition" effect of this theater nuclear deterrent has not been well understood, and the possibility of the substitution of naval sea-based forces for

land-based INF in Europe requires a clear understanding of this force relationship on the part of naval planners.

e. Limited Nuclear War and/or Conventional War and War Termination

The possibility of a large-scale conventional war, perhaps on a global scale, is no longer dismissed. Should such a war escalate to the use of nuclear weapons, ways of limiting and terminating nuclear engagements need to be explored in the new environment of a balanced offensive/defensive force posture made possible by the SDI strategic environment. The possibility of large-scale naval wars--both conventional and nuclear--increases in such an SDI regime.

f. Need for a Global Strategic Concept of Operations and New Strategic Planning Approaches

The foregoing considerations suggest that major efforts should be made in rethinking a new political-military strategic doctrine on a global scale. The U.S. Navy is the obvious choice for leading this task because new methods and design criteria are needed for the design and operational use of the flexible U.S. global naval forces. The systems analysis approach to strategic analysis and planning and to the design of the U.S. naval fleet is not only inadequate but is fundamentally flawed. Rather, an interactive type of analysis, in which second and third order effects are significant, and which places more emphasis on the role of strategic doctrine and political criteria in developing a strategic plan for a global naval fleet, is indicated.

B. Growing Soviet Military Capabilities

Soviet Military Power 1987 asserts that the qualitative nuclear modernization program of the Soviet Union has actually accelerated in the past few years; simultaneously, the Soviet Union has maintained and, in fact, improved its quantitative lead over the United States in both missiles and reentry vehicles. They have radically modernized the strategic force, including the submarine-launched missile, the SS-N-23 with

10 MIRVed warheads, with excellent accuracy. In addition, they have produced fifth generation ICBMs, the road-mobile SS-25 and the rail mobile SX-24, which is about the size of the U.S. MX with 10 MIRVed nuclear warheads. The follow-on to the SS-18 mod 4 with increased throw weight carries at least 10 MIRVed warheads with an increase in accuracy and effectiveness against hard targets. They have also improved their SS-20 INF, as well as the new generation SS-23 and SS-21 short-range (300-600NM) ballistic missiles arrayed against NATO's forces in Europe. Their new BLACKJACK bomber will join the BEAR H bomber, with a nuclear-capable AS-15 air-launched cruise missile. A large portion of their medium bombers is assigned to their naval forces. The Soviets have undertaken a new ground-launched cruise missile and a new sea-launched cruise missile capable of being launched from submarines. The modernization of the Soviet SLBM program continues with the DELTA 4, together with the new long range accurate missile. The attack-class submarine force is being expanded rapidly. The air defense system is based on a dense deployment of surface-to-air missiles, combined with an autonomous manned interceptor capable of look-down, shoot-down missile launchings, as well as homing missiles. The interceptors are assisted by a Soviet-type AWACS that can operate on the periphery of the Soviet Union for interception of U.S. bombers. It is possible that they have improved their capability against low-flying cruise missiles, tactical ballistic missiles, and all altitude aircraft penetrations. Air defense improvements include the possibility of being able to intercept some, if not all, ICBM-launched RVs. The NATO capability of penetrating Soviet air defenses with tactical bombers and fighters deployed in Europe has been radically reduced in the past decade.

The pace of modernization of the Soviet nuclear forces, both land-based and sea-based, is considerably greater than that of the U.S., and its strategic defense program (which includes space) is proceeding at an equal priority basis with their strategic offensive systems, each at about 20 billion dollars per year. Currently, they have the only operational ABM, ATBM, and ASAT systems in being.

In addition to their development of systems, they have continued to increase their R & D budget, probably at the rate of 7-10 percent per year.

The Soviets have utilized stolen or purchased Western technologies in their modernization and improvement program since they have been unable to mount development programs equal in quality to those in the United States and its Western allies.

Soviet Military Power 1987 expounds Soviet nuclear doctrine in this way:

The Soviet deployment of survivable land-based and mobile theater and strategic nuclear forces has markedly increased the USSR's confidence that the West now faces tremendous destruction regardless of which side initiates nuclear strikes. These deployments exacerbate the strategic imbalance in ICBMs and confirm the Soviet advantage in the number of shorter range nuclear missiles...

...One interpretation of these developments is that nuclear deterrence of a Warsaw Pact conventional attack may be diminishing...[or]...the fear of vast devastation might eventually prevent both sides from using nuclear weapons...[or]...their preponderance of power in conventional forces means the West must rely...on nuclear weapons to deter a major conventional attack.

The Soviets...work on...the conventional and nuclear forces equation...they are developing formidable nuclear weapons that help to create a "non-use" environment...Moreover, they are modernizing existing defenses and developing advanced defenses against ballistic missiles...[Also,]...they are developing, modernizing, and fielding conventional forces...to prevail in a non-nuclear environment.

...The military principles governing the conduct of coalition warfare constitute a key element in Soviet strategy...

The Soviets now believe that a world war could be waged for an extended period with conventional weapons only...

In a global war, they plan to eliminate the enemy's nuclear forces and the related command, control, and communications capability; to seize and occupy vital areas on the Eurasian landmass; and to defend the Soviet state from attack.

...the Soviets recognize the crucial function of combined arms warfare in seizing and occupying their ultimate objectives. They believe that a world war could be relatively brief or develop into a protracted conflict.

Gorbachev's glasnost policy has increased the psychological effectiveness of the Soviet "peace programs," focusing upon arms control negotiations. Until recently, the Soviets opposed any form of negotiations on the INF, particularly those that might require them to reduce or eliminate their existing SS-20 weapons, but they have now more or less accepted the so-called zero option for the SS-20. A major problem that faces the West in the current negotiations for the INF is the short-range missiles, such as the SS-21 and SS-23. There is no counterpart to these in the United States or in the inventory of the NATO nations. This has created considerable anxiety in Germany, for those who wish to retain the Pershing 1A missiles. The overwhelming quantitative superiority of Soviet conventional ground-air power in both manpower and equipment over that of NATO has been made an even a greater threat by the potential reduction of the NATO theater nuclear capability as a result of the "zero-option" IRBM/GLCM arms control proposals. The Soviets would no longer be vulnerable to NATO missile counter-air attacks on their aircraft bases.

At the present time, the Soviet-Warsaw Pact main battle tank force outnumbers NATO's by over 2 to 1, and their blitzkrieg offensive tactics, together with their doctrine for combined arms, has made the tank force particularly dangerous to the stability along the entire Western front. Without the current NATO capability for the early use of tactical nuclear weapons, the Soviets might be able to create a situation in which their tank column breakthroughs to the channel could occur within a few days, leading to an early war termination on Soviet terms. When this threat is combined with the possibility of a Soviet "breakout" of a nationwide ABM

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Soviet Military Power, Sixth Edition (Washington, DC: U.S. Government Printing Office, 1987), pp. 7, 10, 15.

system and a theater-based ATBM system, utilizing, in addition, passive defenses for tens of thousands of the Party and military leadership, as well as for technological and managerial elites and worker cadres, the possibility of a coercive strategy to prevent U.S. use of strategic nuclear forces to deter Soviet massive conventional attacks against Europe becomes evident. However, at the present time, the U.S. efforts to build the SDI and to rebuild its now virtually nonexistent CONUS air defense program are in jeopardy in the Congress due to budget and other pressures. The U.S. has no comparable program to the Soviet passive defense shelter program.

The most unexpected recent Soviet advances over the U.S. have been in space. U.S. overdependence on the space shuttle for military, as well as civilian missions became an acute problem with the delays consequent upon the Challenger failure. Other launchers have not been successful. Meanwhile, the Soviet space program continues to expand in every way: new military missions, new very large payload launchers, new men-in-space efforts, and a large effort at new communications and surveillance systems. The U.S. response has been minimal considering the stakes.

C. Current U.S. National Security Policy and Arms Control Proposals

1. National Security Policy

The relationship of forces between nuclear and conventional, U.S. and allied, and land, sea, and air forces is discussed in several current national security documents, the principal one of which is the "National Security Strategy of the United States" issued by the President in January 1987. The other key documents are the Secretary of Defense Annual Report to the Congress for Fiscal Year 1988; the JCS Military Posture FY 88; the document Soviet Military Power 1987 issued by the Secretary of Defense; the statement by Assistant Secretary Melvin R. Paisley on the FY 1988-1989 Navy Research and Development Test and Evaluation Budget; various statements issued by the service secretaries, particularly the Secretary of the Navy; as well as over 100 national security decision directives (NSDDs). There is no single document which summarizes the entire national security strategy and national security policy of the United States.

However, these documents taken together provide an excellent basis for a forecast of strategic and tactical nuclear forces for the next 20 years, together with their relationship to conventional forces and allied forces and interests.

The following remarks are taken from the FY 1988 Report of the Secretary of Defense Caspar W. Weinberger to the Congress:

In addition to making hardware improvements, we have devoted a great deal of thought and effort to the development of more selective, discriminating, and controlled responses to the wide and varied nature of potential Soviet acts of aggression. This flexibility--which follows directly from the requirements of flexible response as initially set forth in the early 1960s--increases our ability to deter both nuclear and nonnuclear attacks against us or our allies.

Now and until we deploy an effective SDI, the security of the United States and our interests depends on nuclear deterrence and our maintaining the nuclear umbrella over our allies--something we are doing and are prepared to continue. Meanwhile, we are investigating technologies under the SDI that could one day make us less dependent on offensive nuclear arms to deter Soviet aggression. But, clearly, as long as we remain dependent on nuclear weapons for our security, we must continue to test them for safety and reliability, and to ensure the credibility, effectiveness, and survivability of our deterrent...

Tomahawk and Harpoon cruise missiles continue to improve the fleet's antiship and land-attack capabilities, as new variants with increased range and versatility reach the fleet. Over-the-horizon targeting capability has matured and now supports employment at the weapons' full ranges.

2. Arms Control Proposals

The legacy of U.S.-Soviet arms control negotiations and treaties--the 1972 SALT I/ABM treaty, the 1974 Vladivostok Accords, and the unratified

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SECDEF Annual Report, FY 1988, op. cit., pp. 56 and 172.

SALT II treaty of the 1970s--may not be spent. These treaties and accords have resulted in severe limits to U.S. responses to the massive Soviet buildup of strategic and theater nuclear forces and their extensive air defense and civil defense programs, as well as the large-scale research and development ABM and space programs. The Reagan administration replaced SALT with START, seeking mutual and verifiable "deep reductions" in strategic and theater nuclear offensive forces.

A recent Department of State Special Report summarizes the most recent U.S. arms control initiatives and U.S.-Soviet arms control negotiations in 1986 and 1987 to date. Negotiations and discussions on nuclear testing, the nuclear nonproliferation treaty, mutual and balanced force reductions (MBFR), and other matters are reviewed, in addition to the three principal negotiations:

Strategic Offensive Forces

On May 8, 1987, the United States tabled at the nuclear and space talks in Geneva a draft START [strategic arms reduction talks] treaty text which provides for 50 percent reductions in U.S. and Soviet strategic offensive nuclear arms...[and]...provides for 50 percent reductions by both sides to 1,600 strategic nuclear delivery vehicles and 6,000 warheads, with appropriate sublimits, over a period of 7 years after such a treaty enters into force...

Intermediate-Range Nuclear Forces (INF)

On March 4, 1987, the United States tabled a draft INF treaty text at the NST talks in Geneva...This calls for reductions to an interim global ceiling of 100 warheads each on LRINF missiles on U.S. and Soviet territory, with none in Europe. The United States and our NATO allies continue, however, to prefer a zero LRINF missile outcome--the global elimination of this entire class of missiles--and will continue to press the Soviet Union to drop its insistence on retaining the remaining LRINF missiles.

In response, the Soviet Union tabled on April 27 its draft INF treaty which reflects the basic agreements on LRINF issues made at Reykjavik. A number of key issues remain to be resolved. The most important of these issues is verification. Any INF agreement must be effectively verifiable if it is to enhance stability

and increase the security of the United States and its allies. The United States has proposed a comprehensive verification regime to enhance compliance...

Another major issue concerns shorter range INF (SRINF) missile systems. We and our allies continue to insist that an agreement on these systems must be bilateral in nature, concurrent with an initial INF treaty, effectively verifiable, and provide for global equality. Soviet efforts to include the systems of any country other than the United States and the U.S.S.R. in an INF agreement are unacceptable...

Defense and Space Issues

During Secretary Shultz's April 1987 meetings in Moscow and subsequently at the NST talks in Geneva, the United States made a new proposal on defense and space issues. This new proposal incorporates the following elements.

- o Both the United States and the Soviet Union would commit through 1994 not to withdraw from the Anti-Ballistic Missile Treaty.
- o This commitment would be contingent on implementation of agreed START reductions, i.e., 50 percent cuts to equal levels of 1,600 strategic nuclear delivery vehicles and 6,000 warheads, with appropriate sublimits.
- o The agreement would not alter the sovereign rights of the parties under customary international law to withdraw in the event of material breach of the agreement or jeopardy to their supreme interests.
- o After 1994, either side could deploy defensive systems of its choosing, unless mutually agreed otherwise.

Since the proposed INF (both LRINF and SRINF) "deep cuts" (zero-zero option) would result in a radical reduction in NATO's ability to deter Soviet conventional attacks on (or diplomatic coercion of) West Germany in particular, the slow pace and lack of accomplishments in the MBFR negotiations are crucial. This lack of progress is noted in the State Department report:

¹ "U.S. Arms Control Initiatives: An Update," Special Report No. 165, June 1, 1987 (Washington, D.C.: United States Department of State, Bureau of Public Affairs), pp. 1-2.

Mutual and Balanced Force Reductions

On December 5, 1985, NATO tabled a new initiative designed to meet Eastern concerns. The proposal deferred the Western demand for data agreement on current forces prior to treaty signature. The Soviets had claimed that this Western demand was the primary roadblock to agreement. The proposal also called for a time-limited, first phase withdrawal of 5,000 U.S. and 11,500 Soviet troops, followed by a 3-year, no-increase commitment by all parties with forces in the zone, during which residual force levels would be verified through national technical means, agreed entry/exit points, data exchange, and 30 annual onsite inspections. Thus far, the Soviets have not responded constructively to the Western initiative.¹

Lacking parallel reductions in Soviet superior conventional forces to the deep cuts envisioned in START and INF agreements, few options are open to NATO to overcome this conventional imbalance:

- Strengthen NATO's conventional defenses: This has been a goal for the past 20 years and is unlikely to be successful over the next 20 years. In fact, it is likely that U.S. conventional forces deployed in Europe will be reduced due to budgetary pressure, and major improvements in the U.S. mobilization base and a U.S. military manpower draft to create reserves are both unlikely.
- Utilize naval forces not covered by the arms control/reduction agreements. These forces may include sea-launched SLCMs, tactical ballistic missiles, carrier-based penetration aircraft (including STEALTH technology), and air-launched cruise missiles, all equipped with nuclear warheads. This latter option will be discussed further in this chapter.

D. Political Restraints, a New Bipartisan Nuclear Policy, and Emerging Technologies

1. Restrained U.S. Response to Soviet Power

The most formidable trend inimical to U.S. and allied security is aggressive Soviet foreign and military policies and their use of political

¹ Ibid., p. 3.

and military power against U.S. interests. This behavior ranges from nuclear coercion to conventional war threats to neighbors, as well as the support of "national liberation movements" in the Third World and indirect interventions in low-intensity conflict situations. U.S. self-imposed restraints, often amounting to a form of unilateral disarmament, make it difficult to mount a consistent U.S.-NATO countervailing strategy. These include: the prohibition of any U.S. ASAT capability to meet the Soviet space threats; the reduction of fund requests for the SDI; the current Congressional insistence on a limited rather than a broad interpretation of the ABM treaty, which has resulted in a stalemate on the FY 88 Appropriations Bill; continuous Congressional threats to even further reduce the planned 50 MX missiles; the resistance to any increased funding to improve the mobilization base and the resistance to any form of universal military service or draft to increase U.S. potential mobilization efforts; and finally the efforts to restrict or eliminate nuclear tests over 1 kiloton. When these efforts are combined with the major challenges to presidential authority on military and foreign policy (as in the dispute over Contra aid in Nicaragua), the ability to meet the overall Soviet challenge is doubtful.

Any evaluation of the capability of the U.S. to expand its military programs and its efforts to meet the nuclear and conventional threats to U.S. and allied security cannot be treated purely in economic or technological terms; the U.S. and its allies have significant economic and technological leads over the Soviet Union. Western unwillingness to exploit these potentials is a function of ignorance concerning Soviet strategy and capabilities, lack of political will, and the nature of liberal democratic regimes.

2. Nature of Liberal Democratic Regimes

The most constant trend that can be forecast for the next 20 years stems from the nature of the Western liberal democratic regimes. Such regimes cannot indefinitely sustain a mobilized military posture for conventional war based on large standing armies because of the fears that such a posture might create a military state. This fact has made the

Western alliances dependent on nuclear deterrence and defense, including the threat to escalate to nuclear war in the event of a massive conventional attack in NATO Europe and the Far East. The United States was capable of a short-term limited mobilization of 15 percent of GNP in the Korean War, peaking in 1953. Manpower was also mobilized in the draft. A rapid demobilization followed war termination. Subsequently, U.S. military budgets have levelled off to about 6 percent of GNP, and 9-11 percent appears to be about the maximum that could be expected in peacetime or in low-intensity conflict situations, with no military manpower draft. The European nations in NATO devote around 3.5 percent of GNP to defense, although some of them, particularly Germany, do have a manpower draft. The Japanese have not exceeded 1 percent of their GNP and have no military manpower draft. The most mobilized of the Western-oriented nations are the smallest and the most directly threatened, e.g., Israel and the Republic of Korea. Neutral Sweden and Switzerland maintain strong forces. It is unlikely that any of the major Western nations would sustain the same levels of intensity of military preparedness that exists in Korea and Israel.

Also deriving from the nature of democratic governments are those problems associated with integrating coalition alliance strategies, on the one hand, and the lack of a national central strategic planning and operating staff for the political-military organization and operation of the armed forces, on the other. There are major inefficiencies in the overlap and competition between the Army, Navy, and Air Force strategies in the United States and fundamental differences between those responsible for military strategy and the political-diplomatic professionals in our State Department. These inefficiencies compound the problems that derive from executive-congressional competition and conflict in the formulation and conduct of foreign and military policy. Unfortunately, short of a major crisis or an actual limited war that would unify the nation, these organizational deficiencies will continue to plague U.S. and allied governments. This condition is exacerbated by Soviet psychological and political warfare and the growth of so-called "peace groups" in all the Western democracies. Mainline churches are also entering the political arena to influence negatively U.S. and allied nuclear policies.

3. SDI Technologies

Emerging strategic defense technologies, including high-capacity, high speed, small-sized computers; new kill mechanisms, both nuclear (as in nuclear lasers) and particle beam, as well as other forms of exotic kill mechanisms make possible cost-effective ABM systems. New possibilities in near-term nonnuclear kill mechanisms offer some real hope in early (around 1995 deployment) strategic space-based and local ground-based defenses. One such possibility is outlined in a recent report.¹ The panel described a space-based boost phase defense system using a kinetic kill vehicle; space-based defenses using laser and particle beam kill mechanisms can be deployed somewhat later. Space-based strategic defense deployments, combined with a local ABM defense, could defend our strategic retaliatory forces and our national C³I systems. Such a defense system would create major problems for Soviet counterforce attacks, and this type of defense would also have some effectiveness for defense of population and urban areas. Attempts by the Congress to force their limited interpretation of the ABM treaty on the SDIO testing program are a major threat to such an early deployment capability.

4. Emergence of Bipartisan Nuclear Doctrine, 1979-87

In the past decade, the United States has elaborated a doctrine for strategic nuclear forces on a bipartisan basis, beginning with the Carter Administration's Presidential Directives (PDs) issued in 1979-1980. These PDs (now called "NSSDs") have been taken over and expanded by the Reagan Administration. Those of particular interest are:

- PD-59, dealing with the targeting of U.S. strategic retaliatory forces and an increased role for the Navy's Strategic Reserve Force (SRF);

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John Gardner et. al., Missile Defense in the 1990s (Washington, D.C.: George C. Marshall Institute, 1987).

- PD-58, concerned with the protection of the President and his successors for continuity of government to thwart a decapitation attack on U.S. National Command Authorities;
- PD-57, concerned with mobilization planning, although little effort has been made so far to improve U.S. capabilities;
- PD-53, which called for survivable and enduring communications to support the C I required to implement the "prolonged war" doctrine called for in PD-59 and PD-58;
- PD-41, related to civil defense and the setting up of local and state as well as federal organizations; although little effort has been made to fund the civil defense program, and Congress has shown little interest, the basic structure is there for later implementation.

The new U.S. prolonged war doctrine starting in 1979-80, was designed to deny the Soviets the possibility of a quick victory in a short war following Soviet preemption. A recent article analyzed the contrast between the U.S. and Soviet strategic doctrines and pointed out that the effect of the new directives from the Carter and the Reagan administrations was to change the U.S. posture from a vulnerable one that required the quick reaction of an all-out retaliatory attack to one which would introduce a capability to fight a nuclear war over a period of some months, at the end of which a termination agreement might be reached in which the U.S. would retain some SRF nuclear capability to prevent post-war coercion as well as providing a leverage for termination.¹

5. Limited War Doctrines

There is also a more realistic appreciation of Soviet limited war strategy based on the Soviet perception of changed correlation of forces that gives them escalation dominance, permitting use of a conventional

¹ R.B. Foster, "On Prolonged Nuclear War," International Security Review 6, (Winter 1981-82), pp. 497-518.

option. Under these conditions, the most likely wars are those that might be fought on the periphery of the Soviet Union (e.g., Korea) or in wars of liberation on the periphery of the U.S. (e.g., in Central America) that might involve direct confrontation of U.S. and Soviet forces. Such wars may escalate to the limited use of nuclear weapons, either at sea or on land or both. These wars may result in an early war termination, without either superpower necessarily threatening the survival of the other by attacks on the heartland of its country. The necessary ability to fight a sustained conventional war, during which a limited nuclear exchange may take place in the theater, requires greater attention to both defense mobilization (as in PD-57) and manpower drafts. There have been signs that this is being recognized in the Congress. The question of political will is at stake here, since the social system has to respond to external threats in a positive way, without forcing the President to back off and perhaps make a completely unsatisfactory "peace."

6. The U.S. Navy as a Flexible Force

The main type of military force that appears to make the largest difference in the ability of the President to threaten the application of force or to maintain a continuous application of force, if necessary, is the U.S. Navy. The Reagan Administration has almost met the goal of a 600-ship navy by means of a major modernization program. The navy not only has the mobility that can bring military power to bear at any point on the globe, but it also provides a supporting and complementary force to land-based army and air forces. The major naval factor in a limited nuclear war is not the nuclear submarine force, but the potential of an advanced Tomahawk ship-to-shore nuclear cruise missile capability. This cruise missile nuclear capability could be used against the air bases for the Soviet medium bombers assigned to their naval forces, but also it could potentially be used against land target arrays in a limited nuclear war that may be fought in the central front of Europe, or in the northern or southern flanks. Thus the gaps that may be left in our posture by the zero-option INF might be filled by ship-based naval forces and weapons that, because of their mobility, would be more difficult to target than similar land-based systems.

7. Increasing "Hitech" Capabilities of Conventional and Nuclear Weapons and Dual-Capable Weapons

Another trend advantageous to the U.S. is the increasing effectiveness of conventional weapons due to better target acquisition means, with greater accuracy of target identification and location; zero-CEP guidance systems for weapons for delivery of munitions, both nuclear and conventional; the possibility of a major improvement in the lethality of antitank munitions, as well as munitions used against air fields. There also exists the possibility of a conventional munition that could be converted to a nuclear capability with an insertable nuclear core.

With regard to hitech trends in weaponry, there is a potential for very small sub-kiloton nuclear weapons and weapons with various types of yields.¹ One already achieved is the enhanced radiation weapon; another is a hard X-ray weapon for potential use of exoatmospheric intercepts of RVs in a ballistic missile defense. There is also the potential for focusing nuclear explosive energy, as in the nuclear-pumped laser; an "earth penetrator"; etc. Such weapons could be very small in terms of yield, thus minimizing collateral damage (e.g., to population) and would be tailored for specific targets. It would be very hard to detect tests of such small weapons in underground testing ranges. The neutron weapon is particularly interesting since it could be used for both the local, hard-site ABM and a theater ATBM capability, thus radically expanding the allowable miss distance against an incoming RV and, at the same time, increasing the kill probability of the incoming weapon. Since the neutron weapon also has a very effective capability against tanks, it might be used in the initial phase of an antitank campaign to incapacitate the lead tanks in a threatened breakthrough. Such weapons could be used in sea-launched

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For an extensive treatment of hitech trends in weaponry see William Bajusz, Deterrence, Technology and Strategic Arms Control, Adelphi Paper #215 (London: International Institute for Strategic Studies, 1987), pp. 9-15; Theodore B. Taylor, "Third-Generation Nuclear Weapons," Scientific American, 256, (April 1987), pp. 30-39.

cruise missiles of the Tomahawk type, which has the advantage of not being susceptible to immediate capture or destruction on the ground, contrasted with short-range ground-based weapons that have to be used rapidly ("use them or lose them").

8. Nuclear Proliferation

Pressures for nuclear proliferation (due to the reduction in the credibility of the American extended deterrent) are likely to increase. It is not at all clear that the acquisition of nuclear capabilities by some nations, such as Israel, would be dangerous to U.S. security. Israel is, after all, an ally. This may not be true of the nuclear weapon potential of Pakistan, which could acquire a type of supranational "Islamic bomb." India has responded to China's nuclear capability by acquiring one of its own; at the same time, India has moved more closely to the Soviet Union, a move to which the Pakistanis have responded. Pakistan at the present time is the principal base for the operation of the Afghan freedom fighters, which makes it a target for Soviet military action. In such a complex strategic situation, it is impossible to predict outcomes. On the other hand, there is very little chance that any putative ally of the Soviet Union would be allowed to achieve a nuclear capability. It would perhaps be too threatening to the Soviets if they could not control an ally, such as North Korea under Kim Il Sung. If proliferation occurs in the LDCs (e.g., Pakistan) the Navy must be equipped to deal with this non-Soviet nuclear threat.

9. Joint Operations

Another major trend that could improve the efficiency of U.S. forces is a much greater emphasis on joint operations and combined arms. One example is the so-called air-land battle doctrine developed jointly by the Army and the Air Force. The U.S. Navy is, in fact, a combined arms service within itself and could assist other services in making basic improvements to overall army-navy-marine-air force efficiency, as in developing compatible C³I systems. The navy has also worked more closely with the air force in recent years on sea surveillance, for example.

In small unit operations (such as the attack on Grenada) the initial landing ("shock") troops may be naval-marine forces alone under a single integrated command with a single integrated doctrine. The possibility then exists for a follow-up force of the rapid deployment or JTF type, using army and air force units in later exploitation and occupation phases. The downward U.S. budgetary pressures may result in changes that will increase the pressure for combined arms doctrines and tactics. At the same time, such downward budgetary pressures on the NATO allies may cause them to seek more cooperative solutions to weapon development and procurement.

This opportunity for the U.S. Navy, consistent with a new emphasis on combined arms (or "joint operations") philosophy, is suggested in the following recent statement:

There is a tremendous misperception about the Navy, about the Navy going its own way. The Navy is a navy, army, and air force under one military secretariat. We do in fact have all of the problems everyone else has. At the outset, to say that we lack "jointness" would be fallacious even if we did not work with the other military services. As a matter of fact, to make these three disparate elements work, the people in Navy and Marine uniforms, and even Navy people whose operational backgrounds are different, requires a level of jointness that no [other] single service ever requires. To put the record straight: We have been very much involved in joint operations because it is the very nature of our game.

E. Needed: A Global Strategic Concept of Operations

A U.S. combined arms strategy and joint doctrine requires a global strategic concept of operations for campaigns at the operational level, as

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Statement of Melvyn R. Paisley, Assistant Secretary of the Navy (Research, Engineering and Systems on the FY 1988/FY 1989 Navy Research, Development, Test and Evaluation Budget, p. 43. quoting the new CNO from the October 1986 issue of Sea Power magazine.

well as for specific limited missions in war. Any U.S.-Soviet conflict may escalate to a global conventional war before nuclear weapons are used. This has been called the operational level (or operational art), which includes all of the elements of war, from initial mobilization and resource allocation to war termination. The operational art, therefore, requires a fundamental overview of the strategic objective as well as the policy goals of a particular campaign or a war. The war must be fought in such a way that it can be concluded under terms favorable to the U.S. and its allies. One of the problems of "favorable outcomes" has been the pressure for "military victory." But victory in a nuclear era is not the same as it has been in the past. All wars in the future must, of necessity, be limited wars if they are to be stopped short of an all-out nuclear exchange. Hence, the most critical question in the definition of victory involves the limits to be set on the political goals, strategic objectives of the engagement, and methods of targeting nuclear, as well as conventional, weapons.

An answer to this question might begin with a look back into history at the manner in which the first limited war was fought after World War II, viz., the Korean War of 1950-53. In 1950, the Soviet-trained and armed North Korean army invaded the South, and the contingent strategic plans--including limited mobilization outlined in NSC-68--were implemented. A new plateau of the U.S. defense budget was established at about \$50 billion per year. The virtual explosion of technology beginning in the early 1950s, with respect to new nuclear weapons, guided missiles, and nuclear-powered ships, to name only a few, has continued to this day. America chose technological plus alliance routes to national security in deterring and containing the Soviet imperial expansion. The outcome of the Korean War restored America's global position and created another latent deterrent--that of limited mobilization for limited war. "Victory" could only be determined in such a limited war by maintaining an historical perspective from the beginning of the war to its termination, taking into account the changing post-war "correlation of forces."

The numerical imbalances and real capabilities of NATO and the Warsaw Pact forces and weapons are serious problems. The nature of Soviet armored warfare in the NATO central front from the perspective of the operational level of warfare, suggests that the Soviets would drive along an entire front with many armored penetrations and, as the penetrations were successfully opened, the Soviet high command could then utilize the advantages of the blitzkrieg without having to rely on the skill and initiative of regimental officers. No reinforcements, either from within Western Europe or from the United States, could be brought to bear in such a campaign. Large-scale armored warfare is so important to the Soviets that they have continued to increase both the quality and quantity of their tanks and all supporting artillery and mechanized troops. This concept of Soviet operations suggests an early NATO use of tactical nuclear weapons to strike the invading Soviet forces. If this shock treatment does not stop the Soviet advance, then additional weapons could be delivered. The rapid use of nuclear weapons may also have an effect not generally emphasized: a psychological impact on the forces in combat that could rapidly arrest the conflict. The discipline, morale, and unit cohesion of the invading forces may not withstand the terror of nuclear weapons even in the kiloton range. This dissolution of the invading army could occur before any threats or actual use of nuclear weapons against Soviet cities.¹

Operational art is defined in the 1986 edition of the Army Field Manual FM 100-5: "Operational art is the employment of military forces to attain strategic goals in the theater of war or theater of operations through the design, organization, and conduct of campaigns and major operations." In a combined environment there is a need to maintain political cohesion, as well as military effectiveness. Given that the overall aim of stated U.S. military strategy is deterrence and defense, a commander must consider the failure of deterrence as well as its success; he must calculate war-fighting roles in terms of the stages in the spectrum of conflict in which he may be engaged. This may include the actual

¹ For a full discussion of this subject, see Edward N. Luttwak, "How to Think About Nuclear War," Commentary (August 1982), pp. 21-28.

conversion from conventional to nuclear weapons and the reversion to conventional forces in war termination. In the U.S. and NATO sense, the entire global concept of operations must be considered in the light of a strategically defensive posture for status quo powers like the U.S. and the Europeans. Hence war represents the collapse of policy, not its continuation, as in the dictum of Clausewitz.¹ Nuclear weapons may be used early on, perhaps launched from ships or from nuclear artillery on the ground or from aircraft based in Europe or on carriers. The military commander must make assessments of both the effects of these weapons and the likelihood of further escalation. At the operational level, the commander must keep termination in the forefront of his thinking, as he moves successively through phases of his campaign or a major operation. Whatever the military objectives, he has an important role in recommending and implementing basic termination options. The restoration of the status quo ante (as in the Korean War example in 1953) may be an important political/military objective. Any potential use of nuclear weapons in the theaters where American forces are now deployed (i.e., as in Europe and Korea) requires a different appreciation of the relationship between the political goals and the military objectives. U.S. laws and regulations require presidential release authority for the use of nuclear weapons, and the commander would have to be in continuous communication with the President and the National Command Authority (NCA). This is a difficult problem for Navy-based nuclear weapons, particularly SSBNs. "It also becomes clear in this context that senior military leaders at the strategic and operational levels should be prepared to do more than translate policy into military strategic and operational objectives. As strategic operational interactions proceed, leaders must also participate in the political decision-making process at the national security policy level. It is at that level that breakdowns between national values and strategy must be fixed and national interests that are not served by the strategy be

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See David Jablonsky, "Strategy and the Operational Level of War: Part II," Parameters 17 (Summer 1987) pp. 52-67, for full discussion of this subject.

identified."¹ It becomes obvious, in examining a strategic concept of operations and the operational art, that the transition from conventional to nuclear and back to conventional in war termination has not been well studied or understood at the national level (the NCA) or at the service level.

The Navy needs a major study effort in this area to develop doctrine for use of nuclear weapons and war termination.

The U.S. Navy has the potential of making a major contribution to a national understanding of this operational art problem because of the combined arms nature of the navy-air-marine team.

In addition to the vertical escalation from conventional to nuclear war and the horizontal escalation across a larger area with an increasing number of combatants, there are two other dimensions that must be treated at the operational strategic level. One is the time dimension--whether it be a short or a long war--and, in that sense, the degree to which mobilization of manpower and materiel will make a major contribution. The other is the political dimension, relating national goals and values, as well as interests, to strategic objectives and military missions, embodied in a comprehensive political-military doctrine. Criteria other than those available within the military context alone must be posited. One of the possibilities lies in the application of the "laws of war," based on the Geneva Conventions and the 1977 Protocols.² Reprisal attacks on population--the most important feature of MAD--are outlawed in the 1977 Protocols to the Geneva Conventions, and they call for "extremely restrained targeting of military objectives only...using weapons with the

¹ Ibid., p. 60.

² See John Bosma, "Arms Control, SDI, and the Geneva Conventions," in Promise or Peril, ed. Zbigniew Brzezinski (Washington, D.C.: Ethics and Public Policy Center, 1986), pp. 341-63, for an analysis of these interactions.

lowest possible collateral effects." The 1977 Protocols would classify the "MAD logic underlying the 1972 ABM treaty--the mutual hostaging of noncombatant populations and the intentionality suggested by the treaty's rigid constraints on defenses for protecting people and cities as a 'war crimes' strategy." The American "victory through air power" advocates of the mid-twentieth century, together with Douhet's 1921 book, Command of the Air, have a strange resonance with the MAD doctrine. MAD contravenes not only our humanitarian principles, but also our legal and traditional commitments to "civilize" warfare and to protect the innocent; the MAD doctrine, Bosma concludes, is a return to barbarism. Strategic defenses are a necessary component of an American nuclear strategy that observes the "laws of war," including also those unwritten "laws" that derive from the just war tradition.

There is "no nuclear deterrence without the will and capability to engage in nuclear defense."¹ The just war approach can be based on a limited objective for the nuclear defense, one that "thwarts the aggression, terminates the conflict as soon as possible, and limits the damage." In O'Brien's use of the term, nuclear defense is a concept of limited nuclear war, fought for limited objectives. A major effort must be made to meet the jus in bello criteria for a just war, including proportionality and discrimination or noncombatant immunity: "Another priority is to develop strategies and tactics, as well as the technical capabilities to make possible the maximization of counterforce targeting and the minimization, if not the elimination, of countervalue targeting." The addition of strategic defenses to the postures of both the United States and its allies would help "bring nuclear deterrence-defense strategies and capabilities into line with the requirements of just and limited war," and would signal the return of self-defense and common sense as the goals and guidelines of U.S. strategy.

¹ O'Brien, William V., "The Bishops' Unfinished Business," Comparative Strategy 5 (1985), pp. 105-33.

The Clausewitzian conception of the extreme of war--unlimited violence--has reached a limit: unlimited nuclear violence may mean the destruction of whole societies and civilizations by targeting of all civilized values--populations, cities, economic and urban resources, etc. This boundary having been set, all future wars must be limited wars, fought within some framework of rules and criteria external to military force and military weapons themselves. This is a problem beyond the scope of quantitative systems analysis techniques. For example, domestic and allied arms control discussions should encompass the entire range of possible wars, in terms of the effect of nuclear arms reductions on all services, particularly the Navy, and on the strategic concept of operations at the operational level and the effect of war termination possibilities. The problem of Soviet secrecy becomes central to any form of limited war, as well as being the central question in the verification of any arms limitation agreement. The "deep cuts" or "deep reductions" agreements in offensive forces, such as the SS-20 and Pershing 2 trade, have a built-in asymmetry: the Western and U.S. side is easily inspected; the Soviet side is not. Hence the question of holding firm for onsite inspection of mobile systems, such as the SS-20 or the SS-21 or SS-23 short-range missiles (not to mention the SS-24 and SS-25 mobile ICBMs), is potentially far more consequential than the elimination of the SS-20 and the Pershing 2: the opening of Soviet society to inspection will help to allay fears of Soviet secret war preparations, as well as possible violations of arms control agreements. In this regard, the entire strategic defense initiative--tactical ATBM as in Europe and the Aegis-type systems in the U.S. Navy, as well as the SDI in the strategic arena--creates a new set of conditions for allied arms control negotiations and also for the conduct of defensive war operations.

The Navy's "maritime strategy" enunciated by the Secretary and the CNOs has an option within it for the potential nuclear and conventional support of ground forces in Europe. The deterrent effect of the threatened defensive use of theater/tactical nuclear weapons on massed offensive conventional forces results from the tactical effect of denying the attacker the advantages of massing armor in several rapidly advancing columns, as suggested above. If the attacker masses, he presents a

lucrative target to the defender's tactical nuclear weapons. If, in the face of this threat, the attacker must spread out his attacking forces, e.g., his tank columns with supporting artillery and mechanized infantry, so that they are spaced in such a way that they do not present lucrative targets to the defender's nuclear weapons, he then may be defeated in detail by the defender's conventional forces and measures, including tanks, anti-tank missiles and guns, air-delivered munitions, mines, barriers, etc. Thus, this dialectical reasoning illustrates the necessity of threatening the defensive use of tactical nuclear weapons against superior conventional armor-heavy forces in order to achieve a "virtual attrition" effect on the attacker's optimum offensive tactics. The attacker then must consider that he may be defeated in detail by the defender's hitech conventional forces (discussed earlier)--which themselves are spread out in depth and in breadth in order to deny the attacker lucrative nuclear targets. Such defensive tactics require that the integration of tactical nuclear weapons and conventional forces in a combined nuclear-conventional weapons doctrine be agreed upon and understood by all the separate armed forces of a coalition-type defensive alliance, such as NATO. The custodian of the nuclear weapons--the United States--bears a special responsibility for the development of the tactics and the doctrine, and for integrating the tactical concepts into the strategic concept of operations at the theater operational level of combined arms--army, air force, naval, space, and national strategic and tactical intelligence. A complete description of the strategic concept of operations for NATO's defense of the Central Front in Germany would take far more data and analysis than is possible to include in this conceptual study.

F. Some Concluding Observations

1. General Forecast

The successful U.S.-allied theater nuclear deterrent strategy based on MC 14/3 will probably not change much over the next two decades. So far, nuclear weapons have favored the NATO defender, and have compensated for a major imbalance (favoring the USSR) in conventional forces. Strategic defenses (to include the SDI/ABM and an ATBM on land and sea) will be

developed and deployed in the U.S., in NATO-Europe, and in Northeast Asia in some form in the next two decades because of (1) the possibility of unilateral Soviet defensive system deployments; (2) the increasingly effective defense technologies that may favor defensive systems over the offensive: MAD will be replaced by MAS in fundamental U.S. strategic doctrine. Some form of flexible response, limited nuclear/conventional-nuclear war doctrine (as in the MC 14/3 doctrine for European ground-air-sea forces) will continue to be expanded to apply to all U.S. nuclear and conventional forces on a global scale, including naval forces. Current U.S. strategic nuclear policy is now consistent with NATO nuclear doctrine, e.g., minimization of collateral damage, no population targeting, restraint in use of nuclear forces through selective release procedures, and war-termination thresholds. All of the above requires more U.S. effort to develop nuclear-conventional weapon interactions and tactical doctrine, in such a way that offensive force concentrations by the Soviet Union become likely targets for U.S./allied nuclear forces. "Self-healing" command-control systems that offer no tempting targets to the Soviets by any means, including terrorist attacks, will become more feasible and important. U.S. and allied space efforts will increase and become more flexible (e.g., no sole dependence on the space shuttle). Control of space will become decisive for strategic defense, for ASW, for sea control, and for all forms of intelligence. Strategic and tactical real-time intelligence systems will be deployed in space.

2. Future Naval Contributions

The U.S. Navy can make a major contribution to land battles in northeast Asia and Europe by use of sea-based cruise missiles (of the Tomahawk and Harpoon types, for example), naval air and air launched missiles, and ship-based tactical ballistic missiles, as well.

Carrier-based air can be used as a partial solution to the vulnerability of NATO's tactical aircraft--some of which are nuclear-armed QRA forces--on fixed European air bases, particularly in Germany, that seem to invite Soviet nuclear preemption. New accurate medium-range ship-based tactical ballistic missiles could also be developed. The Northern flank of

NATO, the Mediterranean, and the Persian Gulf are the U.S. Navy's principal European combat theaters today. Soviet land-based aircraft (medium bombers with ALCMs, in particular) are a major threat to the Navy that can be met in part by advanced defensive systems. The navy's current nuclear-armed cruise missiles can threaten attacks on northern Soviet bomber bases that may be heavily defended with air defenses.

The Pacific theater is less heavily armed with nuclear weapons than the Atlantic-NATO theater. This may change as the Soviet naval forces increase and the submarine threats to U.S. and allied forces increase. Soviet deployment in the Pacific of SSBNs with long-range missiles will also increase, and the U.S. ASW problem against both attack subs threatening naval forces (including U.S. SSBNs) and Soviet SSBNs threatening the CONUS in all oceans will establish new requirements in space, in surface ships, shore installations, as well as in attack subs equipped with advanced nuclear as well as conventional ASW weapon systems.

The advocates of the "maritime strategy" urge an offense-oriented, aggressive U.S. stance, wherein the U.S. Navy "takes it to the enemy" in Murmansk and the Soviet SLBM fleet in the North Atlantic and the northern seas. In the Pacific, an offensive strategy would provide a horizontal escalation deterrent by linking the Far East with extraregional conflicts, rather than a passive strategy concentrating on the defense of U.S. Pacific forces.

The division of U.S. naval resources between Atlantic and Pacific Oceans has been a major problem since Roosevelt and Mahan saw the necessity of a cross-isthmus canal and the maintenance of major U.S. bases on the Pacific coast and the Pacific islands, e.g., the Philippines, Guam, and Hawaii. Since 1900, the relative economic and political importance of the Pacific Asian and the European Atlantic nations has changed, with the Asian nations gaining economically on the European. The Pacific littoral is shared by the U.S. and the U.S.S.R. in the Pacific. The only major Soviet naval base on the open ocean is Petropavlovsk on the Kamchatka Peninsula in the Soviet Far East. It is one of the most important nuclear bases in the

Soviet Union. The geopolitical situation has been well analyzed in a recent column by William V. Kennedy:

Without Petropavlovsk and the straits through the Kurile Islands farther to the south, the Soviet Union would cease to be a Pacific or Indian Ocean power, the Soviet fleet in the Indian Ocean being supported from the Soviet north Pacific bases...Seizure of Petropavlovsk and the Kuriles by U.S. amphibious task forces would put American power ashore in the rear and on the flank of the Soviet forces defending lands that China regards as having been stolen during the 19th century. The nightmare of all Soviet nightmares is China. That is why nothing the U.S. has ever done in Europe so grabs Russian attention as the appearance of naval and marine amphibious task forces in the north Pacific.

Kennedy argues that the requirement for the 15 carrier, 600 ship U.S. Navy can be better supported by including a major carrier task force permanently based in the north Pacific, with Seattle as the home port.

3. Future Naval Role in Operational Art

In the course of carrying on the continuing U.S.-Soviet competition, the problem of developing a concept for a prolonged global war (which may involve the possible use of nuclear weapons), is a very complex one. The heart of the matter is that it is difficult in the current U.S. government structure to create the doctrine for the operational conduct of such a global war, to include the military resources of allies. This doctrine must include not only the operational conduct of the war but also war termination thresholds and procedures, as well as a vision of the post-war world. This strategic doctrine is needed for pre-war plans and civil preparations, as well as for conducting combined arms operations and allied limited nuclear and conventional operations on land, sea, air, and in space. The advent of strategic and tactical missile defenses will greatly enhance the ability to limit damage to civil population and resources, and

¹ Wall Street Journal, July 10, 1987, p. 18.

to develop targeting doctrine for offensive nuclear weapons that avoid cities and populations. A secure reserve force of SSBNs can be used to hold Soviet cities in hostage for intra-war deterrence of Soviet city targeting. A general statement of the U.S. concept of the post-war world, together with the surviving military forces held in reserve, necessary to enforce the peace and influence the post-war global order, is a pre-requisite to the national/allied vision of the post-war world.

There are difficulties in the way of developing such a national/allied concept of operations and the desired outcome of such a global war. The Navy has a strategic opportunity within the structure of planning organizations at the national level. The Navy--the most globally ubiquitous military service--has major roles in all phases of competition, from peacetime presence to all levels of warfare. The Navy of necessity has an intra-service joint operating doctrine of its own (e.g., in coordinating the operations of submarines, carrier and land-based aircraft, surface ships, Marine Corps units, and space resources), and thus may be the most appropriate service to take the lead in military analyses that involve allied nations and their resources and self-defense capabilities. The Navy is developing new methods of strategic analysis and planning for flexible military forces operating in an ambiguous, uncertain environment. The "competitive strategy" policy has an intellectual component: Western strategic thinking and doctrines become ever more important ingredients of long-term victory in the era of nuclear parity and superior Soviet land power. The naval role encompasses requirements for naval superiority and command of the seas before, during, and after a major war, to include the possibility of a global nuclear-conventional war.

V FUTURE CONVENTIONAL WAR

A. Prospects for Conventional War in the Future

The only wars fought since 1945 have been conventional wars, including wars involving China (against the U.S. in Korea, and against the USSR in the Ussuri River border area in 1969). But no wars have been fought between the U.S. and the Soviet Union. The mutual fear of escalation to nuclear conflict has engendered prudence, and dampened all confrontations. What has come to be called unconventional war (or "low intensity conflict") under other names (guerilla war, terrorism, special operations, jungle warfare, riverine warfare, etc.) has been part of most of the conventional wars of this era, but these variations have not entirely displaced more formal conventional combat. In the two principal wars involving the United States, the Korean war was a formal conventional conflict and even in the complexity of the Vietnam war, a significant portion of the combat was conventional. In spite of substantial emphasis on training U.S. forces in unconventional warfare tactics, the bulk of U.S. forces sent to Vietnam were basically conventionally-trained personnel. Limited numbers of U.S. Navy forces involved in Vietnam were engaged in such unconventional operations as river and coastal tactics, special operations in infiltration, guerrilla and counter guerrilla tactics, etc., but in the main the U.S. Navy remained a conventional force. These unconventional capabilities (and the naval craft associated with them) mostly disappeared shortly after the Vietnam war was over. The SEALs (sea-air-land) have been incorporated into the Naval Special Warfare Forces as part of a renewed emphasis in the Navy and other services on special operations, but overall, U.S. forces are conventional forces, prepared for fighting at the level of conventional war or higher.

This forecast to the year 2010 is based on the reasonable assumption that the armed forces of the major powers will be, in the main, conventional forces, augmented by tactical and strategic nuclear weapon capabilities for the nuclear deterrent role (and for war-fighting, if deterrence fails). The major portion of defense budgets and the majority of the armed

forces personnel will be allocated to conventional weapons and force structures. This level of distribution of resources (money and manpower) will also generally be found in the armed forces of the mid-level and smaller powers (and in the latter, an increasing presence of the newer high-technology weapons). The kinds of war exemplified in the conflicts between Iran and Iraq, Ethiopia and Somalia, and Libya and Chad, are likely to persist in the international environment for the rest of this century and beyond, because the kinds of tensions, aggressive designs, ideological and religious differences inciting them will persist and may even intensify. Nuclear proliferation remains a probability in the Third World, and thus nuclear war is possible, but the more likely level of conflict is below the nuclear threshold, and in the main, the forces to be involved will have had the kind of organization and training that would be characterized as conventional.

There is always the possibility, however remote, that a war could begin as a "bolt out of the blue," a nuclear first strike. Conventional forces play a role in deterrence of this kind of act of aggression. The U.S. and its allies will have a substantial deterrent to a first strike--by which the aggressors would hope to win with a sudden blow that would destroy the bulk of our strategic retaliatory weapons, making further resistance pointless--if careful prior preparation has been made for containing the war at the conventional level. Such prior preparation will have to include plans--and the capacity--for mobilization; otherwise the conventional forces cannot be supported and sustained for the six months or more that will be necessary to convince the enemy that sudden victory is not possible.

Doubt in the mind of the aggressor that he will succeed by his aggression is the essence of deterrence. Thus, the capability for protracting the war with conventional forces in response to strategic or tactical nuclear aggression will create such doubts. A further way to create doubt of the success of strategic nuclear aggression will be for the U.S. to pursue the Strategic Defense Initiative (SDI) to the point where it can destroy a substantial portion of incoming strategic weapons. The temptation of the aggressor to launch a first and war-ending strike can be

inhibited by his knowledge that most of his strategic weapons will be intercepted on the way to the target by a working strategic nuclear defense. If so, the probability of nuclear war can be lessened.

Nuclear war can, of course, begin with conventional war, but there is a trend of thinking that suggests that recourse to nuclear weapons in a war that begins conventionally--especially the early recourse to nuclear weapons that has long been assumed in a NATO-Warsaw Pact war--is becoming less credible and therefore less probable. The Soviets departed many years ago from their earlier postulation that any war between nuclear powers would surely go nuclear. The unusual and unexpected talk of virtual elimination of nuclear weapons that took place at the Reykjavik Summit in October 1986 cannot but cast some doubt on the reliance on nuclear weapons as a deterrent to war or as a credible threat to induce war termination. Even though nuclear weapons remain in place, the increasing accuracy and reliability of conventional weapons further reduces the gap between the target-destroying power of conventional and nuclear weapons. That is, conventional weapons can be, for certain targets, more effective than some of the low-yield nuclear weapons. The portent of all the foregoing is that conventional war--between nuclear powers--may well be more likely than was thought up to now.

On the other hand, realism requires restraint in discounting the chances of escalation in any war between nuclear powers. War between the U.S. and the USSR is generally assumed to have the potential of becoming a global conflict. The Maritime Strategy as expounded upon by the CNO and the Secretary of the Navy declares that, if deterrence fails and war begins, the Navy (and Marine Corps) will "seize the initiative as far forward as possible. Naval forces will destroy Soviet forces in the Mediterranean, Indian Ocean and other forward areas."¹ That is, the war will be global. As F.J. West points out, the global dimension has been made a U.S. strategic assumption, in President Reagan's National Security Decision Document (NSDD) in 1982, stating that it is to be a planning

¹ Admiral James D. Watkins, "The Maritime Strategy", U.S. Naval Institute Proceedings Supplement, January 1986, p. 11.

assumption that a U.S.-Soviet war would not be confined to the NATO area but would become a global conflict.¹ The vigorous initiatives suggested by the Maritime Strategy imply that intense conflict will take place in many widely separated places, and that Soviet ships, planes, and ground forces will be attacked and destroyed--likewise, U.S. ships, aircraft and ground units will be attacked by Soviet forces, and some will be destroyed. Soviet ballistic missile submarines will be sought out in their bastions and destroyed, with the objective of altering the strategic nuclear balance in favor of the U.S., as a pressure tactic to induce the Soviets to terminate the war. Further pressing the nuclear threat, U.S. carriers and ships equipped with Tomahawk missiles would deploy around the periphery of the Soviet Union. Marine amphibious forces could seize forward positions to enhance the encirclement of the USSR.

The key question: can these vigorous global combat initiatives be brought off rapidly and successfully, with the objective of greater losses on the Soviet side than to U.S. forces, and keep such a global war at this conventional level? The former CNO, in his definitive article on the Maritime Strategy, discounts the probability of escalation: "Some argue that such steps will lead to immediate escalation, but escalation solely as a result of actions at sea seems improbable, given the Soviet land orientation. Escalation in response to maritime pressure serves no useful purpose for the Soviets since their reserve forces would be degraded and the United States' retaliatory posture would be enhanced."² Admiral Watkins continues, recognizing the risk: "Neither we nor the Soviets can rule out the possibility that escalation will occur, but aggressive use of maritime power can make escalation a less attractive option to the Soviets with the passing of every day."³

¹ F. J. West, "The Maritime Strategy, the Next Step," U.S. Naval Institute Proceedings, January 1987, p. 44.

² "The Maritime Strategy", op. cit. p. 14.

³ Ibid.

What then can be said in response to the question implied by the title to this section, i.e., the prospects for future conventional war, in the world as it will be beyond the Year 2000? The situations that can precipitate war will not have been eliminated; war remains possible and perhaps probable. If war erupts, it will at some point involve conventional forces, even though it might be triggered by one or more of the variations of unconventional warfare or low-intensity conflict, such as provocative terrorism. If between major powers, it is unlikely to begin with a nuclear attack, but resort to nuclear weapons is immediately an option for both sides. Given the trend now foreseen towards a lesser inclination by nuclear powers actually to employ either tactical or strategic nuclear weapons, we must conclude that the prospects are better for the future than they have been in the past for containing war at the conventional level, but this is only to say that escalation is less likely, not set aside. It is a contingency that must always be considered.

War between a major and a minor state (Third World) will almost certainly remain non-nuclear, though unconventional tactics will be a greater probability than in the past. Even though nuclear weapons may be present in the combat area, they are not likely to be used by the major power against the smaller. The latent prospect that nuclear proliferation will extend to the acquisition of nuclear weapons by Third World nations probably will loom larger beyond the year 2000, and thus "escalation" in a major-minor clash between nations is just possible. If attempted by the smaller against the larger nation, it would have the nature of suicidal desperation; the major power could obliterate the smaller foe in retaliation; yet, restraint might prevail even in the face of so great a provocation.

Conventional war is of course likely to continue between minor powers, with no direct superpower involvement, as in the present enduring conflict between Iran and Iraq, and before that, the Arab-Israeli wars. Although unconventional tactics may be involved at various times and places in such wars, the forces used in the main conflict are conventionally trained and armed.

Finally, as to the prospects for conventional war between the U.S. and the USSR, if all the trends noted above be true and if they have the effect of making nuclear powers less apt to use their nuclear weapons, it suggests that although the prospects are greater for containing a U.S.-Soviet war at the conventional level, the absolute probability of the outbreak of war itself may thereby be increased in the coming era. The clear implication is that the conventional force capabilities of the U.S. and its allies cannot be allowed to slip below the level of credibility in the mind of the enemy that conventional war can be sustained by the West for as long as is necessary to induce war-termination on terms that preserve U.S. and allied vital interests.

B. Regional War

There have been two world wars in this century and a third is a possibility that has been thought about and written about. Yet it is wars limited to a localized arena that have been the reality since 1945, and on the scale of possibilities, such wars pose threats far more likely to engage U.S. forces than a global conflict. Given the probability of war's being regional, it is clear that there are some places where war is more likely to occur than others. In the following discussion, the regions of greatest concern in a forecast of conflict are examined. The regions are taken up more in the order which reflects their importance to U.S. security interests than with regard to the probabilities of conflict.

In the main, the regional discussion focuses on the likelihood that if the U.S. is involved in conflict starting in and contained in a limited area, the adversary will be a minor power. The dividing line between low-intensity conflict (to be taken up in the next section) and conventional warfare is not well-defined. In taking up the question of potential conventional warfare between the U.S. and minor powers, it must be assumed that if such conflict were to occur, in most cases it would begin at the level now called low-intensity conflict. Conventional war would be an escalated level involving larger numbers of forces on each side, or, as one definition of the changeover point suggests, the stage at which uniformed forces or both sides engage one another.

Insurgency, subversion and terrorism are regarded as falling in the low-intensity conflict category; any one of these kinds of aggression can escalate to a more widespread conflict that would be regarded as conventional war.

Of the five regions selected as the most important for examination of future conflict potential affecting the national interests of the United States, only one, NATO-Europe, is regarded as an unlikely area for a conventional war to arise from insurgency, subversion or terrorism. The NATO-Warsaw Pact confrontation is of such long duration, of such formalized structure and commitments, and such intense scrutiny concerning the threat of and probability of war, that the prospect of inadvertent escalation to conventional war from the kinds of incidents or developments associated with low-intensity conflict seems improbable. This is not to say that low-intensity conflict is of no consequence in the NATO-Europe region; for example, the 1986 U.S. attack on Libya was justified at least in part by reaction to the terrorist bombing of a night club in West Germany in which Americans were killed. But it is to say that this kind of incident is not likely to start a chain of events that would lead to a NATO-Warsaw Pact conventional war. Thus, in identifying the possible adversaries of the U.S. in a regional war (that would likely remain a regional war), it is more relevant to look beyond NATO-Europe to the other regions selected here for scrutiny. Nevertheless, because Western Europe is so important to U.S. national security, and because conventional war is a real possibility in the region, it is taken up first in the following discussion.

1. NATO-Europe

In the forecast in this study for the early years of the twenty-first century, the NATO alliance will still be in force and the territorial divisions between the NATO countries and the Warsaw Pact countries will be essentially unchanged. The case of the two Germanys could be an exception; it is possible that some form of reunification will have taken place. However, it is difficult to believe that West Germany would so change its political and economic structure that accommodation under a communist framework with East Germany would be possible, and, similarly, the likeli-

hood that East Germany would either desire or be allowed by the USSR and the rest of the Warsaw Pact powers to be unified with the free enterprise republic of West Germany seems quite low. Therefore, given the assumption that the West does not succumb to pessimism and weariness over the costs and frustrations of holding the line against aggression, the general political and territorial shape of Europe on both sides of the Iron Curtain will likely persist into the next century.

Deterrence of conflict in Europe has worked for more than four decades, in spite of disagreements among NATO allies about what it has required and will require from the member nations and even as to why it has worked. At no time could it have been said that the U.S. and its NATO allies were in full and complete accord on NATO strategy, yet the alliance has survived and war has not happened. Complacency for the future, however, if it were to be based on just the absence of war, would not be wise, for there are changes in the shape of the threat.

Warsaw Pact forces have grown in numbers and in the sophistication afforded by high technology (although their reliability, especially those of Poland, is unpredictable), and overshadowing all is the strategic nuclear parity (or superiority in some aspects) achieved by the USSR with the U.S. In the early years of the fielding of new military technology the U.S. had a substantial lead, but the gap is closing.

The naval factor in the NATO-Warsaw Pact confrontation has significantly increased during the years of the new technology and the impact is not yet fully recognized or reckoned with in strategic planning. Under former Fleet Admiral Sergei G. Gorshkov, the Soviet Navy has grown to be a blue water, high technology force. In only one area, carrier aviation, does the Soviet Navy fail to compete on a level with the U.S. Navy, and that area is being addressed with the construction of large CTOL (conventional take-off and landing) carriers. Soviet land-based naval aviation, however, is a formidable force. Modern technology has expanded the capabilities of navies from fighting each other at sea to every locale of the battle on land, in the air and in space.

The coming of age of navies, in high technology and in numbers of units sufficient to allow for widespread deployments, has invoked a new approach to the concept of conventional war in the nuclear age, especially in the European theater. As the U.S. Navy has reckoned with the problem of meeting the Soviet threat, in Europe and around the world, it has been necessary to consider how a naval war (and naval support of war involving all the U.S. forces) might be fought to U.S. and Western advantage and at the same time be able to be contained at the conventional level.

Traditional thinking by our European allies has focused on the Central front: the fielding of sufficient conventional land and air forces to offer credible initial resistance to a conventional Warsaw Pact assault, but with the vital backup of short-range and intermediate-range nuclear forces to be called into action should the enemy's conventional assault begin to threaten defeat of NATO forces. In its extreme form, this is a "deterrence only" strategy, calling for only modest outlays for conventional forces and logistics for a very limited duration of fighting; the deterrence that would prevent the necessity actually to use these forces is in the holocaust threatened by the tactical nuclear weapons, and the postulated high probability that tactical nuclear warfare would rapidly lead to strategic nuclear warfare affecting the U.S. and Soviet homelands. Europeans, dreading the prospect of prolonged conventional conflict on their lands, or even worse, a tactical nuclear war that does not escalate but is confined to local devastation, prefer not to plan for prolonged conventional war. Even to plan for it can be believed to reduce the credibility in the mind of the enemy that the West will actually resort to early use of nuclear weapons, thus possibly eroding the deterrence of aggression.

U.S. naval thinking, focusing on how forces might best be used in actual conflict contingencies, has moved towards the concept that the best defense is offense. With sufficient naval forces in being, e.g., a navy of approximately 600 ships, it is possible to deal with the reality that deterrence may fail. If a conventional war should begin in Europe, and it could very well involve the northern and southern flanks as well as the Central Front, the fighting is not likely to be terminated by a quick surrender by either side, nor under the probabilities of the future as now

forecast, to invoke the early use of nuclear weapons. The opportunity is thus afforded the U.S. Navy, very early in the conflict, to take offensive action against the Soviet Navy, in the European theater and around the world, wherever they may be found. Swift combined action between the U.S. Navy and allied naval forces in all theaters can both prevent Soviet sorties through the choke points they must transit and where possible make attacks on their forces inside their bastions. A bold, but not reckless, going into harm's way by the Navy-Marine Corps team early in a conflict situation can reverse the advantage the aggressor may achieve in his initial attack and convince him that there is no easy victory; he will face a prolonged conventional conflict, and nuclear war remains a danger if he persists. The possibility for war termination on terms compatible with U.S. vital interests would then be created. This strategy is different from the conventional NATO strategy, especially as has been preferred by European planners, but it is a viable and affordable strategy. It can make the Navy an integral part of the overall NATO defense, maintaining security of the sea lanes to Europe and being ready to provide tactical support to the battle on land. With a viable U.S. mobilization base undergirding the extended effort, it supports the containment strategy of the future.

2. Middle East-Southwest Asia

The forecast for this troublesome region is for continuing troubles. The deeply-rooted sources of tension and conflict are centuries old and not likely to disappear in the two or three decades addressed in this study. Religion, race, ideology, nationalism and economics feed the cross strains of interests in this key area where continents intersect. The world's largest reserves of oil are located here. For the U.S. and its allies the frustrating international security dimension of this important region is its inaccessibility. In the other key regions of international concern there are at least a few places where advance bases are available for the prepositioning of land and air forces and for providing support to mobile forces. Thus, as crises of recent years have shown and are likely to show in the future, demands are placed on naval forces to provide an on-scene military presence free of overflight restrictions and base transit and support requirements. Even if bases in the region can be obtained for the

use of land and air forces, on temporary or longer term understandings, the Navy-Marine Corps team will certainly be required to be ready for mission assignments in the Middle East-Southwest Asia region.

Terrorism and the Middle East have become symbolically linked in global perceptions; these acts of violence are generated by the fanaticism so easily evoked from the religious, nationalist and ethnic roots of tension and conflict. It may be regarded as something of a mystery why war has not resulted from some of the terrorist acts perpetrated. In an earlier period of history the murder of 241 U.S. Marines who were deployed to a crisis zone on a mission of national security could well have started a war. The risk of war from future terrorist incidents remains real, and other sources of conflict in the region will persist. The expansionist aims of the Soviet Union, exemplified by their thrust into Afghanistan, are not likely to diminish. The policy declaration made by President Carter in January 1980 still stands, and it makes U.S. intentions clear:

Let our position be absolutely clear. An attempt by any outside force to gain control of the Persian Gulf region will be regarded as an assault on the vital interests of the United States of America. And such an assault will be repelled by any means necessary, including military force.

Beyond the general objective of containing Soviet expansionism, there are specific reasons why the Middle East-Southwest Asia region is important to the U.S. and its allies. Although at present the U.S. gets less than six percent of its oil from the Persian Gulf, by the 1990s and on into the 21st century there will be an increasing U.S. dependency on Persian Gulf oil, because other sources (especially domestic U.S. oil) will be drying up. If the Soviets were able to establish effective hegemony over the Persian Gulf and its environs, they would have a powerful economic-political tool for use against the West.

Even without the oil factor, the geostrategic position of this region at the nexus of three continents makes it necessary for the U.S. to retain its influence there. Israel struggles for survival in this turbulent region; there would not appear to be any reason why the U.S. commitment to Israel's survival would diminish in the future. A tenuous Arab-Israeli

"peace" persists, and it is in the U.S. interest to see that tension and conflict are contained at least not higher than the level of isolated clashes and acts of retaliation that seem to be the inevitable pattern of events. The Soviets, on the other hand, believe that their interests and objectives are served by instability, especially where it causes trouble for the U.S. and its allies, e.g., disruption in the import of oil or export of U.S. goods or endangering U.S. citizens by acts of terrorism.

It is for this basic reason, i.e., that U.S. interests are served by stability that the U.S. must make its strategic posture clear to any adversary who would either seek control of the Middle East-Persian Gulf-Southwest Asian region or act to foment instability and conflict there, that the U.S. would act to counter any such moves. As noted above, the inaccessibility of the region makes this a difficult strategy to implement and therefore to make such a strategy credible as a deterrent, but nevertheless it is an essential strategy.

The Navy-Marine Corps team is the logical "rapid deployment force" to be called upon if necessary to implement this strategy. If the U.S. acts promptly, in many cases the Navy-Marine Corps team, as a first-order option, should be able to deal adequately with the situation at hand. Yet there may be situations that require a larger response involving all the U.S. services.¹ It would be appropriate for the Navy to take the lead in seeking joint action to refine and expand upon existing plans for such contingencies. Many U.S. Army force contingency plans call for airlift of forces, but sealift may well be a more practical alternative, or an addition to an airlift. U.S. Air Force and U.S. Navy joint efforts in air reconnaissance, interdiction, air defense, and antisubmarine warfare, and especially C³I functions, (command, control, communications, and intelli-

1 See The U.S. Navy, the View from the Mid-1980s, James L. George, ed., (Westview Press, Boulder, CO, 1985), pp. 287-304; and Strategic Requirements for the Army to the Year 2000, Robert H. Kupperman and William T. Taylor, Jr., (Lexington Books, Lexington, MA, 1984), pp. 371-424, for discussions of contingency situations in the Middle East-Southwest Asia region. See also Military Intervention in the Third World, John H. Maurer and Richard H. Porth, eds., (Praeger, New York, 1984), pp. 207-230 and passim.

gence) require careful advance planning. All such planning is effectively tested by exercises. If both U.S. Marine Corps and U.S. Army forces are required in contingences in this region, the sharing of the landing force/ground force missions calls for prior definition and planning.

3. East Asia

In contrast to the inaccessibility of the Middle East-Southwest Asia region, East Asia has distinct geographic advantages for the U.S., and the U.S. Navy in particular. The Asian continental rim and the island chain along it are readily accessible from the sea. Moreover, the Soviet Navy has the disadvantage of having to transit various passages to reach the open sea from their naval bases in Northeast Asia. The U.S.-constructed base in Cam Ranh Bay, now fully utilized by Soviet naval and air forces, is an important exception to the Northeast Asia choke-point strictures on operations of the Soviet Pacific Fleet, yet even this strategic acquisition by the USSR has its problems. Cam Ranh Bay is of great utility in the Soviet Pacific Fleet's peacetime political exploitation of naval presence in the Western Pacific, Southwest Pacific and Indian Oceans, but if actual conflict were to break out between the USSR and a major power (U.S. or PRC), the Soviet base in Vietnam would be a high priority target for the opposing air and naval forces. The Soviets would have difficulty defending it.

A decade ago only a minority of American decisionmakers regarded East Asia of equal or greater strategic and economic importance than Europe but today a majority recognize the shift of gravity of U.S. interests and foreign policy concerns towards the body of nations on the western rim of the Pacific Ocean. Although President Jimmy Carter had come into office in 1977 believing it wise to remove the U.S. ground forces from Korea, he learned better and abandoned the idea in 1978, and in 1980 further acknowledged the importance of East Asia by abandoning the "swing strategy" that called for U.S. naval forces to be shifted from the Pacific to the Atlantic if there were war with the Soviet Union.

There are many reasons for the U.S. focus on East Asia as a region of primary concern: the region exceeds Europe in the volume of two-way trade with the United States; nearly one-third of the world population lives there, and the proportion is growing; the major buildup of Soviet military forces--land, sea, air, missile--in the region constitutes a growing politico-military threat to the U.S. and its allies; the presence of the Peoples Republic of China is a strategic and economic factor that bears upon all future U.S. national security policies; and not least, it is the region where the U.S. has fought three major wars since 1941, and has military alliances committing it for Asian security for the indefinite future.

As noted above, East Asia has been the scene of major combat and it remains a zone of potential conflict. The Soviets and Chinese face each other across a highly militarized border. Although the Soviets have the edge in conventional and nuclear forces, the Chinese have the manpower and depth to make a Soviet conventional attack very costly in manpower and weapons, even though the Chinese would be forced to retreat if attacked. Further, the PRC has enough nuclear weapons to retaliate with a degree of devastation the Soviets would find unacceptable. The tension level in Sino-Soviet relations waxes and wanes, but even when relations appear to be ameliorating, they stop short of anything resembling the allied relationships of the 1950s. China has built a navy of increasing blue-water capabilities and this modernization and expansion apparently has been stimulated by such factors as the continuing buildup of the Soviet Pacific fleet, Soviet support of Vietnamese aggression in Southeast Asia, and conflicting claims of sovereignty and mineral rights in the South China Sea. Although China seeks no alliance with the U.S., the PRC Navy does seek technological assistance in its modernization quest, and U.S. strategic interests are served by providing selective transfers of technology and equipment to all elements of the Peoples Liberation Army, keeping a balance between upgrading the PRC's capabilities to counter Soviet threats and avoiding a level of aid that would significantly increase the PRC threat to the survival of the Republic of China on Taiwan.

There are no models for predicting the future of the ROC, but its de facto status as a separate political entity seems unlikely to change before the end of the century. The Taiwan Relations Act, passed by the U.S. Congress in 1979, will endure for the main reason that it would take another act of Congress to terminate it, an unlikely prospect. Hong Kong will pass to PRC control in 1997 and Macau will follow in 1999, but these events do not necessarily presage Taiwan's becoming in fact "a province of China" or "a part of China" as the U.S.-PRC joint communiques of February 1972 and August 1982 indicated. What does seem possible and even probable is a continuation of separate existences by the PRC and ROC, but along with this state of affairs an increase in contacts and interactions between the two political entities. There is already indirect trade between the PRC and ROC and some visitation by people from Taiwan to places in the PRC. Professionals from both sides meet in various scientific, academic and athletic events in third countries. Occasional direct contact is necessary, for example, to arrange for the return of a China Airlines (Taiwan) aircraft that was diverted by its pilot to the PRC in 1986. So far, the ROC has stoutly refused to consider such means of contact as exchange of mail and telephone service, but this may change. The dreaded contingency, one that would put Washington on the spot, of a PRC military attempt to force the reunification of Taiwan, must be judged from the PRC's perspective: it would be a risk versus gains decision, and although the question of sovereignty over Taiwan is one of the foremost national political issues in China, pragmatism and patience may lead to the judgement that the risks of use of force exceed the gains. For the U.S., all this means a careful balancing act, avoiding taking part in either promoting or preventing the reunification of Taiwan and maintaining workable relations with both sides.

Although there is reason enough on both sides to avoid a Sino-Soviet war, the situation on the Korean peninsula is less assuring. South Korea's strong military posture and the deterring presence of U.S. ground forces in harm's way near the DMZ have kept North Korea at bay for more than three decades, but the persistence of North Korea in modernizing its armed forces and positioning them in an attack mode are cause for continuing concern and vigilance by South Korea and the U.S. There may be some movement within the next decade or so towards some form of a more peaceful coexistence, or

even unification, between North and South (and the U.S. may be able to give discreet assistance), but in the interim, the threat of war will best be contained by maintaining the strong U.S.-ROK military posture that has kept the peace up to now.

For keeping the peace in Northeast Asia, the bases in Japan are essential and the cooperation of U.S. and Japanese forces is likewise necessary to deter aggression (by North Korea or the USSR) or to fight if deterrence fails. For example, closing the straits to prevent Soviet Navy units from exiting the Sea of Japan demands close U.S.-Japan coordination (and Korean as well, for the southern exit). There is some ambiguity about Japan's willingness to commit its forces in a Northeast Asia conflict, i.e., unless the Japanese homeland is attacked, but this reluctance cannot be accepted by the U.S. as the operating mode for the future; the U.S. must press for and make clear to Japan that it is a necessary planning assumption, that the military assets of the Japanese are essential for the preservation of Japanese and U.S. national security if there is aggression threatening us in Northeast Asia.

Southeast Asia is a region with a more complicated mix of possibilities than Northeast Asia. U.S., Chinese and Soviet interests and objectives intersect here in a variety of ways, and these ways will undoubtedly change by the end of the century. The primary local contenders are the USSR and the PRC, the former backing Vietnamese hegemonic designs and the latter resisting, specifically backing the Cambodian resistance to the Vietnamese takeover of Kampuchea. U.S. interests in mainland Southeast Asia are at present focused on protecting Thailand from the spillover effects of the Sino-Soviet rivalry, and as a general objective, seeking stability, freedom of access to the region and unhindered navigation at sea and in the air, and containment of Communist (mainly Soviet) expansionism.

The goals of stability and access over the entire Southeast Asia region are especially relevant to the Philippines, where the major U.S. naval and air bases are located. The post-Marcos era in the Philippines will be a long struggle for containment of the Communist insurgency, an entrenched threat to the survival of freedom, democracy and economic

growth; the roots of insurgency go back to the days of the Huk rebellion in the early years after World War II, but the movement has grown most dramatically since the early 1980s. The Marcos government was not able to put down the threat of the New People's Army and the Aquino government has not made significant progress. The Communist threat is the main source of trouble, but Muslim unrest in the South complicates the government's battle to prevail.

U.S. national security interests clearly require action to see that the Philippine government is able to put down the threat to its survival. Not only would the loss of the naval base at Subic Bay and the air base at Clark be major impediments to the forward deployment strategy of the U.S., but the loss of the U.S. relationship with a friendly government in Manila would undercut the rationale for a permanent U.S. political presence in the Southeast Asia-South China Sea area.

Further, the problem does not end there. Even if the Aquino government or its successor succeeds in containing the Communist threat (and the Muslim unrest), the expiration of the base agreement in 1991 raises the question of renewal. Candidate Aquino had opposed extension of the base agreement but after election modified her stand to leaving the question to be decided in 1991, not a fully reassuring position. Other base sites have been considered, from Guam, one thousand miles to the east, to various places to the South, such as Darwin, Surabaya or Singapore. None of these has the geographic suitability of Clark and Subic, and the cost and time of building new bases to duplicate the excellent facilities of the Philippine bases would be great. U.S. friends and allies in ASEAN (Association of Southeast Asian Nations) would feel far less secure if the strong U.S. forward position in the Philippines were to disappear. The support and deterrence role of the Seventh fleet would become even more critical than now; operations in Southeast Asia and the Indian Ocean could of course continue even if Subic Bay were lost, but the units could be at the end of a much longer logistic pipeline. The general rule that a fleet loses about ten percent of its effectiveness for every one thousand miles of distance from its support base could not but have some effect in such a situation. Without Clark and Subic, the Soviet presence in Cam Ranh Bay would loom

even larger than now. It will be in the U.S. interest to begin negotiations on retention of the bases long before the expiration date in 1991.

The Soviet outpost in Cam Ranh Bay was not enough for the Kremlin's expansionist strategy; the "vacuum" the Soviets perceived farther away in the Southwest Pacific area was too tempting to ignore, and this region has been the scene of the most recent Soviet political-military moves. The U.S. and its World War II allies were pervasive in their presence in the Southwest Pacific in rolling back the Japanese war machine, but in the post-war years the region became a strategic backwater for the Western powers.

The Soviets made fishing agreements with Kiribati and Vanuatu in 1984-1985, indicating their desire to extend their influence into an area of potential political-military utility to them. By offering annual hard currency payments, e.g., \$1.7 million to Kiribati, for the right to fish in local sea areas, the Soviets gain access to local ports and the general advantage of steaming in waters normally used by the U.S. and allies. The nearby U.S. missile testing range at Kwajalein can more closely be monitored by Soviet naval units, and they can pursue hydrographic research efforts that will benefit their submarine operations and enable them better to monitor and counter U.S. submarine operations.¹ Along with such enhancements of their own military operations, the Soviets can use these inroads into the island territories to promote the concept of a nuclear-free zone, and as a general strategic objective, put themselves into positions to threaten the West's sea lines of communication (SLOCs), a Soviet wartime objective to be implemented in a variety of potential conflict situations.

The Soviet inroads into the Southwest Pacific have evoked overdue U.S. attention to the region, resulting, for example, in new fishing agreements that corrected some past U.S. abuses of local island territorial waters. Kiribati did not renew its Soviet fishing agreement in 1986, indicating

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Pacific Defense Reporter, Aug. 1986, p. 13.

that not all is going Moscow's way. As for trends to the end of this century and beyond, the U.S. and its allies can do much to preclude the expansion of Soviet hegemony into this region, recognizing that there is a rising tide of nationalism and self-assertion in these various mini-states that will require enlightened political and diplomatic approaches to the issues at hand, such as fishing rights, trade, economic development, nuclear testing, etc. The Southwest Pacific is not the strategic equal of such regions as Northeast Asia, Europe or the Middle East, but it is nevertheless a vast maritime area important to the U.S. and such allies as Australia, and the locus of many of the sea lanes and narrow straits that are essential to the economic and security well-being of the maritime powers.

4. Central America-Caribbean

This is a region the U.S. cannot ignore. It is either our "back yard" or "front yard", depending on one's choice of terms, but in any case, so close that it is vital that the Soviets (or any hostile power) not be allowed to dominate it. Already, the Soviet presence in and influence over Cuba, and the ongoing attempt to extend that influence to Central America, pose a serious threat. In 1962, in the Cuban missile crisis, the U.S. Navy was effectively used to contain the serious threat of Soviet missiles being deployed in Cuba, and in the current Central American crisis, the Navy could have been -- but was not -- employed to cut short the Soviet-Cuban infiltration of Nicaragua. As the case study in the next section of this study explains, a naval blockade of such a maritime objective as Nicaragua is feasible, effective and in accordance with international law. As we look to the two decades ahead, and with the prospect that there will likely be more Communist attempts to penetrate the Central America-Caribbean area, the Navy-Marine Corps team will remain a potentially effective strategic instrument in U.S. national security policy.

The strategic importance of the Central America-Caribbean region needs little elaboration. It is nearby, it affords an open approach to a long and unfortified southern coastline of the U.S., and it is the locus of key sea lanes, especially those leading to and from the Panama Canal and the

U.S. Gulf Coast with its concentration of oil fields and refineries, space landing bases and other industrial and security assets. Furthermore, instability in Central America has resulted in a serious illegal immigration problem for the U.S.; further political violence will worsen this situation.

U.S. concern for the Caribbean and adjoining lands is of long standing. In 1823 President James Monroe set forth some principles that came to be known as the Monroe Doctrine, i.e., that there would be no further European colonization in this hemisphere and no intervention in the affairs of the nations on this side of the Atlantic Ocean. In return, the U.S. would not interfere in European affairs. In the main this doctrine has been effective; such crises as the Spanish actions that led to the Spanish-American war were dealt with, and in this instance, the U.S. Navy was effectively used to preserve U.S. dominance in the hemisphere.

It was not until some 60 years after the Spanish threat to the Monroe Doctrine (and Cuba) was turned back that Cuba became again the focal point of intrusion as Fidel Castro came to power in the island. After a period of equivocation in 1959-1960, when it was deemed possible to live with the Castro takeover, it became clear that his was a Communist regime that was going to be a threat of increasing concern, and a way was sought to overthrow him. Instead of using the highly appropriate Navy-Marine Corps team, the U.S. embarked on a CIA-managed scheme that led to the disastrous Bay of Pigs debacle in 1961. The Soviets were pleased to have gained so easy a victory, and both they and most of the U.S. allies were astounded that the power of the U.S. was not used to thwart so clear a threat to U.S. security. This evidence of indecision no doubt contributed to the 1962 Khrushchev gambit to attempt to deploy strike aircraft and install nuclear missiles in Cuba. This time, the U.S. Navy was not forced just to stand by, as had been the case in 1961 at the Bay of Pigs, but was effectively used to force a Soviet retreat. It was here that the Soviets learned a lesson: their naval power was far too inadequate to match U.S. naval power, especially so far from the Soviet homeland. Fleet Admiral Sergei Gorshkov had already embarked on a naval expansion program, and the 1962 Cuban Missile Crisis gave those plans a higher imperative, resulting in only a

few year's time in a Soviet blue water naval force able to project Soviet power to all points on the world's seas.

Notable in the Soviet naval deployment pattern have been the penetrations into the Caribbean. Beginning in 1969 a long series of task groups of surface craft, submarines and aircraft deployed into the Caribbean Sea and Gulf of Mexico, including, in some of the groups, ballistic missile submarines.¹ The Soviets built a naval base at Cienfuegos in Cuba, have continued to make naval visits to the area, and have stationed a brigade of troops in Cuba, but they have not maintained a permanent naval squadron there. Soviet aircraft come and go, conducting fairly regular reconnaissance and supply operations. Nevertheless, they have challenged the Monroe Doctrine to the point that they have seen the U.S. acquiesce in a permanent foreign military presence in U.S. "home waters", creating a problem that will not go away unless the U.S. makes some hard decisions to change the situation.

5. Southern Africa

Oil and essential minerals, and especially the trade routes carrying those imports around the Cape of Good Hope, are key issues in policy and strategy considerations regarding the Southern Africa Region. For the U.S., access to critical minerals, such as manganese, cobalt, chrome, vanadium, gold and platinum, is of greater urgency than the transport of oil around the Cape, but for the European allies, both the critical minerals and the oil trade route are key matters. U.S. dependence on Middle East oil is presently low (about 5 percent) but this is predicted inevitably to increase over the next decade, because the Persian Gulf region has the only major known reserve of oil for future world use.

Beyond the issues of trade in oil and minerals is the trend of Soviet infiltration and growing influence in the Southern Africa area. The Soviet Navy is now seen in various island ports in the western half of the India

1 See James L. George, op. cit., pp. 348-359.

Ocean and on the African mainland, e.g., the Seychelles, Mauritius, Mozambique. The U.S. and U.K. abstain from ship visits to the Republic of South Africa because of its racial policies. The consequence of these developments is that there is very little U.S. and free world naval presence along the important trade routes passing by the Cape and for long distances before and after rounding the Cape. The Soviets and their surrogates are in a position, from Angola around to Malagasy, to interfere with the sea lanes should crisis or conflict situations arise that would make it in their interest to do so. Soviet naval presence is facilitated by dissembling; the Soviets, for example, cynically certify that their ships carry no nuclear weapons -- whether they do or not -- while the U.S. sticks to its policy of neither confirming or denying that nuclear weapons are carried. Thus Soviet ships are permitted to make ship visits where U.S. ships are excluded.¹

The drift towards leftist governments in Southern Africa and a more visible and active Soviet presence are ominous for the future, although there are some signs that the trend is not always in the Soviet's favor. In Angola, for example, Jonas Savimbi and his followers who are fighting the Communist regime may yet succeed. A rollback of Communism in this one country would be a psychological setback for Soviet expansionism, signaling to the world that the Soviets' boast that once they take over a country it never reverts to the Western camp again, is no longer based on fact. Soviet support to their proxies in Southern Africa depends upon the men (often Cuban) and materials that travel by sea. Thus the U.S. Navy is again placed in a position of opportunity and responsibility to deny, if U.S. policy so directs, the Soviets the unrestricted use of the sea for expansion of their empire. Protection of U.S. and allied sea lines of communication (SLOCs) is a key element of this broad U.S. naval role.

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The U.S. Navy, the View from the Mid-1980s, op. cit., p. 295.

C. The Role of the Allied Navies Beyond the Year 2000

The future value of the allied navies depends both on the overall strategy which the West adopts and on the nature of the projected Soviet maritime threat. As to the first point, even in the concept of NATO strategy that would involve resisting Soviet conventional pressure and then fairly rapidly accepting nuclear escalation, naval forces designed to assure sea passage between the Old and New worlds are of value. It would be the beginning of a strategy in which NATO is prepared to fight a protracted land war. As an example of the second, to the extent that the Soviet maritime threat consists of substantial numbers of missile-carrying long-range bombers, NATO escorts optimized almost entirely for ASW may not be entirely relevant to the naval problem. These particular issues seem increasingly important.

As a vital parenthetical point, to the extent that NATO naval structure reflects the major scenario of a big NATO-Warsaw Pact conflict, note that it may not be relevant to many lesser, but more probable, kinds of conflict. For example, the NATO nations have shown little interest in supporting U.S. intervention in the Third World. In the past, there have been many proposals for military and even naval specialization within NATO. To what extent should the United States rely on Allies which are allied only within some very limited parameters? This is not so very far from the question of the permanence (and primacy) of NATO within U.S. security calculations.

For that matter, it is not clear that navies built within NATO requirements always meet national needs. The British certainly found that their ASW-oriented fleet barely met the requirements imposed by the Falklands War.¹ The French clearly think so; they could not tolerate

¹ It has been argued, almost certainly correctly, that the further cuts proposed in 1981 (which would perhaps have promoted British ASW) would have made it almost impossible for the British to retake the Falklands. They would have included the disposal of the British VSTOL carriers. Although the carriers were designed for ASW, they retained enough residual flexibility to provide vital anti-air support, and some close (air to ground) support.

abandoning the power projection mission in favor of strong concentration on ASW. As a result, they alone of the European navies retain large-deck carriers.¹

At present, NATO/Japanese wartime naval operations can be broken into a series of categories:

- 1) Forward submarine operations, in which U.S. nuclear attack submarines, probably assisted by British nuclear submarines, operated in or around the Soviet "bastions." No other ally can really help here, as submarines in the North must be quiet nuclear craft.
- 2) Attacks mounted by the NATO Strike Fleet, consisting of U.S. carrier battle groups supported by a British ASW force built around the British VSTOL carrier(s). It is not clear to what extent NATO planners envisage a similar forward strike by the Sixth Fleet carriers, or to what extent, if any, they assume active support by the French or Italian Navies in such an endeavor. The British position appears to be special, in that the royal Navy has a widely appreciated expertise in ASW. Moreover, submarines do not present the same sort of threat in the Mediterranean. There are some indications that the French would expect to operate their carrier force in conjunction with the Sixth Fleet.

1 For a time, of the non-U.S. NATO navies, Canada, Britain, France, and the Netherlands operated small carriers. The Canadians and the Dutch were forced to concentrate largely on ASW, but the British and French operated full strike carriers, although substantially less capable than their U.S. counterparts. The new Italian and Spanish ships are inherently limited, compared to conventional ships, although their Sea Harrier aircraft do provide a limited strike capability. Apart from a very limited helicopter system, no VSTOL carrier has a true airborne early warning system, and so none is likely to be able to engage Soviet bombers at sufficient range to abort any missile attacks they may mount. This is quite apart from the very severe limitations imposed by the Sea Harrier strike fighter itself. It is not clear whether a current U.S.-British Memorandum of Understanding will result in a future supersonic VSTOL fighter, or whether developments in offboard AEW will solve the AEW problem for small carriers.

- 3) ASW barriers, using a combination of U.S. and NATO assets, including many of the NATO diesel-electric submarines. In European waters, barriers would probably be placed across the GIUK Gap and across the Straits of Gibraltar and, possibly, across the Sicilian Narrows. Presumably, this is also the wartime mission of Japanese submarines, blocking the entrances to the Sea of Japan.
- 4) Open-ocean escort of vital convoys by ASW Support Groups, each consisting of several escorts and an underway replenishment ship. Groups of this type exist in the U.S., Canadian, British, and Dutch navies in the Atlantic, and one might read recent Spanish developments as the formation of another such group. In the Pacific, the Japanese have theoretical responsibility for some local escort, and their ships would be suitable for such a mission. The French and Italian navies would be responsible for operations in the Mediterranean. Note that such support groups vary considerably in the extent of their anti-aircraft potential, both for their own protection and for the defense of the ships they are escorting.
- 5) Open-ocean support by ASW patrol aircraft, such as Orions, Atlantics, and Nimrods, which are operated by virtually all the open-ocean Allied navies.
- 6) Mining and anti-ship attack in strategic straits, particularly the Skaggerak/Kattegat around Denmark, the Dardanelles, and the entrances to the Sea of Japan.
- 7) Mine countermeasures to keep vital ports open. The NATO navies currently seem to spend considerably more than the United States on this problem. One reason why is that they are much easier to attack with mines, both air- and surface-laid. For a time, the Belgian Navy specialized entirely in mine countermeasures, although now it also operates four small frigates.
- 8) Anti-invasion (i.e., anti-surface) forces in the Baltic, in Northern Norway, and in the Dardanelles. They include small submarines, fast attack boats, and aircraft armed with anti-ship missiles such as Kormoran (German) and Penguin (Norwegian). It would be particularly important to prevent the Soviets from seizing the Danish Straits and so securing the egress from the Baltic. To a considerable extent, too, a Soviet seizure of Northern Norway would secure the egress of the Northern Fleet. For that matter, Soviet seizure of Norway would provide airfields suitable for the bombardment of Britain, and it would also bring Backfire anti-ship bombers far south.

Although rarely associated with any particular NATO strategy, the combination of NATO naval efforts actually does express a particular set of strategic ideas, closer to those now current in the U.S. Navy than to those usually associated with the NATO position on land. The NATO naval program continues efforts begun almost at the beginning of the Alliance, and so also reflects strategy adopted in the early 'fifties.

Much of the total effort is devoted to ASW, imposing a series of barriers between Soviet submarine bases and the open sea. In the North, for example, Soviet submarines would have to survive the transit through their own home operating areas (patrolled by U.S. and British nuclear submarines), then a series of air, surface, and submarine barriers, then long-range patrol aircraft cued by open-ocean surveillance systems (such as SOSUS), and then finally the support groups actually protecting their targets.¹

As for the other main component of the current Soviet maritime threat, naval aircraft, the Strike Fleet and Sixth Fleet are either to destroy the bombers on the ground, or to engage and destroy them in Outer Air Battles. In any case, the bombers are not to be allowed into potential hunting grounds in the open ocean. Many will argue, too, that to penetrate to the open ocean the bombers must pass within range of numerous land-based interceptors, which will attack them.

Part of the stated logic of the ASW priority is the hope that, given the limited range of existing Soviet naval bombers, convoys can be routed far enough to the south, at least initially, to avoid contact with them. Note that by the end of the decade the Soviet Navy will probably take delivery of longer-range Blackjack bombers, which will have much greater range and which, therefore, may negate the current position.

¹ U.S. policy, moreover, is to use submarines in forward areas to threaten Soviet assets such as strategic submarines, so as to force the Soviets to concentrate their own attack submarines at home for their own ASW defense, and thus to reduce the load on the other Allied ASW assets.

The object of all this naval effort is to destroy existing Soviet threats to free use of Sea Lines of Communication, which are valuable because they permit NATO to keep fighting: first, because it becomes possible to reinforce the forces at the front, and second, because the NATO countries require resources from overseas if they are to continue to function effectively.

As a corollary, the quick destruction or neutralization of Soviet naval forces would free NATO offensive naval forces (largely U.S.) to operate on the flanks of the Warsaw Pact. For example, should a Warsaw Pact offensive be stalled in Western Europe, a U.S. descent behind its seaward flank might force the soviets to pull back.¹ This possibility is conditional because such an operation would be risky, and therefore would be practical only if the Soviet naval threat had been very considerably drawn down.

In a larger sense, then, the current structure of the NATO navies is designed to support a protracted ground war in Europe, a war which by its nature would have to be non-nuclear. One might reasonably argue that, with improvements in the Soviet nuclear arsenal, the current NATO declaratory posture, which relies on the threat of nuclear escalation to deter hostilities, is less and less credible. As a consequence, NATO is more likely to have to face the real prospect that war, if it comes, will be protracted.

There is apparently considerable evidence that the Soviets no longer expect a European war to escalate to a nuclear exchange. They of course hope to win rapidly, and the NATO naval posture would really begin to count only if the war lasted beyond the initial week or two.

¹ Provided the NATO side had not previously mined the approaches to the flank.

Thus, the naval factor can play an important role in the deterrence of war. If it is understood by both sides that if a NATO area war goes beyond the "short war" of two weeks or so, the naval factor will begin to influence the outcome, and consciousness of this reality can deter the aggressor from the outset. That is, if the aggressor cannot be certain of engaging only in the short war that he hopes will bring him victory, he must face up to the prospect of losing if the naval factor that begins to operate after two weeks is weighted in his enemy's favor. Thus, planners on both sides must ask these questions: "What if the war is not short?" "Should we attack if we cannot prevent prolongation of the war?" "Can we win a prolonged war?"

What of the future? The Soviets are likely to continue to present a maritime threat consisting largely of aircraft and submarines. The Soviet surface fleet will be important in the Baltic (on the flanks of the NATO army) and in any attempt to seize the strategic straits or Northern Norway, but it is not likely to grow to such proportions as to make the current concentration on ASW and AAW obsolete.

What may well happen will be an increased AAW burden. Relatively few Soviet submarines (Charlies carry short-range self-targeted weapons; Echoes, Julietts, and Oscars carry longer-range weapons requiring external assistance) currently carry anti-ship missiles, so that the threat to sea lines of communication is still, at this writing, largely a matter of submarine torpedoes. Most NATO frigates, outside the U.S. Navy, have only the most limited forms of AAW defense, and it is almost universally limited to self-defense.

However, the current generation of new Soviet submarines is equipped with a large-diameter (65-centimeter) torpedo tube. Current weapons which it can fire are probably a strategic cruise missile (SS-N-21), a big torpedo, and a long-range anti-submarine missile (SS-N-16). It is entirely possible that, given Soviet predilections for large warheads and high speed, it could fire some future (as yet unannounced) anti-ship missile, comparable tactically with Sub-Harpoon and Sub-Exocet. In that case, the

open-ocean AAW threat to shipping could increase dramatically. Note that this threat would not really be affected by Strike Fleet type operations, except in that the most efficient Soviet attack submarines would surely be used against the Strike Fleet, and might be sunk in that operation.

Some new NATO escorts, then, do show increased AAW capability, examples including the British Type 23 and the rebuilt Canadian "Tribal." However, effective AAW is quite expensive. It is not clear to what extent the projected NATO frigate (NFR-90) will be designed for a powerful AAW battery. If a system derived from Aegis were available it imply a large and relatively expensive ship. France has proposed a point-defense weapon, arguing that future anti-ship missiles will be so fast that long range (i.e., area air defense) will be irrelevant. For a time the official NATO position seems to have been that any new defensive missile would, at best, protect only the firing ship and the one or two nearest other ships; the weapon was tentatively called the Local Area Missile (LAM).

As for the structure of the Soviet threat, much depends upon what Mr. Gorbachev does. He needs a great deal of money with which to modernize Soviet industry, and the military, particularly the Soviet Navy, would be a convenient source of that cash. His navy is just now introducing a generation of very quiet attack submarines, particularly Sierra and Akula; it can be argued that NATO will require a very heavy investment to counter them effectively. If Soviet naval investment is drastically reduced, then the proportion of the naval threat which the new submarines represent may be extremely small over the next one or even two Five Year Plans, which may have effects extending as far as the late 1990's.¹

On the other hand, Gorbachev may find it more difficult to slash new aircraft production. Aircraft still cost substantially less than ships, and they are easier to maintain, with fewer people. Thus one might imagine

¹ Note that these are also among the few classes with 65-centimeter torpedo tubes. The others are later Victors and, probably, Oscars and Typhoons. The position of the new Mike class is uncertain.

a shift in the balance between the Soviet submarine force and Soviet Naval Aviation to the advantage of the latter. If Blackjacks are indeed introduced, then the open-ocean AAW threat might well intensify.

Another interesting possibility would be a shift in Soviet naval doctrine. At present, the Soviets regard their ballistic missile submarines as their most valuable naval asset, and they spend much of their money protecting that asset. Protection includes the assignment of numerous attack submarines which might otherwise be used against sea lanes of communication.¹ It might be argued that, if their basic policy shifted towards acceptance of protracted war in Europe, the Soviets would also find themselves more concerned with cutting the NATO sea lines of communication which ensured that the war was in fact costly and protracted.

The counter-argument is that the Soviets consider preservation (or improvement) of the strategic nuclear balance essential to overall success in the war -- essential, indeed, to preventing the West from attempting some war-winning strategic attack. To the extent, then, that the United States can threaten the Soviet SSBNs, it seems unlikely that the Soviets will lightly release the forces assigned to protect them. The Soviets could try to pull their SSBNs back into their ports (arguing that the overall nuclear balance would preclude any quick nuclear attack on them). However, the United States has special naval attack forces (SEALs) which seem well designed to penetrate just such bases. The SEALs could be developed and exercised to emphasize this threat, just as Arctic capability has been emphasized in recent years to deny the Soviets a sanctuary they would not have to defend.

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Similarly, the Soviets seem to emphasize attacks on Western strategic submarines. To the extent that those submarines really can survive without a bastion-type defense, one might argue that they soak up potential Soviet anti-ship resources. One might argue further that, in a protracted war, the Soviets would attempt to attack Western SSBNs at their bases, to which they would have to return to replenish. Presumably they would then be exposed to ASW forces, and the defense of these bases could exact useful attrition.

From the NATO point of view, a much more important question is the future balance between land/air threat and the maritime threat. Gorbachev faces crises both in money and in demographics. He needs money for industrial modernization, and possibly for accelerating the Soviet version of SDI. The last time the Soviets found themselves in this type of pinch, under Khrushchev, they slashed conventional ground and naval forces, relying (for a time at least) increasingly on nuclear deterrence. This time the deterrent may be devalued in part by the emergence of the U.S. SDI.¹

Thus if the Soviets continue toward assuming that war on the Continent will be non-nuclear, they will probably cut their navy to pay for continued strength on the ground. The cut might be in force levels, but more probably, at least at first, it will be in time spent at sea, and thus will hardly be perceptible, at least, on a public level. What the public will see will be a continuing modernization of Soviet ground forces.

Alternatively, there may be more emphasis on nuclear weapons relative to conventional ones (an emphasis which need not preclude conclusion of a limited arms reduction treaty). It is not clear how Europeans would react to such an emphasis, particularly if the United States had de-coupled by withdrawing its Euro-strategic weapons. Certainly such an emphasis should increase British and French determination to maintain national deterrent forces.

At present, the Royal Navy is probably the most sophisticated in Europe. The French are catching up or passing in numbers, but much of their equipment is less sophisticated and perhaps unacceptable for use in a major war. The Italians and the Dutch probably occupy the next place, closely followed by the Spanish. Of all of these countries, the Spanish possess the least advanced industrial base. However, at least as of three

¹ Khrushchev's reaction would have been to deny the viability of the U.S. defensive system, on the theory that no one would have had the nerve to call his bluff.

years ago, the Spanish government has tried to develop that base by means of the international arms trade, and it may be significant that Spain has very strong current (and historical) ties to the Middle East, which will probably revive as a major market.

As for trends, the Royal Navy is in long-term decline, as the British economy has not grown very rapidly. For example, Britain has probably been the major net loser in the Common Market, yet no serious British politician has tried to withdraw, in hopes that somehow the situation will reverse. This general shrinking of resources presents the British government with a terrible dilemma: more and more there is pressure to cut away an entire sector of defense. However, so much has been cut in the past that the current choices are extremely unpleasant. One of them would be the elimination (by attrition) of the surface component of the Royal Navy, in favor of maritime patrol aircraft and submarines.¹

At present, Western Europe is in a prolonged recession, in that it has been unable to create enough new jobs to absorb the large number of youths reaching employment age each month. Possible reasons include rigid employment laws (discouraging the formation of new businesses), some business slowness in applying electronically-based technology (particularly in France and Germany), and a fragmentation of resources within Europe on national lines. The Common Market seems more protectionist than integrationist, with the result that its agricultural policy is sopping up considerable amounts of money which might otherwise go into growth.

¹ This was actually proposed by then Defense Minister Nott in 1981; the surface Navy was saved by the Falklands. The main sectors are: (1) the nuclear deterrent; (2) the RAF (now largely tactical in character); (3) the British Army of the Rhine; (4) the surface Navy; and, (5) the ASW (submarine/maritime patrol aircraft) force. (1) and (3) are the embodiment of British status as a Great Power. In the past, the RAF has had great political success. There is probably a lot of infrastructure still to cut, but that is difficult as it adds to unemployment in a weak economy. It is often argued by British academics that to continue all-round cuts merely leaves totally worthless forces. However, there is no indication now that the British government is willing to accept this rather drastic prescription.

These trends do not make for optimism about the economic future of Western Europe. Actually, if one compares the present European economy with that when Europe was the seat of empire, the present and past are not much different. However, politically, there is an underlying resentment that Europe is no longer the center of the world, and European governments (with the notable exceptions of Britain and France) seem unwilling to involve themselves out-of-area. Moreover, given their own perceived poverty, they have shown strong determination to dissuade the United States from security involvement outside Western Europe: to them, NATO is the world, and the Central Front is central in every way.

Western Europe is not in danger of economic collapse. However, given its self-perception of poverty, it is not likely to believe itself rich enough to provide sufficient forces for its own continental defense, let alone the defense of the seas around Europe. It is easy to imagine pressure in every country to concentrate on domestic "essentials," including large-scale welfare programs in most countries. What they are varies from country to country, but conventional naval forces would then tend not to figure high on national priority lists.

What does it all mean for the United States? Projections into the 'nineties and beyond are not reassuring for a strong European response in a NATO-Warsaw Pact war. To the extent that the Far East becomes a more important trading partner than Western Europe, the future focus of U.S. military power may well be in that direction. Moreover, it seems much more likely that the United States will become embroiled in the Third World than in a major war.

Currently, U.S. naval strategy seems well designed to justify forces which can be used effectively either in the Third World or in a major NATO-Warsaw Pact conflict, with or without the participation of the allied navies. It seems unlikely that the United States will succeed in convincing the NATO Europeans, except perhaps the British and French, to operate out-of-area, particularly in support of U.S. aims. Whether or not Europeans will invest in a new generation of highly sophisticated,

expensive surface ships to replace today's fleets cannot be forecast with assurance, but it will by that time be a question that they must face from the reality of their self-preservation. Alliances are a two-way street.

The U.S. must face the prospect that the future of the allied navies may be bleak. Japan may in time build a fleet sufficient to protect its own sea lanes, at least out to the 1000 miles they have agreed to be their responsibility. There is another possibility, but it is far off: the rising economies of South America, particularly that of Brazil, may support a new generation of allied navies. Brazil has shown special interest in Africa, and it can be argued that Africa will be an important venue of conflict in the next century. The same might conceivably be said for some of the South Asian navies, although their position is far less favorable.¹

The irony of the allied naval future prospects is that it is more the lack of political will than economic or technical shortcomings that stands in the way of an adequate back-up for the U.S. world peacekeeping role. A drift into neutrality or even accommodation to a perceived Soviet dominant global power position may be the trend facing the U.S. Yet, the U.S. need not lamely accept such a prospect. By maintaining a strong and credible global position of its own, and by getting U.S. grand strategy in hand, projecting a consistent and firm posture to both allies and adversaries, there is a real possibility that the allies may be moved to emulate the U.S. image of strength.

¹ There is another bleak possibility. The United States may well become militarily involved in Central America, and it seems unlikely that the Europeans will provide support of any kind, material or moral. Ironically, Central America is important partly because so much of any U.S. reinforcement for NATO would have to come out of the Mississippi and through the Gulf of Mexico, past Cuba; or out of the West Coast and through the Panama Canal. Similarly, it seems difficult to explain to Europeans that the security of trans-Pacific sea lines of communication affects them, because so much of the Western industrial base now lies in the Far East.

VI LOW-INTENSITY CONFLICT IN THE FUTURE

A. General

Low-intensity conflict (LIC) is not something new; it is, rather, something old with a new name. The terminology is not ideal nor universally agreed upon. This category of conflict includes types that actually would be high-intensity, at least for one of the adversaries. But the term necessarily was adopted to describe a part of the conflict spectrum that does not fit the usual practice of dividing conflict or warfare into two categories: nuclear or conventional.

The Secretary of Defense has stated the necessity for designating LIC as a category as follows:

While terrorism, subversion and insurgency are as ancient as conflict itself, the growing intensity with which they are pursued by our adversaries in the post-World War II era requires a commensurate increase in the attention we devote to them. Indeed, these forums of ambiguous aggression have become so widespread that they have¹ become the 'warfare of choice' over the last 40 years.

Although the superpowers and other major powers are almost always involved, either directly or indirectly in LIC, the conflict is not directly between the superpowers nor in places where major wars traditionally have been fought. As Donald M. Snow describes the phenomenon which has arisen in the nuclear age:

Something of a paradox has emerged. In regions of vital interest such as Europe, one cannot fight for fear of starting a nuclear war. But in other parts of the world where interests are not vital--are therefore

¹ SECDEF Annual Report, FY1988, op. cit., pp. 56-57.

not worth fighting over--confrontation is¹ permissible because it does not raise the same specter.

It is clear that deterrence of nuclear war has worked for over 40 years, but that LIC has not been deterred. Neither is LIC likely to be deterred in any broad or general way, because the conditions--the political, economic, military, technological, psychological, social root causes--which have led and seem likely to continue to lead to LIC, are so basic and so pervasive around the world that in no way can they be dealt with effectively enough to prevent all conflict. The decline of empire and the rise of a heterogeneous array of states usually placed in the category of the Third World have created a threatening and frustrating arena for violence, and all this took place in a period when the United States was thrust into the global role of defender of freedom. In the same period the Soviet Union moved into the role of chief adversary of those nations that were or aspired to be free, independent and self-governing. This inherited leadership role has caused the U.S. to intervene in places and situations where LIC was occurring or about to occur, and the results of intervention have been mixed, at best. Decisions regarding future interventions must take account of many factors, but certainly the Soviet approach to LIC.

B. Low-Intensity Conflict in Soviet Strategy

Soviet conduct of low-intensity conflicts under the banner of "wars of national liberation" will be a persistent threat against the interests of the United States and its allies in the decades ahead. It has become increasingly clear in recent years (since about 1960) that the Soviet Union sees the Third World as an arena where Soviet interests could be furthered, at the expense of the West. Alvin Rubinstein describes this strategic development as follows:

Soviet intervention in the Third World is a new phenomenon, an outgrowth of two striking changes in

¹ Donald M. Snow, United States - National Security, (New York, St. Martin's Press, 1987) p. x.

Soviet foreign policy since the death of Stalin: the capacity to project power for the first time in Russian and Soviet history into areas lying far beyond the immediate confines of the U.S.S.R.; and the emergence of the Soviet Union as a credible nuclear superpower. These changes mark the shift of post-Stalin Soviet foreign policy from a continental-based strategy to a global one.¹

In its support of "wars of national liberation" the Soviets use many tools: military presence, deception, disinformation, duplicitous diplomacy, terrorism, agitation and propaganda, training of cadres and the supplying of arms. With regard to the latter, the pattern of arms deliveries to the Third World is indicative of the degrees of Soviet interest in extending its influence into the various world regions, as shown in the following table:

MAJOR SOVIET EQUIPMENT DELIVERED TO THE THIRD WORLD 1981-1986*

	Near East and South Asia	Sub-Saharan Africa	Latin America	East Asia and Pacific	Total
Tanks/Self-propelled Guns	3,720	585	500	660	5,465
Light Armor	6,975	1,050	200	660	8,885
Artillery	3,350	1,825	800	530	6,505
Major Surface Combatants	22	4	4	4	34
Minor Surface Combatants	28	18	39	37	122
Submarines	9	0	1	0	10
Missile Attack Boats	10	8	6	2	26
Supersonic Aircraft	1,060	325	110	210	1,705
Subsonic Aircraft	110	5	0	5	120
Helicopters	635	185	130	75	1,025
Other Combat Aircraft	235	70	50	90	445
Surface-to-Air Missiles	11,300	2,300	1,300	375	15,275

*

Revised to reflect current information.

Source: Soviet Military Power, 1987, Department of Defense, p. 134.

¹

Alvin Z. Rubinstein, "Soviet Intervention in the Third World", in Military Intervention in the Third World, op. cit., p. 19.

The Soviets have had a string of successes in Third World intervention: Cuba in 1959-1960, Angola in 1975, Ethiopia in 1977, Vietnam (and the Cambodian invasion) in 1978, and Afghanistan in 1979. They have also suffered some setbacks, e.g., Egypt in 1972 and Somalia in 1977, but they press on. The Soviet methodology of intervention is described in a recent book, The Red Orchestra:

The consolidation of Leninist regimes in various parts of the world has, as a necessary condition, deliberate and coordinated action by Moscow. In practice, this means that internal causes serve as the vehicles and, sometimes, as the rationalization for the application of external influence and intervention by the Soviet Union. Such intervention is also designed to prevent reversion to a non-Leninist condition. The Soviet record in this regard is impressive. Without Soviet influence there would be some degree of turmoil in the world; with Soviet influence and intervention the degree is enormously increased.

There are nine principal instruments of influence employed by the Soviet government:

1. Conventional Soviet diplomatic activity, including the use of Soviet diplomatic personnel for overt and covert objectives.
2. Coordinated political action carried out by, for example, Communist parties, front organizations, and covert political operations.
3. Propaganda activities employing all forms of the media; again, covert media activities are important.
4. Intelligence gathering, analysis, dissemination, and operations; counterintelligence activities including active measures designed to manipulate and deceive.
5. Provision of internal security services for local regimes, together with military and non-military advisers and experts.
6. The transfer of arms and related supplies and maintenance capability.
7. The transfer of resources in the form of goods in kind (for example, oil), as well as cash and credit.

8. External combat forces from non-Soviet sources (such as Cuba, North Korea, Vietnam or Libya), and, less frequently, from the Soviet Union itself.
9. The admixture of instruments used in particular cases varies widely. It seems to be determined by local needs and constraints, attentiveness to possible reactions, and countermoves by adversaries.

An indication of the kind of regime that the Soviets try to install in their Third World target countries can be found in one of the analyses of the Grenada incident. The following excerpt is from the Introduction to The Grenada Papers.²

The New Jewel Movement and the People's Revolutionary Government of Grenada, which it created in 1979, were experiments cut short by an American invasion. What makes these papers from Grenada doubly valuable is that they permit us intimately to witness both the dynamics of a Marxist-Leninist regime in the early stages of its consolidation and its emerging relation to broader configurations of political power in the Communist world. It is now apparent that until 1983, when the New Jewel Movement suddenly exploded from "internal contradictions," the regime was bent upon imposing comprehensive totalitarian controls upon the people of Grenada by methods meticulously copied from its mentors in long-established Communist states--the USSR, Cuba, Vietnam, and East Germany in particular.

There is no doubt but that the measures described above have been successful in furthering Soviet objectives. At the same time, the Soviets have paid a high price for their expansionism. From a financial perspective, Cuba alone costs the Kremlin an estimated \$4-5 billion per year. According to Charles Wolf and his Rand associates, the cost of Soviet Third

¹ Hoover Institution Press, Stanford University, 1986, edited by Dennis L. Bark.

² ISC Press, San Francisco, CA, 1984, edited by Paul Seabury and Walter A. McDougall.

World policy has more than doubled during the decade of the 1970s, and by the 1980s had reached between \$35 and \$46 billion.¹

A second kind of expense has to do with maintaining a number of weak regimes in power. In Afghanistan, this has necessitated the deployment of over 100,000 Soviet troops to check the mujahadin, with serious morale-related implications for the Kremlin Politburo to consider.

The political and economic performance of a number of new pro-Soviet Marxist-Leninist regimes has been disastrous. Economically, South Yemen, Mozambique, and particularly Ethiopia have managed to destroy what ranged from adequate to healthy agricultural production. Narrow factionalism among indigenous supporters of Moscow is notorious. For example, in 1986 a Mafia-style shootout took place in the Politburo of the Yemen Socialist Party.

Nevertheless, it is unrealistic to expect that the new Soviet leadership will discontinue its support of regimes like Angola, Afghanistan, Ethiopia, Nicaragua, and South Yemen. No Soviet leader can afford the image of someone who presides over the disintegration of the Soviet empire. In fact, since Gorbachev's takeover of power, major offensives have been initiated against insurgents in Angola and Afghanistan, and Nicaragua continues to receive substantial arms shipments.

With respect to revolutionary insurgent movements not yet in power, Moscow will probably try to maintain at least the status quo. Those organizations already receiving Soviet assistance will continue to be sustained at the present level. Whenever attractive opportunity presents itself for another takeover, it is unlikely that the Politburo would refuse, even though it would increase its commitments. Soviet expansionism is an enduring motivation.

¹ Charles Wolf et. al., The Costs of the Soviet Empire (Santa Monica, CA: The Rand Corporation, 1983), p. 19.

With the prospect that low-intensity conflict will be a major threat to U.S. interests now and in the future, it should be analyzed as thoroughly as nuclear strategy and conventional warfare. The U.S. Navy/Marine Corps team, which most likely will have the prime military role in executing a national strategy for dealing with low intensity conflicts, should take the intellectual lead in analyzing and designing counters to this persistent threat.

C. Low-Intensity Conflict in U.S. Policy

1. The Concept

In recent years, U.S. political leaders and military planners have become increasingly preoccupied with low intensity conflict (LIC). The concept of low intensity conflict is essentially a residual category, covering all those forms of political violence and military action less intense than modern conventional warfare. Major examples include coercive diplomacy, terrorism/counterterrorism, insurgency/counterinsurgency, and special operations outside the context of conventional war.

Because it covers a diverse assortment of activities, some of which are not overtly violent and many of which fall outside the traditional definition of war, the concept of low intensity conflict is somewhat ambiguous. That quality is readily apparent in the Joint Chiefs' agreed definition of LIC:

Low intensity conflict is a limited politico-military struggle to achieve political, social, economic, or psychological objectives. It is often protracted and ranges from diplomatic, economic, and psychosocial pressures through terrorism and insurgency. Low intensity conflict is generally confined to a geographic area and is often characterized by constraints on the weaponry, tactics, and level of violence.¹

¹ Joint Low-Intensity Conflict Project Final Report, Executive Summary, U.S. Army Training and Doctrine Command, Fort Monroe, Virginia: 1 August 1986, p.3.

The above definition has been widely criticized. One observer, for example, complained that "it is so broad and encompassing that it is almost meaningless."¹ The problem, however, lies less with the definition than with the concept itself: it is a catchall category in which the various elements are included not because of what they are, but because of what they aren't -- conventional or nuclear war.

In his fiscal 1988-89 Report to Congress, Chief of Naval Operations Admiral C. A. H. Trost implied some skepticism about the concept, remarking that "while scholars have only lately become aware of the concept of 'low intensity conflict', the Navy and Marine Corps have been operating in this arena since President Jefferson dispatched the fleet to deal with the Barbary pirates in 1802."² Trost went on to note that the spread of sophisticated weaponry in the developing world has made the phrase "low intensity" a rather dubious description of third world conflict: "To the scholar this may be low intensity conflict, but to forces on the scene, these operations are dangerous and intense."³ The surviving crew members of the U.S.S. Stark would undoubtedly agree.

Ambiguous as it is, the phrase "low intensity conflict" has entered the vernacular of contemporary political debate and will probably remain in official usage for some time to come. In the Department of Defense Reorganization Act of 1986, Congress mandated creation of an "Assistant Secretary of Defense for Special Operations and Low Intensity Conflict."⁴

¹ Maj. Mitchell M. Zais, "Low Intensity Conflict: Matching Missions and Forces," Military Review, August 1986, p.79.

² Admiral C. A. H. Trost, Chief of Naval Operations, Report to Congress on the Posture and Fiscal Year 1988-1989 Budget of the United States Navy, Department of Defense, Washington: 1987, p.22.

³ Ibid., p.23.

⁴ Secretary of Defense Caspar Weinberger, Report to Congress on Special Operations Reorganization, Department of Defense, Washington: 1987, pp.1-4.

Budget presentations and planning documents are increasingly permeated by the terminology of low intensity conflict. For better or worse, LIC is now commonly perceived as an important "mission" that the armed services should prepare for more thoroughly.

The purpose of this section is to explore the Navy's role in future low intensity conflicts, with particular emphasis on force requirements and contingency plans. The section attempts to answer three key questions:

1. What are the specific characteristics of low intensity conflicts that differentiate them from other military contingencies?
2. What kinds of low intensity contingencies are most likely to arise in the coming years, and to what degree will naval forces be required to deal with them?
3. Are the Navy's current capabilities for dealing with low intensity conflict adequate and, if not, how should they be augmented?

2. The Nature of Low Intensity Conflict

The diversity of activities subsumed under the rubric of low intensity conflict makes it difficult to generalize about the concept. According to Edward N. Luttwak,

Low intensity wars are all different, and each requires an ad hoc set of operating procedures. It follows that a primary task for the officers of the dedicated body is to develop one-place/one-time adaptive doctrines and methods.¹

However, there are several distinguishing characteristics that apply to most forms of LIC. First of all, political considerations tend to

¹ Edward N. Luttwak, "Notes on Low Intensity Conflict," in William A. Buckingham, Jr., editor, Defense Planning for the 1990s: The Tenth National Security Affairs Conference, National Defense University Press, Washington: 1984, p.206.

predominate over purely military factors. Luttwak notes that "in low intensity wars victory is normally obtained by altering the political variables to the point where the enemy becomes ineffectual, and not by actually defeating enemies in battles."¹ This clearly applies to most successful counter-terrorist and counterinsurgency campaigns. Conflicts that have escalated to the degree where two or more adversaries confront each other in decisive battle usually take on the character of conventional warfare, rather than low intensity conflict.

Because political factors largely determine outcomes in low intensity conflict, a preponderance of firepower is not in itself an assurance of victory. However, strong firepower, delivered on target with precision, can be effective, and in the case of coercive diplomacy, even the threat of overwhelming firepower may significantly change an adversary's behavior.² In the cases of counter-terrorism and counterinsurgency, heavy use of firepower can be undesirable, especially if not delivered highly accurately, on well-identified targets, because the enemy may be too elusive to target and efforts to retaliate may tend to legitimize terrorist or insurgent claims about the brutality of the defensive forces.

A characteristic common to most forms of low intensity conflict is their amorphous quality. Unlike conventional warfare where friendly, enemy, contested, and neutral territory are all fairly well demarcated, most low intensity conflicts proceed in the absence of clearly identified front lines and rear areas. Indeed, terrorists and insurgents depend upon this amorphous setting to hide them from the usually superior firepower of their adversaries. Coercive diplomacy is again an exception, since the capacity to coerce an adversary through military threats depends on being able to fix the adversary's location, or at least the location of targetable assets important to the adversary.

¹ Ibid., p.206.

² For a discussion of coercive diplomacy, see Thomas C. Schelling, Arms and Influence, Yale University Press, New Haven: 1966, pp.1-34.

The primacy of politics in warfare lies at the heart of Clausewitz's theory of war. As stated in Chapter IV, all future wars are limited, but it is the escalation potential in the LIC area that gives the defender diplomatic leverage. Diplomacy without the threatened use of force is empty rhetoric. The relationship between diplomacy and war has been analyzed extensively by the great student of Clausewitz, Raymond Aron.¹

The highly politicized, amorphous nature of most low intensity conflicts means that special procedures are required for their successful prosecution. The most important of these are as follows:

1. Victory in most low intensity conflicts will be aided by maintaining or winning the support and approval of the indigenous population.² A political force, whether it be a terrorist movement, revolutionary insurgency, or government in power, requires some degree of popular support for survival. However, in many conflict situations, there is a tendency for the people to shift in the direction of the likely winner.
2. The laws of war seldom operate in low intensity conflict. Terrorists and insurgents will tend to violate them as a matter of course, while defending forces will usually be required to adhere to the more exacting standards of civil law.³
3. Low intensity conflict is generally conducted in conjunction with indigenous civil, police, and military forces.⁴ Because the enemy's forces are scattered among the general population, and the support of that population is critical to victory, local forces must play a major role in the defensive effort.

A final characteristic of low intensity conflict is that it tends to occur in the developing world. Although terrorism is a serious problem

¹ See Aron, Raymond, Peace and War, a Theory of International Relations (Krieger, Malabar, FL, 1981), especially Chapter I, pp. 21-46.

² Lt. Col. Jonathan R. Hensman, "Taking Terrorism, Low-Intensity Conflict, and Special Operations in Context," Marine Corps Gazette, February 1987, p.49.

³ Ibid., p.49.

⁴ Ibid., p.49.

within the western democracies, the government of most industrial nations possess either the popular support or the politico-military means to cope effectively with low intensity threats. As Secretary of Defense Caspar Weinberger notes in his fiscal 1988-89 Annual Report, the same cannot be said of the governments of many developing nations in Asia, Africa, and Latin America:

These new states, in many cases, have encountered economic, political, and social problems that make them ripe for internal upheaval or external exploitation and subversion. The rampant growth in the international arms trade, coupled with the increasing lethality of weapons, have combined to reduce the costs to countries planning to use LIC.¹

The end result, as Weinberger observed in a recent address to a conference on low intensity conflict, is that roughly a quarter of the world's nations are currently involved in some form of strife. The vast majority of these are developing nations combatting terrorist or insurgent movements -- movements that are often supported by the Soviet Union or its surrogates.²

Most of the aforementioned characteristics of low intensity conflict create problems for U.S. political and military leaders, who must formulate policy responses to the challenges posed by LIC. Accustomed as it is to domestic political stability and external conflicts that are well-defined and unambiguous, the United States is ill-equipped to cope with wars fought for limited purposes over protracted periods in amorphous settings. General Paul Gorman of the U.S. Army described the problem of low intensity conflict before the same 1986 conference the Secretary of Defense addressed in these terms:

1 Weinberger, Annual Report, op. cit., p.57.

2 Secretary of Defense Caspar Weinberger, "The Phenomenon of Low-Intensity Warfare," in Proceedings of the Low-Intensity Warfare Conference, 14-15 January 1986, Department of Defense, Washington: 1986.

LIC is inherently a form of warfare repugnant to Americans, a conflict which involves innocents, in which non-combatant casualties may be an explicit object. Its perpetrators are secretive, conspiratorial, and usually morally unconstrained. Their operations are the antithesis of respect for human rights. They can succeed if all they undertake is death and destruction, and yet they can impose on a defending government grave imperatives for restraint, heightened regard for human rights, creative reconstruction and societal reform under stress.¹

For the Navy (and Marine Corps), the problem is that in the higher levels of deterrence, its credibility is high, but naval forces are very likely to be called upon to respond at a level "between the curtain of deterrence and the floor," where its image and reality of preparation and training may not involve the same degree of credibility.

3. Forms of Low Intensity Conflict

Whatever characteristics the various forms of low intensity conflict may have in common are vastly outnumbered by the attributes that differentiate them. The assortment of activities subsumed under the rubric of low intensity conflict is very diverse in order to understand the specific forms of LIC, each must be considered separately and on its own terms.

During late 1985 and early 1986, the Army and Air Force carried out a "Joint Low Intensity Conflict Project" designed to clarify key concepts and requirements for dealing with low intensity threats to U.S. security. Although the Navy did not participate in the project, the findings of the final report will undoubtedly influence the manner in which military planners consider future Navy mission requirements. The report listed four types of low intensity conflict in which the United States is likely to be involved:²

¹ General Paul F. Gorman, "Low-Intensity Conflict: American Dilemma," in Ibid., p.15.

² Joint Low-Intensity Conflict Project Final Report, op. cit., p.4.

1. Peacekeeping, which may be defined as "military operations conducted in support of diplomatic efforts to achieve, restore, or maintain peace in an area of conflict."
2. Terrorism Counteraction, consisting of offensive and defensive measures aimed at mitigating or negating terrorist threats.
3. Insurgency/Counterinsurgency, meaning for the most part foreign internal defense and development (IDAD) of states threatened by guerilla movements.
4. Peacetime Contingency Operations, a broad category including activities such as coercive diplomacy, small-scale wars in the developing world, and most types of special operations outside the context of conventional warfare.

Before examining each of these areas, it is useful to explain the distinction between special operations and low intensity conflict. Low intensity conflicts are forms of political violence and military action less intense than modern conventional warfare. Special operations include most of the tactics and tools that would be applied to the prosecution of low intensity conflicts, but these same assets may also be employed in more intense forms of strife:

Special operations forces (SOF) with unusual, occasionally unique, skills are designed to undertake unorthodox security tasks that ordinary organizations could accomplish only with far greater difficulty and far less effectiveness, if at all. Irregular warfare is their forte, including insurgency/counter-insurgency, transnational terrorism/counterterrorism, associated psychological warfare, and "surgical" strikes deep in enemy territory.

SOF may support conventional, nuclear, chemical, and biological capabilities during high-, mid-, and low-intensity hostilities. Overt, covert, and clandestine operations for deterrent, persuasive, coercive, and war fighting purposes mix force with fraud and finesse at every level of competition.¹

¹ John M. Collins, U.S. and Soviet Special Operations, Congressional Research Service, Library of Congress, Washington: 23 December 1986, p.73.

The term low intensity conflict thus describes a type of setting or environment in which military activities take place,¹ whereas special operations denote certain types of activity considered to be non-traditional or unconventional. There are three basic forms of special operations: (1) direct action, such as assassinations, sabotage, raids, and hostage rescues; (2) indirect action, including subversion psychological operations, military assistance, and economic assistance; and (3) intelligence operations, which cover reconnaissance, surveillance, and target acquisition.²

It is important to recognize that low intensity conflict is not synonymous with special operations. Although some types of special operations are well-suited to the conduct of low intensity conflict, they may be equally useful in conventional conflicts. By the same token, conventional forces and capabilities are often useful in prosecuting low intensity wars. The Chief of Naval Operations alluded to the latter fact in his fiscal 1988-89 Report to Congress:

The same naval forces that deter the Soviets are equally effective through their mobility, flexibility and logistic independence in an international environment marked by low-level, high-probability crisis and conflict situations....Forward, mobile, and able to apply pressure selectively when and where needed, naval forces have acquired the bulk of American experience in dealing with situations located between peace and global war on the spectrum of conflict.³

The difference between low intensity conflict and special operations is one of several important distinctions frequently confused in the literature on LIC. There is also a tendency to confuse the four major types of LIC, even though they are quite different. At this point, it is

¹ Joint Low-Intensity Conflict Project Final Report, op. cit., p.3.

² Collins, op. cit., p.7.

³ Trost, op. cit., p.7.

appropriate to separately discuss each of these four generic forms of low intensity conflict -- peacekeeping, terrorism counteraction, insurgency/counterinsurgency, and peacetime contingency operations.

Peacekeeping

Peacekeeping involves establishing a military presence in a conflicted area to support diplomatic efforts aimed at restoring or preserving peace. Peacekeeping forces generally have three tasks: to provide a buffer between hostile states or factions; to enforce truces and other agreements aimed at averting conflict; and to maintain civil order so that a measure of normalcy may return to the conflicted area.¹ The forces are usually lightly armed and composed of contingents from a number of nations; the contingents are carefully selected and balanced to assure that peacekeeping functions will be conducted in an impartial and non-provocative manner.

Because they are lightly armed and composed of disparate elements, the peacekeeping capacity of such forces is often more symbolic than real. They seldom have war-fighting capabilities comparable to the indigenous forces they are sent to restrain. The success of peacekeeping operations thus frequently depends upon the willingness of indigenous factions to restrain themselves when confronted with outside mediators.

Since the degree of restraint that warring factions exhibit is difficult to gauge and subject to rapid change, peacekeeping can be a dangerous undertaking -- especially in view of the local military superiority indigenous forces usually enjoy. Peacekeeping operations are therefore seldom mounted without a great deal of diplomatic preparation and negotiation aimed at minimizing the possibility of confrontation between the peacekeepers and indigenous forces. Issues such as who shall participate in the peacekeeping force, where it will deploy, how it will be armed, and what measures it may employ must all be resolved to the

¹ Zais, op. cit., p.14.

satisfaction of local factions before the force arrives in the conflicted area.

Clearly, when agreement on such matters can be reached among the warring factions in a conflicted area, there is reason to believe peacekeeping is possible. An example of a successful peacekeeping operation is the multinational military force deployed in the Sinai Desert between Egypt and Israel. The Sinai force was established to monitor compliance with Israeli-Egyptian peace agreements arising out of the 1973 Middle East war, particularly those bearing upon territorial boundaries in the Sinai. The United States is one of several nations contributing forces to the Sinai operation. The diplomatic commitments the United States has provided to Israel and Egypt concerning security and economic assistance have been a powerful factor promoting the success of the Sinai operation; there have been few violations of the peace agreements by either side.

At the opposite end of the spectrum, in terms of degree of success, is the ill-fated multilateral peacemaking force dispatched to Lebanon in 1982 by Britain, France, Italy, and the United States. In the case of the Sinai, foreign forces were charged with enforcing agreements between two states over which one of the peacekeeping powers had considerable influence. In Lebanon, the situation was far more complex, and the prospects for success much less favorable:

The multinational force to which Britain, France and Italy also made contributions, had taken up its positions around Beirut in 1982, with the U.S. Marines defending the exposed international airport on the southern flank. Their position was an unenviable one: unable to move out and control the situation around them, they became the focus of congressional questioning to what their role really was; at the same time, they offered a tempting physical target for the Lebanese Muslim factions. Throughout August and September the American force lost a number of men, as fighting between the Lebanese Army and the Muslim factions raged around their positions; in retaliation U.S. ships bombarded Druze and Shi'a positions in the Chouf Mountains. The peacekeeping force had become part of the war. In the eyes of opponents of Prime Minister Gemayel, the U.S. Marines role was now a strongly partisan one. The result of this change in perception was the brutal terrorist attack on the Marine position at the end of

October [1983], in which 239 Marines were killed in a single kamikaze attack with an explosive-laden truck.¹

In the aftermath of the attack on the Marine barracks and a similar assault against French troops in Beirut, the western powers gradually withdrew their forces from Lebanon. In the process, they further weakened their influence in the region and strengthened the position of anti-western factions in the Lebanese civil war.

The experience of the western powers in Lebanon underscores the inherent danger of all peacekeeping operations. Unless there is willingness on all sides in a conflict to seek cessation of hostilities, peacekeeping cannot be successful. Indeed, when such willingness is lacking, there is grave danger that peacekeeping forces will be drawn into hostilities. It is thus critical that peacekeeping operations not be attempted unless there are preexisting diplomatic agreements among the parties to a conflict that demonstrate their willingness to accept peace. In Lebanon such arrangements were not possible, and the multinational peacekeeping effort consequently ended up exacerbating an already bad situation.

Peacekeeping operations are usually conducted by ground forces. However, peacekeeping functions may also be accomplished by naval forces, for example, when bodies of water are contested or serve as the main corridor of attack between two hostile states. In such circumstances, peacekeeping may appear similar to a show of force or even coercive diplomacy. However, the similarity is more apparent than real. In peacekeeping operations, the foreign force is a neutral, non-threatening entity whose presence is accepted by the local parties to a dispute. Where shows of force or coercive diplomacy take place, the military threat posed by the foreign force is an important consideration in the

¹ Strategic Survey 1983-1984, International Institute for Strategic Studies, London: 1984, p.5.

calculations of local actors, and these actors may vehemently oppose introduction of foreign forces into their area.

Terrorism Counteraction

Terrorism counteraction refers to any measures taken to negate or mitigate the threat posed by terrorists. Until recently, the term "counterterrorism" was used to designate all such measures. However, it is now common in official documents to use the term "antiterrorism" to refer to defensive measures, reserving "counterterrorism" to refer exclusively to offensive measures. Antiterrorism thus consists of all plans, tactics, procedures and tools for reducing the vulnerability of military forces and civil society to terrorist attack. Counterterrorism covers only those active measures undertaken to destroy or disable terrorist forces by directly attacking them. Counterterrorism is usually practiced by specially trained, dedicated forces such as Navy Seal Team Six; antiterrorist methods are practiced throughout the armed forces.¹

Like many concepts in low intensity conflict, terrorism is a fairly new term used to describe a fairly old phenomenon. In essence, it is the employment of random violence and the fear such violence engenders to achieve political ends. The random, seemingly unfocused, quality of the violence is what differentiates terrorism from more organized forms of conflict such as insurgency. Terrorists adopt a strategy of random attacks to compensate for the fact that they are weak and few in number. Their usual goal is to undermine political confidence and stability by causing citizens to question the capacity of the existing order to protect them.

The success of a terrorist campaign depends heavily on mass psychology. Because they are weak, terrorists must seek to elicit a maximum emotional response to relatively low levels of actual violence. The unpredictability and boldness of the random violence terrorists

¹ Zais, op. cit., pp. 16 and 18.

perpetrate heightens fear among target populations that they will become victims, even though the statistical probability of victimization is quite small.

Contrary to widespread belief, terrorism is not a new force in world politics made possible by "increasing global interdependence" or some other factor unique to the late twentieth century. Terrorism in one form or another has occurred sporadically throughout western history, usually in response to some propitious combination of political circumstances, radical beliefs, and available means. For example, between 1894 and 1914, anarchists assassinated six western heads of state, including President McKinley of the United States, President Carnot of France, King Humbert of Italy, Empress Elizabeth of Austria, and two different Premiers of Spain.¹

Despite earlier instances of terrorism, however, it is clear that modern technology has conferred upon terrorists advantages they did not previously enjoy. Electronic mass media in particular enhance the capacity of terrorists to provoke fear on a vast scale with very little effort. This is one reason why the world is currently witnessing a surge in terrorist incidents. In the five years prior to 1984, the number of incidents reported worldwide averaged 500 per year. That number increased to about 600 in 1984, and then increased again to over 800 in 1985. Deaths caused by terrorists more than doubled between 1984 and 1985, rising from 312 in the earlier year to 877 in 1985.²

Horrible as these events were, it is important to note that even in the peak year of 1985, total deaths attributed to terrorism worldwide did not exceed 1,000. This underscores the fact that the tangible security threat posed by most terrorist groups is less important than the psychological impact they have on target populations. Although terrorists

¹ Barbara W. Tuchman, The Proud Tower, Bantam Books, New York: 1967, p. 12.

² Tim Zimmerman, "The American Bombing of Libya: A Success for Coercive Diplomacy?", Survival, May/June 1987, p. 196.

often present their actions as merely the first step in an escalating campaign to overthrow the existing order, they seldom develop the strength to actually seize control of territory or institutions. In the rare instances where they do (e.g., Lebanon), it is usually because there is a preexisting political vacuum created by the absence of effective central government.

Suppressing terrorism usually requires unconventional forces and tactics. What approach is appropriate, however, will be largely determined by the answer to two questions:

1. Is the terrorist organization transnational in character, or are its operations confined to the territory of a single state?
2. Is the terrorist organization self-sustaining, or does receive arms and aid from a foreign government?

When a terrorist movement arises spontaneously within a single state and receives little or no outside aid, it is usually most effectively dealt with by indigenous police and military forces. When the movement is transnational -- i.e., operating across international borders -- but does not appear to be under the sponsorship of a foreign government, cooperative efforts among the police and military forces in each of the affected states seems to work best. The latter approach has been followed with some success by western European governments in suppressing the loosely-knit alliance of terrorist groups such as Direct Action, the Red Brigades, and the Red Army Faction.

When there is evidence that a foreign government is sponsoring terrorism, the type of response called for may be quite different. In particular, it may be desirable to launch conventional attacks against the sponsoring government to force it to stop supporting terrorism. That was the objective of U.S. bombing attacks against Libya in April of 1986. The reasoning behind the attacks was set forth by Defense Secretary Weinberger in his fiscal 1988-89 Annual Report:

When terrorism is sponsored by the leaders of sovereign states as a tool of aggression...it moves beyond the realm of an international police matter to a higher level -- that of international conflict involving state-to-state confrontation. Here the situation differs from individual acts of terrorism, as we saw this past April when we identified Libya as clearly responsible for an act of terrorism against our military personnel in West Berlin. The military operations executed by U.S. forces in response to this act of aggression were conventional in nature...The objective of the Libyan operation was both to strike at terrorist support bases, and to teach the State of Libya that providing terrorist groups with the support necessary to conduct their international campaign of aggression against the United States carries with it a terrible cost.¹

U.S. Navy forces are well-suited to this sort of counter-terrorism, because it utilizes the kind of conventional capabilities for which the Navy is principally designed. Future actions against states sponsoring terrorism will undoubtedly draw upon naval forces, especially carrier-based aviation that can surgically destroy terrorist support facilities. Since the level of violence of most terrorist acts is fairly low, the capacity of the Navy to retaliate against sponsoring states in a proportionate and discriminating manner will be highly valued by decisionmakers seeking politically acceptable responses to terrorism.

It is impossible to predict when, if ever, the United States will again attack states believed to be sponsoring terrorism. It is clear, however, that in most of the plausible scenarios naval units will be the only U.S. forces within striking distance of likely targets. The logistical difficulties encountered by Air Force F-111s in executing their share of the April, 1986 strikes against Libya² underscore the fact that many potential sponsors of terrorism are beyond the reach of U.S. land-based forces. This is especially true in the Middle East, where approximately half of all terrorist incidents have occurred in recent years. Moreover, few nations hosting U.S. overseas military bases will be

¹ Weinberger, Annual Report, op. cit., p.61.

² "U.S. Demonstrates Advanced Weapons Technology in Libya," Aviation Week and Space Technology, April 21, 1986, p.18.

willing to allow their territory to be used for the launching of attacks against other countries. Conventional retaliation against state-sponsored terrorism is therefore likely to remain primarily a Navy mission.

Logistical and political considerations also make it likely that the Navy's special operations forces will be more heavily involved in future counterterrorism efforts than those of the Army and Air Force. Although some Army and Air Force counter-terrorism units are stationed overseas, they are located far from areas where terrorist activity is most common. Elements of Navy Seal Team Six and related special operations units are likely to be able to respond more quickly and effectively to distant terrorism such as the Achille Lauro incident because of the on-going Navy presence in regions with a high incidence of terrorist activity. Even when Army and Air Force units can respond quickly in places like the Middle East, they are likely to operate at a considerable disadvantage compared with seal teams, because of the lack of secure land bases and the greater readiness of seal personnel to utilize fleet capabilities on the scene.

Insurgency/Counterinsurgency

Insurgency, also known as revolutionary warfare, involves "extended, organized efforts by disaffected parts of a population to overthrow established order, seize political power by subversive and coercive means, and sometimes alter the existing social system."¹ Counterinsurgency is the use of a broad range of tools and tactics to combat insurgency. Depending on the degree of intensity an insurgency has reached, counterinsurgent efforts may include economic assistance, military assistance, psychological operations, unconventional warfare, or conventional weapons and tactics.

Insurgencies typically develop in three stages, the first being latent or incipient revolution. In this stage, insurgents clarify

¹ Collins, op. cit., p.43.

doctrine, command relationships, and objectives while gradually building support within disaffected elements of the population. Insurgent violence at this stage tends to be minor and symbolic, such as terrorist attacks against government buildings and assassinations of representatives of central authority.¹

If the insurgency progresses beyond this stage -- many do not -- it enters the stage known as guerilla warfare. Guerilla movements are usually characterized by elaborate organization, substantial popular support, and an ability to deny existing authority control over territory for extended periods. Guerilla warfare tends to be protracted and episodic, aimed at wearing down a government's capacity to resist while consolidating control of the rural countryside and population.

In the final stage of insurgency, often referred to as "war of movement", guerilla forces are sufficiently strong to challenge the government for control of key provinces and population centers.² Combat at this stage may often be of a predominantly conventional character, with both sides employing massed firepower and large troop formations. Insurgencies that have developed into wars of movement are almost always won by the insurgents.

The optimum methods for combatting insurgency will be determined primarily by which stage of intensity they have reached. In the incipient or latent stage, the most effective approach to counterinsurgency is economic and civil assistance aimed at eroding the popular base for revolution. At the guerilla stage, economic and civil assistance must be augmented by military action utilizing special counterinsurgent tactics and training. In the final stage, counterinsurgency may differ little from conventional warfare.

¹ Zais, op. cit., p.16.

² Ibid., p.19.

Current U.S. policy for dealing with insurgencies was developed during the Vietnam War. The essence of that policy, articulated in the Nixon Doctrine of 1969, is that the United States will provide economic and military aid to friendly governments threatened by insurgency but will only rarely send forces to fight:

Experience has shown that the best means of dealing with insurgencies is to preempt them through economic development and social reform and to control them with police, para-military and military action by the threatened government....[A] direct combat role for U.S. general purpose forces arises primarily when insurgency has shaded into external aggression.¹

American reluctance to provide forces for counterinsurgency is clearly a response to the experience in Vietnam. Nonetheless, the Nixon Doctrine correctly recognizes that insurgencies can seldom be successfully suppressed by non-indigenous forces. If a local government lacks the ability to cope with insurgency when given the resources to do so, that is a sure sign that the future belongs to the insurgents. As Secretary Weinberger notes in his fiscal 1988-89 Annual Report, "the deterioration of the host country's situation that could result in a call for U.S. troops is, in itself, an indication that the regime is not making progress in enacting needed reforms."² Injecting U.S. forces into such a situation would probably be a serious mistake.

A key dilemma for the United States in coping with threats posed to its security by foreign insurgencies is the issue of Soviet involvement. General Paul F. Gorman has correctly observed that "attempts to link the Soviets to all low intensity conflict are founded in misapprehension."³ However, it is a demonstrable fact that since World War Two, the USSR has

¹ Richard M. Nixon, U.S. Foreign Policy for the 1970s: A New Strategy for Peace, A Report to Congress, Washington: February 18, 1970, p.127.

² Weinberger, Annual Report, op. cit., p.59.

³ Gorman, op. cit., p.19.

directly assisted anti-western insurgencies in at least seventeen countries. In addition, the Soviets have used surrogates such as Cuba and Libya to foment insurgencies throughout the Third World. Cuba alone has aided pro-Soviet insurgencies in Angola, Bolivia, Columbia, El Salvador, Ethiopia, Guatemala, Mozambique, Namibia, Nicaragua, Uruguay, and Venezuela. Largely as a result of eastern bloc aid, four of these countries are now controlled by pro-Soviet regimes.¹

Although the American preference that indigenous troops combat insurgents is strong and sensible, the problem of Soviet and Soviet surrogate support for "wars of national liberation" cannot be ignored. It is therefore likely that in addition to providing aid and training, the United States in the future will on occasion use special or conventional forces to directly intervene in revolutionary wars. Such interventions will generally be mounted only when it can be demonstrated that insurgents are being actively assisted by the Soviet Union or its surrogates.

Direct attacks against countries supporting insurgency, similar to the raid against Libya in retaliation for supporting terrorism, may occur in the future. However, most of the nations presently assisting Third World insurgencies are allies of the Soviet Union, and this substantially increases the dangers in attacking them. The United States is not likely to risk a direct military confrontation with the USSR over Eastern bloc aid to insurgencies, although there will be cases when it should, because the potential losses in such a confrontation may exceed the potential gains.

The Reagan presidency has produced one innovation in the area of insurgency/counterinsurgency that is likely to continue to be applied in the future: covert support for anti-Soviet insurgencies in the developing world. During most of the postwar period, the USSR has promoted revolutionary violence in the Third World while the United States has assisted counterinsurgency campaigns. In the 1980s, though, the United

¹ Collins, *op. cit.*, p.44.

States has provided weapons and training to anti-Soviet guerillas in Afghanistan, Angola, Cambodia, and Nicaragua. It may also be providing low-level support to incipient revolutions in several other Soviet client states.¹

Most of the insurgents supported by the United States are resistance fighters -- opponents of Soviet-supported revolutions. Nonetheless, it is noteworthy that the present administration has adopted tactics previously employed only by the Soviet Union on its surrogates. The low cost and low visibility of these tactics suggest that they will continue to be employed by future administrations, at least occasionally.

However, the role of the Navy in combatting or assisting foreign insurgency is likely to remain minor. Responsibility for training and equipping friendly counterinsurgency forces will continue to reside primarily with the Army, which is usually better suited to the mission. Considering the political controversy that often surrounds such efforts, that is probably to the Navy's advantage. In any event, it seems unlikely the Navy will need to give substantially greater attention to insurgency/counterinsurgency in its future war plans and force posture.

On the other hand, Navy conventional capabilities will continue to be used where appropriate in support of insurgent/counterinsurgent activities. In particular, the Navy's ability to blockade ports and interdict arms shipments may at times be important in suppressing externally-supported revolutionary movement or punishing regimes guilty of such support. The next chapter of this study provides a case study of how such capabilities might be applied in Central America.

¹ Mark N. Katz, "Soviet Military Policy Toward the Third World," Washington Quarterly, Fall 1986, pp.161-162.

Peacetime Contingency Operations

The fourth type of low intensity conflict is, like the LIC concept itself, a residual category. Peacetime Contingency operations consist of all those low intensity military actions not readily identifiable as peacekeeping, terrorism/counter-terrorism, or insurgency/counter-insurgency. There are two basic forms of contingency operations:

1. Demonstrations of capability, such as military exercises, shows of force, and some manifestations of coercive diplomacy.
2. Actual use of military force, such as strike operations, hostage rescues, and special intelligence missions.

Demonstrations of capability involve the display of military forces to communicate resolve or warning. In the case of military exercises and naval peacetime presence, the objective is to demonstrate that the United States is committed to preserving political relationships that it values; the threatened use of military power to achieve this end is unstated but implicit. When shows of force are employed, the threat is usually more explicit: forces are sent to a troubled area to demonstrate that if the United States chooses to involve itself militarily in the region, it has the capacity to do so. The threat of intervention is apparent, but the specific form it might take is left to the imagination of potential adversaries.

When military demonstrations develop beyond mere shows of force into coercive diplomacy, threats of violence may become highly explicit and specific. In coercive diplomacy, military forces and other forms of pressure are used to either deter or coerce the behavior of a target government.¹ At its most intense, coercive diplomacy may entail the actual use of military force against a foreign country to influence that country's actions. Usually, however, coercive diplomacy is a

¹ See Schelling, op. cit., pp.1-34.

psychological strategy in which outcomes are influenced not by overt force, but by the threat thereof.

Naval forces are well suited to the execution of military demonstrations for the purpose of communicating resolve or warning. Indeed, it is often the case that naval forces are the only way of visibly signaling U.S. commitment in many parts of the world. In most of the developing world, for example, the United States lacks a local base structure that would permit injection of Army and Air Force units into a region in circumstances short of war. In these areas, the Navy is the sole means of bringing pressure to bear on local actors without resorting to hostilities.

The range of U.S. military actions taken against Libya in early 1986 underscores the Navy's capacity to provide escalating gradations of threat in response to specific provocations. In February of 1986, the aircraft carriers Saratoga and Coral Sea commenced military exercises off the coast of Libya, a minimal escalation of the Navy's normal peacetime presence in the Mediterranean. Six weeks later, in March, the two carriers were joined by a third, the America; the three carriers and thirty other ships then conducted a show of force by crossing the so-called "line of death" into the Libyan-claimed Gulf of Sidra. When attacked by Libyan forces on March 24 and 25, aircraft from the carriers were dispatched to destroy several Libyan patrol boats and surface-to-air missile sites at Sirte. The Libyans responded by stepping up anti-American terrorism in Europe, which in turn led to a series of joint Navy/Air Force bombing raids against military targets in Tripoli, Benghazi, and Benina. At this point, the Libyan government ceased aggressive actions against the United States.¹

¹ Trost, op. cit., p.34; John F. Lehman, Jr., Secretary of the Navy, Report to the House Armed Services Committee on the Posture, and Fiscal Year 1988-89 Budget of the United States Navy and Marine Corps, Department of Defense, Washington: 19 March 1987, pp.23-24.

These events reflect a remarkable capacity to tailor responses to provocations. U.S. Navy actions off Libya evolved from peacetime presence into military exercises, then into a show of force, and finally into coercive diplomacy. At each stage in the escalation process, the Libyan government had the opportunity to evaluate its position and cease aggression. When it failed to do so, the Navy applied progressively higher increments of pressure until the Libyans finally desisted in the aftermath of the bombing of Tripoli.¹ Clearly, none of the other U.S. military services has the capacity to apply coercive pressure in so precisely measured a manner.

The Libyan experience began as a demonstration of capability and ended in a series of limited military strikes. There are many other forms of peacetime contingency operation, however, that must be planned from the outset with the intention of using force. These range from relatively minor actions like hostage rescues up to multiservice strike missions such as the 1983 "Operation Urgent Fury" against subversive forces in Grenada. All four U.S. military services possess conventional and special forces applicable to contingency operations of this type.

It seems obvious, however, that Navy and Marine forces relevant to contingency operations will see more action in the future than their Army and Air Force counterparts. This situation arises because of the logistical problems cited earlier in connection with counterterrorism. There are vast areas of the world where the Army and the Air Force are not capable of projecting force rapidly or effectively. Most of these areas are in the developing regions of Africa, Asia, and Latin America, where peacetime contingencies are most likely to arise in such places, only the Navy and Marines can effectively mount reserve operations, execute surgical strikes, carry out special intelligence missions, and the like.

Recent experience suggests that inclusion of Air Force and Army elements in contingency operations that could have been accomplished

¹ Zimmermann, op. cit., pp.201-207.

entirely by Navy and Marine forces is counterproductive. The unique capabilities possessed by some Air Force and Army units are often not sufficiently critical to mission success to justify converting a Navy/Marine operation into a joint service undertaking. Joint service efforts at force projection tend to be unnecessarily complex and inefficient, as Operation Urgent Fury demonstrated.¹ As awareness of these facts spreads, it can be expected that peacetime contingency operations in the third world will increasingly come to be regarded as a Navy/Marine responsibility. In the following section, the adequacy of naval forces to carry out such operations in the future will be examined.

4. Naval Forces and the Future of Low-Intensity Conflict

Having discussed the various types of low intensity conflict and how naval forces can be used to prosecute each, it is appropriate to examine whether the Navy's present and programmed forces are adequate to cope with future low intensity contingencies.

It has already been noted that both conventional and special forces are potentially useful in low intensity conflicts. However, little purpose would be served by reviewing here the adequacy of the Navy's conventional forces for LIC; those forces are so extensive that they clearly are capable of coping with virtually any low intensity threat requiring a conventional response. There is much less certainty, though, about the adequacy of special operations forces. Accordingly, this section is concerned primarily with assessing the adequacy of Navy special operations forces for conducting future low intensity conflicts.

Naval special warfare missions include intelligence collection; direct action (demolition, subversion, and surgical strikes); counterinsurgency; guerilla warfare; riverine operations; psychological

¹ "Pentagon Study Faults Planning on Grenada," New York Times, July 12, 1986, p. 1.

operations; and coastal patrol/inter-diction.¹ All of these missions are potentially relevant to low intensity conflict. Forces to accomplish the missions include the following key assets:²

Active Force

- 2 Navy Special Warfare Groups
- 3 Navy Special Warfare Units
- 6 Sea-Air-Land (Seal) Teams
- 2 Seal Delivery Vehicle Teams
- 2 Special Boat Squadrons
- 3 Dry-Deck Shelter-Capable submarines

Reserve Force

- 6 Navy Special Warfare Group Detachments
- 2 Navy Special Warfare Task Groups
- 1 Seal Detachment
- 2 Special Boat Squadrons
- 4 Special Boat Units
- 1 Engineer Support Unit
- 2 Light Attack Helicopter Squadrons

Programmed additions to the active force in the near future will include formation of a seventh Seal team, procurement of specialized equipment, construction of special facilities and support craft, and acquisition of more dry deck shelter capable submarines.³

Navy special operations forces, like those of the other services, are currently in the process of being substantially expanded and upgraded. The size of the SEAL community has grown thirty percent over the past five years, and further increases are planned in fiscal 1988 and 1989. The two Special Warfare groups now assigned to the Atlantic and Pacific fleets will soon be augmented by a new special warfare unit with the Sixth Fleet.

¹ Melvyn R. Easley, Assistant Secretary of the Navy, Statement on the FY 1988 FY 1989 Joint Navy Program for Development, Test, and Innovation Budget, Department of Defense, Washington, 1987, p. 2.

² Joint Chiefs of Staff, United States Military Posture, FY 1988, Department of Defense, Washington, 1987, pp. 63-64.

³ Ibid., pp. 63-64.

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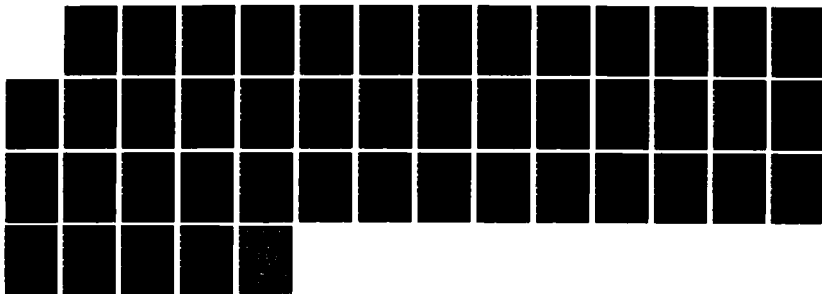
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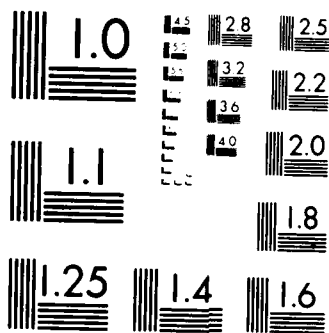
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Fleet in the Mediterranean and a second unit assigned to the U.S. Southern Command for Caribbean/Central American contingencies. Furthermore, a Naval Special Warfare Command has been established as the Navy component of the joint Special Operations Command recently activated.¹

In addition to these organizational changes, the Navy has formulated a Naval Special Warfare Research and Development Master Plan to guide development of special operations weapons and tactics. One result of the plan is that R&D funding for naval special warfare projects has more than doubled in recent years. Major Navy R&D initiatives in the special operations area include the following²:

1. Appointment of a special Warfare Development Committee made up of key naval personnel to expedite R&D and resolve problems.
2. Increased emphasis on off-the-shelf technologies to allow quicker development of special operations weapons and equipment.
3. Streamlining of the weapons testing and evaluation process.
4. Creation of the Naval Coastal Systems Center as the lead laboratory for special warfare R&D.
5. Establishment of a Naval Special Warfare Center to develop new tactics for special operations forces.

On paper, the Navy's upgrades of its special operations capabilities appear far-reaching and impressive. And, in fact, they are, compared with where naval special warfare capabilities stood in the early 1990s. However, even when the programmed buildup of special operations forces is completed in the early 1990s, the Navy will still lack the strength and flexibility in this area that would be conferred by possession of a large, well-equipped force. The following major deficiencies are apparent:

1. The planned naval special warfare force is too small. The six existing Seal teams are each authorized to have 175 men;

¹ Lehman, op. cit., p.21.

² Paisley, op. cit., p.36.

additional personnel added by 1990 to the special warfare force will total 750 men.¹ With so few personnel available for so many possible missions, it is not hard to see how the Navy's capacity to cope with some low intensity contingencies could be overwhelmed.

2. The Navy has not made adequate efforts to assure that it can function effectively in joint operations with Army and Air Force special forces. The recent decision of the Defense Department to exclude naval special warfare groups from direct control by the U.S. Special Operations Command² increases the likelihood that problems of interservice coordination such as those seen in Grenada will arise again in future operations.
3. Naval special warfare forces continue to be troubled by inadequate tactical communications capability. They are not only poorly equipped for interservice communications in joint operations; in some contingencies current equipment is not adequate to permit communication among scattered Navy units.
4. The Navy needs to improve its capacity to acquire and analyze intelligence about terrorists and insurgents. In particular, it requires a better ability to provide personnel in the field with the kind of detailed tactical intelligence that is often essential to the success of special operations missions.

A further deficiency concerns not the Navy but the Marines. Although the Commandant of the Marine Corps has recently designated a Marine Amphibious Unit as "special operations capable", there is little evidence that the Marines are adequately trained for most special warfare contingencies. the formal schools of the Development and Education Command allocate only three to five percent of instruction time to low intensity conflict, and not all of this concerned with special operations. As one British authority has observed,

A Marine battalion, trained in raiding techniques, is simply not "special" enough to undertake the sort of surgical operations normally expected of a special force. A "complete" force, such

¹ Collins, op. cit., p.34-35.

² Weinberger, Report on Special Operations Reorganization, op. cit., p.3.

as the U.S. Marine Corps, must surely develop a surgical capability of this nature.¹

The 1,400 Reconnaissance Marines are a noteworthy exception to these generalizations. In general, however, it does not appear that the Marine Corps is adequately prepared to cope with a wide range of potential contingencies requiring special operations expertise.

In summary, the Navy has made steady progress in improving its special warfare capabilities in recent years, but the present and programmed forces in this area may not be adequate to deal with some low intensity contingencies. Although Seal Team personnel are widely regarded as the best trained of U.S. special operations forces, training alone cannot compensate for inadequate numbers, incomplete intelligence, or inferior equipment. The Marine Corps' lack of readiness to conduct most types of special operations is an additional handicap. Collectively, these deficiencies could compromise the Navy's ability to deal successfully with a wide range of future low intensity conflicts.

D. Central America: A Case Study

To illustrate how the Navy can defeat Soviet-sponsored LIC, this case study examines the opportunities for a "blockade of a Central American country." It places a discussion of the policies related to blockade, coastal interdiction, or quarantine within the broader context of U.S. policies for the region, and assesses the forces required to "operationalize" such policies. The analysis includes the command-and-control (C²) and logistics aspects, and an assessment of existing U.S. capabilities to undertake the tasks for such activities.

¹ Hensman, op. cit., p.50.

1. U.S. Regional Interests and Policies

The January 1987 U.S. government publication National Security Strategy of the United States explicitly spells out fundamental U.S. security interests, among them:

To defend and advance the cause of democracy, freedom, and human rights throughout the world. A foreign policy that ignored the fate of millions around the world would be a betrayal of our national heritage.

The document extends the nation's mandate in this area by declaring two objectives that are directly germane to the issue of U.S. policies in Central America and the Caribbean:

To promote the growth of national independence and free institutions throughout the world.

To encourage and support...the growth of free² and humane social and political orders in the Third World.

And, although it recognizes diverse political and economic dynamics and trends in the world that may be at odds with American goals, the National Security Strategy of the United States places the most serious challenges in an East-West cast:

The most significant threat to U.S. security and national interests is the global challenge posed by the Soviet Union.... Motivated by the demands of a political system held together and dominated by Marxist-Leninist ideology and the political part which represents it, Moscow seeks to alter the existing³ international system and establish Soviet global hegemony.

¹ White House, January 1987, p. 5.

² Ibid.

³ Ibid, p. 6.

The Reagan Administration has viewed regional policies primarily within the context of U.S.-Soviet competition. The so-called "Reagan Doctrine" has its origins in the 1980 presidential campaign when Candidate Reagan promised first to contain and later reverse Soviet gains in selected countries where Soviet-backed regimes were facing guerilla opposition: Afghanistan, Angola, and Nicaragua.

Initially the Reagan Administration was not dedicated to a complete rollback of all Soviet gains in the Third World. The real objective of the Reagan first-term was less ambitious: recouping some of the losses of the 1970s while shifting the ground-rules to the advantage of the United States in the U.S.-Soviet competition in the Third World. This objective was put into operation by actively challenging Marxist regimes in power, by raising the costs to the Soviet Union if it was unwilling to enter into regional agreements to reduce tensions, and by sending aid and advisors to anti-Marxist movements. While anti-Soviet movements in Afghanistan and Angola were perceived as ideal recipients of U.S. encouragement, as Raymond Copson and Richard Cronin argue:

It was the threat to U.S. interests in the Western hemisphere, however, that most directly influenced the emergence of the Doctrine. The successful 1983 U.S. intervention in Grenada, which was backed by the neighboring island democracies, gave encouragement to those who advocated forceful U.S. action to reverse Soviet third-world gains. Meanwhile, the Administration and its supporters faced a practical need to articulate a rationale for U.S. support of the anti-Sandinista guerrillas in Nicaragua.¹

After the 1984 election, the Reagan Administration renewed its emphasis on direct, albeit nominally "covert," aid to freedom fighters. The President apparently saw in his landslide victory a mandate to roll back Soviet influence. In his 1985 State of the Union Address, Reagan declared that "we must not break faith with those who are risking their lives -- on every continent, from Afghanistan to Nicaragua -- to defy

¹ Survival, January/February, 1987, p. 42.

Soviet-supported aggression and secure rights which have been ours from birth." The President later affirmed his support to anti-Marxist guerrillas in Nicaragua -- "I'm a Contra, too" -- and his 1986 State of the Union Address expanded America's commitment:

...you are not alone, freedom fighters. America will support with moral and material assistance your right not just to fight and die for freedom, but to fight and win freedom -- in Afghanistan, Angola, Cambodia, and Nicaragua.

The Reagan Administration has thus been willing to assume a much more aggressive posture in regional conflicts, even at the risk of confrontation with the Soviet Union. Indeed, military operations have been much more prevalent, as witnessed by the October 1985 airborne interception of the "seajackers" of the Achille Lauro and the March/April 1986 carrier- and land-based air attacks on Libyan ships, missile sites, and "terrorist bases."

Specifically, with regard to the Administration's policies toward Central America and Nicaragua, spokesmen have repeatedly stated that there are no plans to send U.S. troops into battle, although other forms of direct U.S. involvement may have been contemplated. It appears that the President and his advisors believe that if not excised, the Soviet influence in Nicaragua will eventually turn the country into a base for fostering Communist movements throughout the region and hemisphere, perhaps allowing Soviet military forces free use of facilities, as well. In an October 1985 speech, Secretary of State George Schultz argued for replacing the Sandinista government:

Can we...accept the existence of the Sandinista regime in our hemisphere even if we find its ideology abhorrent? Must we oppose it simply because it is Communist? The answer is we must oppose the Nicaraguan dictators not simply because they are Communists, but because they are Communists who serve the interests of the Soviet Union and its Cuban client, and who threaten peace in this hemisphere.

[†] Address before the National Committee on American Foreign Policy, New York City, October 2, 1985. Department of State, Current Policy, No. 748, p. 2.

2. Political and Legal Implications

U.S. policy options for opposing Communist "dictators" in this hemisphere are quite broad. The National Security Strategy of the United States clearly spells out the need for "private and governmental support to groups seeking national independence and freedom." Coupling this with the document's discussion of low-intensity conflicts, and the potential for the actual application of armed force becomes clear. Defining "low-intensity conflict" as that waged at levels below conventional warfare by any combination of means -- i.e., the use of political, economic, informational, and military instruments -- the National Security Strategy of the United States declares that indirect rather than direct applications of U.S. military power are the "most appropriate and cost-effective ways to achieve national goals." And, although the primary role of the U.S. armed forces in this context is to support security assistance programs, the military must also "stand ready to provide more direct forms of military assistance when called upon."

Gregory Trevorton analyzed U.S. strategies in Central America in the March/April 1986 issue of Survival, and concluded that the Reagan Administration certainly was amenable to displays of force in the region. But the substantial human costs and potential political and diplomatic liabilities made actual invasion unlikely. As Trevorton summarized the situation:

In rhetoric, the Administration is not prepared to live with the Sandinistas, and most of the people probably concur. Yet it stops short of actions to match its goal: it harasses, perhaps frightens the Sandinistas, but does not really threaten to overturn them. Here, too, it probably has caught the mood of U.S. domestic politics, since there is little evidence that Americans are willing to pay the price of overthrowing the Sandinistas,¹ least of all if that price includes sending in the Marines.

¹ Survival, March/April, 1986, pp. 5-6.

Several constraints on the use of armed force to support the Reagan Doctrine are evident, including domestic politics, international/allies' "public opinion," and international law.

There is a strong conviction that a clear moral and legal issue is needed to justify the use of violence. (This, clearly, was the case in the 1986 air strikes against Libya.) The United States and other states' members of the United Nations Organization have agreed, in Article 2 of the Charter, to settle their disputes by peaceful means so as not to endanger peace, security, and justice, and to refrain from the threat or use of force against the territorial integrity or political independence of any state. When such activities have been contemplated or undertaken, it is usually justified under Article 51 of the Charter, which recognizes an inherent right of individual and collective self-defense of member states against armed attack, pending enforcement action by the Security Council.

An important principle of international law is that force is permitted for individual or collective defense against armed aggression. Even if the aggression is covert rather than overt, the use of force is still permitted. If in policy making the U.S. succumbs to the idea that it is only overt force that may be repulsed, we seriously erode the concept of the Charter of the United Nations of the right to defend against aggression, in whatever form. It is particularly important to remember this principle in the case of Communist aggression in Central America. Whatever the decision as to the use of U.S. armed forces in this critical region, it should not be based on a wrong interpretation of international law -- if force is necessary, it does not break international law to use it.

Domestic politics and public opinion, however, are much more salient constraints on the use of armed force in Central America. The American public's heightened sensitivity to the dangers of involving U.S. military forces in direct combat in the Third World -- "NO MORE VIETNAMS!" -- is perhaps why the Reagan Doctrine focuses on direct aid and indirect military support, although, as noted previously, direct military operations are not a priori ruled out. As Gregory Treverton has observed:

...the image of Central America as a potential Vietnam may be more appropriate in the longer run and in non-military terms. There is little doubt that American military power could achieve an initial success (though recent operations, such as the Iran rescue or the invasion of Grenada, have been less than impressive). The real question is: then what?... Turning initial success into continuing stability would require a sustained application of military power -- and the American public is not likely to support this.

Allied states' support of overt applications of military force by the United States in Central America is likewise uncertain. Widespread indignation was expressed in 1984, especially in Western Europe, when the covert mining of Nicaraguan internal waters was discovered. Similar unilateral, U.S. "adventurism" is likely to generate negative reactions, again particularly in Europe, at a time when support for U.S. arms control initiatives (among others) will be expected by Washington. The opinions of U.S. allies should, therefore, act as a brake on U.S. policy options that envision direct combat intervention.

Related to this last point is the likely response of the Soviet Union to American exercises of armed force in the region. Soviet reactions to U.S. initiatives, or preemptive moves by the Soviet government, may frustrate U.S. goals, although this is doubtful in Central America. The Soviets' policies and programs supporting revolutionary movements in the Third World are well-documented. Most Soviet interventions have involved logistical and command-and-control assistance, but when necessary, Soviet forces actually are employed, as in Afghanistan.² In response to an American use of force against Nicaragua, for example, there is little evidence that the Soviet Union is willing to run much of a risk to support the Sandinista revolution. The U.S. intervention in Grenada made it

1 Ibid., p. 135.

2 Soviet forces are also employed in special types of units, as in Angola, Egypt and Syria.

apparent that, in a conflict with the United States, leftist regimes in the region should not rely on active support, even from Cuba, much less the Soviet Union. Indeed, Pravda has warned the Nicaraguan government that the "revolution must defend itself."

If circumstances in Central America clearly require additional direct military measures to be taken, beyond supplying materiel and advice, these measures must be judged by Americans, allies and friends as justified and proportional to the threat, without risking "another Vietnam." The likely constraints on U.S. actions, constraints that will be felt by the Reagan Administration, seem to narrow the policy choices to blockade, coastal patrol and interdiction, or "quarantine."

3. Concepts of Blockade

The concept of blockade is rooted in the laws of armed conflict and neutrality. A blockade occurs when a belligerent bars access to the enemy coast or part of it for the purpose of preventing ingress or egress of ships or aircraft of all countries. The blockade is an act of war, and, if duly carried out in accordance with the rules of warfare, is effective to deny freedom of passage to the shipping or aircraft of other states. Under these rules of warfare, a blockade is binding only if effective and its existence known. The effectiveness of a blockade is conditioned by the maintenance of such a force by the belligerent which is sufficient really to prevent access to the enemy coast. As was declared in The Franciska (1855), the blockaded coast

...must be watched by a force sufficient to render the egress or ingress dangerous; or, in other words, save under peculiar circumstances, as fogs, violent winds, and some necessary absences, the force must be sufficient to render the capture of vessels attempting to go in or come out most probable.

Thus, "blockade" is clearly an act of economic warfare that is designed to weaken an enemy's economic and financial foundation by intercepting goods and materiel declared contraband, and thereby to curtail his ability to continue the struggle. It is directed at neutrals in war, as

otherwise the ships or aircraft of neutrals would be immune from any actions by the belligerents. (In war, generally, the ships and aircraft of countries allied to an enemy are lawful targets and subject to attack without warning.) A blockade, in strict sense, will not be legitimate in a "peacetime" military operation, and probably would not be politically acceptable, as well.

Generally, as J.G. Starke¹ argued, in the absence of a specific agreement that belligerent rights shall be applicable to a "non-war armed conflict," such as that envisioned as "low-intensity conflict," a contestant cannot resort to contraband interception or blockade, especially in regard to "quasi-neutrals." In a state of "no war-no peace," there are no real belligerents or true neutrals: if there is no state of war, there are automatically no neutral countries, and only part of the law of war is in operation. During the May 1970 "incursion" into Cambodia, for instance, U.S. and South Vietnamese warships cut off supply routes by sea to a stretch of the Cambodian coastline in what appeared to be a partial blockade. The existence of a blockade per se was denied by officials of both countries. What was being conducted was, in today's terms, coastal patrol and interdiction (CP&I) operations against "enemy" craft.

Even such CP&I operations seem to envisage a concept of conflict somewhat greater than "low-intensity conflicts," and may be perceived as not proportional to or justified by the threats to U.S. interests in the Caribbean region or Central America. CP&I is a Navy Special Warfare mission, consisting of low-threat offensive operations in hostile foreign waters, or low-to-medium-threat operations supporting a friendly nation in its own waters. While CP&I may legitimately be carried out defensively in support of friends in Central America, in the context of existing politics and regional initiatives it is unlikely that U.S. public opinion, the Congress, and America's allies would support a unilateral decision to conduct offensive CP&I operations against an "unfriendly" country in the

¹ J.G. Starke, An Introduction to International Law, (London, Butterworth, 1972), pp. 534ff.

region. In this regard, the War Powers legislation would seem to constrain U.S. offensive actions.

This analysis seems to point to the policy alternative of a "selective blockade, "quarantine," or, in more general terms, a "pacific blockade." A pacific blockade is a measure employed in peacetime, and is designed to coerce a state whose ports are blockaded into complying with a request for satisfaction by the blockading states (in the Central American context, "stop exporting your revolution and we will lift the blockade"). The legality of such a unilateral act in the late 20th century is under some doubt, in light of the U.N. Charter. However, as a means of collective security, the pacific blockade may even now be legitimately employed. Indeed, Article 42 of the U.N. Charter expressly mentions blockade as one of the operations the Security Council may initiate in order to "maintain or restore international peace and security."

There are obvious advantages in the employment of a pacific blockade. It proved to be a far less violent means of action than war, and extremely elastic. In history it was generally used by very strong naval powers against weak states, and it appears to have been relied upon by strong maritime powers in order to avoid the burdens and inconveniences of war. But, as a reprisal, it is limited: a blockading state has no right to seize ships of third states which attempt to break a pacific blockade. By declaring merely a pacific blockade, the blockading state essentially admits the interests at state were not sufficient to warrant the costs and risks of war.

Although the United States historically maintained that pacific blockades were not applicable to American ships, during the Cuban Missile Crisis of October 1962 the Kennedy Administration instituted a variant of the pacific blockade and enforced it against third states. The "quarantine" or "selective blockade" of Cuba was far more extensive and focused than a pacific blockade. Its explicit purpose was to "interdict" the supply of certain weapons and equipment to Cuba, in order to prevent the establishment or reinforcement of missile bases in the country. Unlike a blockade in strict sense, the "quarantine" was not intended to preclude

all entry or exit of goods to and from Cuba. Furthermore, unlike a pacific blockade, ships of countries other than Cuba, en route to Cuba, were subject to search, and, if necessary, control by force. Finally, President Kennedy proclaimed the quarantine pursuant to a recommendation of an international organization, the Organization of American States, perhaps alluding to the U.N. Charter's Article 42 prescription of a blockade as a collective security measure.

While the Cuban Quarantine is, in all circumstances, a very special case, it may be an appropriate model for a "blockade of a Central American nation." Certainly, if appropriately announced, circumscribed, and supported by intelligence information, a "selective blockade" may be acceptable to the regional powers, and U.S. and allied governments and publics, as an appropriate means to stem the flow of advanced weapons into the region, or to coerce a Leftist government to agree to terms acceptable to the United States and its friends in the region. Acting under the request of affected states, much as the United States did in Grenada in 1983, the U.S. Navy could be called upon to interdict ships carrying materiel that would constitute grave threats to regional peace and security. Still, such a "selective blockade" must be effective, which is dependent upon the United States' capabilities to undertake such operations.¹

4. U.S. "Brown-Water" Capabilities

The U.S. Navy is capable of mounting a large, "blue-water" quarantine of a Central American state. Even countries such as Nicaragua, possessing both Pacific and Caribbean coastlines, could be subject to overwhelming naval forces drawn from the U.S. Second (Atlantic) and Third (Eastern

¹ Note that blockade by minelaying is not considered in the following sections on U.S. Navy capabilities. Mines are too indiscriminate in their targets and cannot be turned on and off in a political sense, although in a technical sense they can be rigged to become inert after a certain period of time. Thus, for political reasons, U.S. capabilities to interfere with coastal shipping are considered outside of a mine blockade.

Pacific) Fleets. Yet such demonstrations draw down the Navy's capabilities to meet other global commitments, and cannot usually be sustained for long in peacetime for political reasons and because of the requirements to support other, overseas ship deployments.

An alternative approach would be to use the Navy's forces that have been designed for near-shore and coastal operations, and to augment them as necessary with other assets that are useful for long-term interdictions and quarantines. The Navy has operated riverine and coastal forces as long ago as the U.S. Civil War. During World War II, an extensive coastal combat force was employed, mainly high-speed torpedo boats, employed in attack missions against German, Italian and Japanese coastal shipping. But it was in the Vietnam War that the "brown water" forces came into varied and widespread use in the extensive river complex of Indochina. These forces were used for troop movement, support of friendly villagers, denial of use of the rivers to the enemy, and, along the coastal inshore waters, to interdict the flow of men and arms from North Vietnam. Although much of this coastal and riverine force was transferred to the South Vietnamese Navy at the end of the war, the U.S. Navy retains some capabilities in this combat category. These "brown water" forces are described in Appendix A.

5. Prospects for the Future

U.S. capabilities at present and in the near future to carry out long-term interdiction operations in support of the quarantine are marginal, principally because of the age and limited unit capabilities of individual coastal patrol and interdiction assets, and the lack of an overall organizational framework for undertaking such operations. While a quarantine of a Central American country operationally would be under the control of the U.S. Southern Command, the various assets required to carry out the tasks of a quarantine are dispersed among various other organizations and their control in peacetime is fragmented. There is no doubt, however, that the framework and assets could be forged into a workable team once the decision is taken to undertake such operations.

The time from decision to undertake such operations until a reasonable capability is available could be measured in terms of months if the project is given sufficient resources and proper leadership. A related factor, of course, is the ability of that leadership to operate with sufficient priorities that the program does not become bogged down within the U.S. Defense/Service bureaucracies. Another factor to be considered is the problems of appropriate air support for such an operation unless the use of foreign air bases is possible or one or more aircraft carriers can be committed to the operation.

This survey of LIC and possible U.S. responses to this form of Soviet-support conflict suggests a major Navy-Marine Corps role in coping with this Third World arena of U.S.-Soviet competition. Because of the many places in the world where LIC may have to be dealt with, and possibly in more than one place at one time, it indicates a need for the 600 ships and 15 carriers, to be able to deploy battle groups to be in position to respond promptly to widely separated crisis or conflict situations.

VII CONCLUSIONS

A. The Stable Factors

The principal constant factors in strategy are geopolitics, demography, and the character of a nation's regime. There is little change in these factors over a period of 25 to 35 years--the life-expectancy of a naval fleet. The United States, an insular, commercial, naval-maritime power, opposed by the U.S.S.R., a continental, autarchic power, has an economic and military requirement for freedom of the seas. This freedom is as necessary to allies as it is to the United States, to retain cultural, political, economic, and military relations with each other and with neutrals on the Eurasian rimland and the southern continents. The Truman containment policy, established in 1947, recognized these geopolitical facts of international life, and since then the U.S. has accepted the global responsibility--in concert with Western allied navies, which are essentially regional--for command of the seas, for the defense of Western democracies and American interests.

The Pacific Ocean is the largest of the oceans that cover 70 percent of the earth. A major part of the world's trade is transported in ships that crisscross the Pacific, and there is no technology in sight that will alter the fact that all but a small fraction of trade must go by sea. One clear message is evident from the foregoing geopolitical factors, that the U.S. Navy and the U.S. Marine Corps are required to look to a 21st century world in which their missions in the world's seas, and especially the Pacific Ocean, will be even more essential to U.S. and free world security than in the present period.

Neither the American liberal democratic political system nor the Soviet Marxist-Leninist totalitarian system is likely to change radically over the next three decades. Geography is fixed, leaving only space as the new physical frontier. The distribution of the world's population, with the great preponderance of the world's population living around the Pacific and Indian Oceans, is unlikely to change. The world's current total

population of five billion may increase by 2 percent per year to a total of nearly seven billion by 2010. Most of this population growth is occurring in the Third World underdeveloped countries (LDCs), such as Mexico--about 2.5 percent per year versus about 0.8 percent per year in the industrialized countries. Thus political, social, and economic instabilities are likely to increase in the LDCs, with increasing pressures on the developed countries.

There is a long-term competition between the U.S. and the Soviet Union over the ideological, political, and economic foundation for a new world order. Soviet foreign policy is based on a revolutionary expansionist imperium, in which trained cadres of indigenous political-military leaders attempt to seize control of the government military apparatus of target countries with Soviet bloc assistance. The Soviet Union itself is a military state, with a large, relatively efficient military industrial complex. The Soviet economy, however, is stagnant, the people disillusioned, agriculture nonproductive, and the ruling Party cadres fearful of losing control if policies of economic decentralization and material incentives, necessary for increased productivity, are pursued to the point where they are effective. Thus the Soviets' main export is an ideology of totalitarian political control and military arms and expertise designed to destabilize Western-oriented states and to create heavily armed Marxist-Leninist states on a global scale. Recent Soviet successes in LDCs (e.g., Ethiopia, Angola, Nicaragua) have depended heavily on Cuba's troops and/or Soviet military assistance.

B. International Institutions and Organizations: Significant Changes

World War II destroyed the nation state system that came into being after 1918. The creation of the United Nations in 1945 created hopes for a more peaceful era. The U.N. Charter accepted the rights of self-defense and collective security as basic principles and permitted the forming of regional alliances, such as the OAS, NATO, SEATO, CENTO, and ANZUS. In its early years, the U.N. was largely dominated by the U.S. During that period, a universal commitment to human rights was adopted. The principle

of collective defense was reflected in South Korea's being defended by 14 nations under a U.N. command.

As the number of independent nations grew from 50 to some 150, the character of the U.N. changed. It came under the increasing domination of the so-called non-aligned nations, many of them, like Cuba, under Soviet influence.

Since the mid-fifties, several building blocks of the U.S. alliance system have disappeared; the OAS has become ineffective and NATO less responsive to U.S. leadership. The Warsaw Pact, which opposes NATO on the Central European front, is not a true alliance, but is rather a Moscow-directed group of Soviet satellites. However, as a military organization, the Warsaw Pact conventional forces (armed and led by the Soviets) are markedly more powerful than those of NATO.

From the U.S. point of view, the emerging global political system contains favorable long-term prospects, as well as shorter term perils.

In the early years after World War II, the United States took a series of bold initiatives--not matched by the closed society of the Soviet Union--to share its wealth and skills with two broad classes of nations: the developed societies, such as the countries of Western Europe and Japan that had been devastated by war, and the many and disparate underdeveloped nations that came to be known as the Third World. The economic, military, and technological aid plans conceived under the leadership of President Harry Truman, Secretaries of State General George C. Marshall and Dean Acheson, initiated the process that is now fully evident, having the effect of closing the development gap between these aid recipients and the United States. Western Europe, Japan, and now even the NICs (newly industrialized countries) such as South Korea (the ROK) and Taiwan (the ROC), have approached, equalled, and in some cases exceeded in certain respects, the economic and technological achievements of the United States. This closing of the economic gap has been hastened by the failures of the U.S. to remain as efficient and competitive on the world scene as it might have.

What is clearly developing, as a continuation of a trend already evident, is the growth of a multipolar world, forcing both of the superpowers who have dominated the power structure for most of the present era to deal with a more complex, more independently-minded set of major and minor powers. The ability of the U.S. and the U.S.S.R. to influence, coerce, or manage the behavior of the individual members of this multipolar world will diminish. Within this multipolarity there may begin to emerge the pentagonal world envisioned during the Nixon-Kissinger years, i.e., five centers of power represented by the U.S., the U.S.S.R., China, Western Europe, and Japan. Power balancing among these centers will be a challenge to all, but the complexity of the power permutations will tend to prevent a dangerous coalescence of power in one camp. Since these trends threaten Soviet global ambitions, Moscow may accelerate its political-military expansion. If this can be checked--contained--by the U.S. and its allies and if Soviet advanced positions in, say, Nicaragua and Angola, can be thrown back, the Soviet claim about the inevitability of communism's global triumph will be less credible.

What a multipolar world will mean for the Soviet Union is the prospect of what they have traditionally feared: encirclement. As the free and independent nations outside the communist bloc grow economically and technologically, and acquire for themselves a credible national defense capability, the array of nations who could and would resist aggression will tend to inhibit the planners in the Kremlin from continuing an expansionist strategy. If the U.S. and its allies can stand firm in their common defense efforts until the beginning of the 21st century, the Soviet leadership may well be forced to conclude that Moscow will have to live with a hostile world unless its aggressive policies are altered.

C. Growing Global Interdependence.

The economic and fiscal interdependence of democratic industrial nations with each other and with most of the countries of the Third World (particularly the newly developed nations such as South Korea) have grown tremendously in the last 20 years. This trend will continue in terms of trade, supply of raw materials, and energy. This interdependence has

brought benefits but also problems, such as massive indebtedness and a huge negative balance of trade. In July 1987, Barber Conable, the new head of the World Bank, warned of a major economic crisis unless a series of trouble spots in the world economy could be remedied early enough to avert emerging problems. The Soviet Union, which is facing an economic slowdown, remains largely on the outside of the emerging global economy, whereas the PRC, through its own modernization efforts, and with help from Japan and the U.S., is moving closer toward it.

U.S.-multinational corporations have played a major role in promoting global economic interdependence. Yet the shape of U.S. industry is changing. An example: the U.S. no longer has a few "big steel" plants, but rather a large number of smaller, highly specialized plants that produce high quality products and that are flexible enough to meet changing demands. Much steel, of course, is coming from overseas, and this condition is not likely to change. This is a condition that is increasing across the board, and this internationalization of industry seems here to stay. The U.S. cannot return to anything near autarchy in resources, either raw or manufactured, and hence must plan carefully how to manage national security requirements within such an internationalized industrial system. Certain categories, e.g., semiconductors, may need special precautions that prevent dangerously high dependence on overseas sources. Watching these critical defense items will require continuing attention and perhaps decisions to pay more for domestic production that would otherwise be more economical within the international system.

As the U.S. struggles to revive its economic competitiveness in the world, the achievement of a better balance for sharing the burden of mutual security among the free world allied democracies is a challenge that must be met.

While it cannot be denied that the U.S. economy has been in a period of malaise, it need not remain so. The ingredients of a reversal of this trend are still present and need only be brought together in concerned national action. In spite of slippage on the productivity front, the U.S. has remained on the cutting edge of science and advanced technology; this

is a key factor in achieving future economic and military strength. As a major world power and the leader of the free world, the U.S. cannot but devote an adequate portion of its national assets and labor to the responsibilities of leadership. The friends and allies of the U.S. should do their share, but nothing can take the place of American contributions.

D. Accelerating Pace of Science and Technology.

The surge of scientific research and its application to a wide range of technology will continue unabated. SDI developments in both the Soviet Union and the United States will push both countries further and further past the present frontiers of space, with unknown implications for global security. The ever-growing role of the computer in the new technologies will continue to reshape human society.

E. The Communications Revolution.

The vast movement of peoples between the countries of the free world for business, pleasure, or security is creating a greater global awareness. The growth in relatively cheap air travel is in part responsible for this phenomenon. Global television broadcasting, telephonic internetting, and the ubiquitous radio have made much of the world as close as next door. Eventually, if the Soviet Union wants to become a modern society, state control and monopoly of internal communications will have to be abandoned. International communications can become the central core for waging the battle of ideas between the U.S. and Soviet political/economic systems.

F. The Changing Nuclear Deterrent Doctrine

As the U.S. looks to the end of the century and beyond in the vital sphere of deterrence of aggression from American adversaries, it can be seen that the form of strategic deterrence is changing. Nuclear weapons are on the threshold of fundamental change. As the new generation of weapons was recently described by Theodore Taylor:

These weapons would be as removed from current nuclear weapons in terms of military effectiveness as a rifle is technologically distant from gunpowder.

With the advent of such new types as directed energy weapons, the trend is towards war-fighting weapons rather than weapons of mass destruction. With the great variety of nuclear weapons coming into being, especially the specialized and extremely accurate weapons of low yield, the distinction between small nuclear weapons and precise and effective conventional weapons will be blurred. The accuracies of these precision weapons--both nuclear and conventional--are already achieving the near-zero CEP accuracy performances that only a few years ago were predicted not to happen until the end of the century.

Major efforts should be made in rethinking a new political-military strategic doctrine on a global scale. The U.S. Navy is the obvious choice for leading this task because new methods and design criteria are needed for the design and operational use of the flexible U.S. global naval forces. The systems analysis approach to strategic analysis and planning and to the design of the U.S. naval fleet is not only inadequate but is fundamentally flawed. Rather, an interactive type of analysis, in which second and third order effects are significant, and which places more emphasis on the role of strategic doctrine and political criteria in developing a strategic plan for a global naval fleet, is indicated.

The impact of strategic arms control agreements that appear imminent will be substantial, especially in NATO-Europe. The possibility of acquiring a true strategic defense capability can take us out of the era of mutual assured destruction (MAD) and into a balance between strategic nuclear offensive and defensive forces, creating an environment of mutually assured survival (MAS).

¹ Theodore B. Taylor, "Third Generation Nuclear Weapons," Scientific American, April 1987, p. 30.

Nuclear proliferation has in years past been forecast as a growing threat, but the reality has been a very slow increase in the membership of the nuclear club. This slow trend seems likely to persist, for two reasons. First, there may actually be a reduction in the nuclear arsenals of the superpowers before the end of the century, a development that could be of some assurance to the "near-nuclear" powers that their needs for the ultimate weapon are less urgent; and second, while the cost of going nuclear is reducing in economic terms, the political cost within the international community is increasing. The danger remains that some irresponsible nation such as Libya could acquire nuclear weapons, or that Pakistan may respond to India's nuclear capability with an "Islamic bomb." Barring this kind of destabilizing development, nuclear proliferation should proceed at a modest rate.

G. U.S. Security Policy in the Future Strategic Environment

The multipolar world will not take away the need for free world alliances. Although the linkages will have to deal with greater room for independence of the parties, there will be a special need for alliance structures fashioned to deal with regional problems. Traditional U.S. contingency plans have been oriented on two critical areas: Europe and Northeast Asia. In the more complex world now evolving, where low-intensity conflict (LIC) is the most likely kind of threat that must be dealt with, contingency plans and alliance linkages need to be considered in four other vital areas: the Mediterranean-Middle East-Persian Gulf, Central America and the Caribbean, Southeast Asia, and Southern Africa.

The U.S. may well have to intervene in one or more of these LIC-prone areas, because these are the places where Soviet political warfare is either active or potential. In the first order of responses to the need for intervention, the global reach and mobility of the Navy-Marine Corps team is the logical policy instrument. Above all, the U.S. Navy must be able to engage the Soviet Navy, but force structure and force posture plans must provide for engaging in LIC in remote areas as well. Overseas bases must be held as long as host-nations will allow, but if political

conditions arise that further curtail the worldwide U.S. base structure, the Navy-Marine Corps team will have to rely more heavily on sustainability of combat effectiveness at sea, without bases. There may well be calls upon the Navy-Marine Corps team for blockade, "quarantine," mine and countermine warfare, amphibious assault, intelligence gathering, special force operations, antisubmarine warfare, carrier-based strikes--i.e., a wide spectrum of tasks. Many contingency calls will involve combined operations, requiring rehearsed C³I joint capabilities. Versatility and flexibility in such operations can be force multipliers.

H. Mobilization

Preparations for the kind of multipolar, multithreat world to be encountered by the U.S., and by the Navy-Marine Corps team and the other services, require serious consideration of the mobilization problem. Even a mission involving LIC can well require some degree of mobilization. In the Korean War, which resulted in a long-term victory for the U.S., the U.S. saw the need to effect a partial mobilization, increasing the defense budget from about 5 percent of G.N.P. to about 15 percent. Fortunately, the reserves from World War II were available and, properly, were called up for service. American industry responded to the stepped-up war demands.

Conversely, in the Vietnam War, which resulted in both a short-term and long-term North Vietnam (and Soviet) victory, the U.S. avoided mobilization, relying on "business as usual," and no call-up of reserves. There was a manpower draft, which, although implemented in an unwise political manner that tended to polarize social relations between the upper and lower economic groups in the U.S. population, did manage to produce the manpower needed. Without going into a litany of the many other problems of that war, its conduct sets an example to be avoided rather than followed.

Facing up to limited (as well as general war) mobilization requirements for potential future conflict, even low-intensity conflict in the Third World, is a necessity, if the U.S. is to be able to make the most of its assets in any future contingency. Both manpower and industrial requirements need attention.

Of the two, manpower is the most sensitive politically. Present manpower needs are being met in a generally acceptable way. Even in peacetime, however, the U.S. faces a low point in the pool of young men and women in the mid-1990s. The Navy, probably more than the other services, will feel the pinch in its effort to man the 600-ship fleet.

Mobilization, even partial mobilization that appears to be necessary to meet the needs of low-intensity conflict, requires a fully-manned active force and the ready availability of reserves. The reserve concept is of increasing importance; the U.S. now tends to rely on a reserve count to measure total current force strengths. How to meet active and reserve requirements is a problem with no easy answers.

The simplest way to meet manpower needs is to restore the draft law, and ideally, to implement it with universal national service for all young Americans. The lesser mode of using the draft to meet service quotas is an answer to the problem, but both universal service and drafting for service quotas are politically sensitive subjects. The manpower problem is real and not easy to solve, both for peacetime needs and for mobilization, but the Department of Defense and the Congress have no choice but to tackle it.

Industrial mobilization requirements are of a different sort. At present, defense requirements represent only about 6 percent of U.S. industrial output, and thus there is a situation in which there is not really a "defense industry" in the U.S., but rather a civilian industry upon which the defense needs are superimposed. As a generalization, U.S. industry is ready and willing to meet national security needs, if the Defense Department will tell them in clear terms what the mobilization requirements are. Considerable thought is being given to this problem, e.g., in the Industrial College of the Armed Forces, especially as increased consideration is being given to the contingency that war may be more prolonged than was previously thought probable. Within such contingency considerations for mobilization, even the critical materials stockpile is a difficult factor to plan for. One new stockpile factor is the growing need for composite materials, needed in readily usable form at

the outset of mobilization. Trying to keep a match between technological advances and the associated stockpile requirements will require special attention and fine judgement.

Access to energy resources will be a problem of increasing concern within the last decade of this century and beyond. Oil will continue to be the largest single source of energy well into the next century, and access to oil reserves will be an important factor in the overall strategic balance between the East and the West. Thus the Persian Gulf region, which has well over half of the known oil reserves that are economically recoverable, will continue to be a strategic focal point of the international environment. Western Europe and Japan are already heavily dependent on Persian Gulf oil, and the U.S. dependency will increase. Department of Energy projections indicate that U.S. net imports of oil will increase from the current 4.5 million barrels per day to between 8 and 11 million barrels per day by 1995, and to between 9 and 13 million barrels per day by the Year 2000. Most of this increase will probably come from the Persian Gulf. The U.S. strategic petroleum reserve will therefore become of greater importance in the future; it now contains over 515 million barrels (about 30 days supply) and is being built towards a goal of 750 million barrels. At the very least, this level of contingency supply should be on hand to keep the U.S. economy and the U.S. military going in the event of a future crisis that could disrupt imports.

I. U.S. Global Aims and the Navy

The inescapable and dominant conclusion of this analysis is that the geo-political structure of the earth, the continuing Soviet bid for global hegemony, and the accelerating revolution in military technology make the U.S. Navy-Marine Corps team the forward arm of U.S. strategy. This should impel the Navy to create and foster the required intellectual leadership needed to help forge an integrated national strategy that will "provide for the common defense" in the turbulent years that lie ahead.

The fundamental task of the Navy will be to maintain and sustain a coherent cooperative relationship between an expanding world of democratic

states. The correlation between democracy, human rights, and peace is becoming recognized ever more clearly. If the U.S. Navy is identified as the mobile shield of democracy it can become a symbol of peace and not of neo-imperialism. President Reagan stated America's goal for the future persuasively in his speech to the British Parliament on June 8, 1982:

While we must be cautious about forcing the pace of change, we must not hesitate to make clear our ultimate objectives and to take concrete actions to move toward them. We must be staunch in our conviction that freedom is not the sole prerogative of a lucky few but the inalienable and universal right of all human beings. So states the United Nations' Universal Declaration of Human Rights--which, among other things, guarantees free elections.

The objective I propose is quite simple to state: To foster the infrastructure of democracy--the system of a free press, unions, political parties, universities--which allows a people to choose their own way, to develop their own culture, to reconcile their own differences through peaceful means.

This is not cultural imperialism; it is providing the means for genuine self-determination and protection for diversity. Democracy already flourishes in countries with very different cultures and historical experiences. It would be cultural condescension, or worse, to say that any people prefer dictatorship to democracy.

"Providing protection for diversity" and at the same time preparing for the contingency of war on a global scale will require a high order of intellectual devotion by a group of dedicated people so placed that their views can reach the President and his most senior and responsible officials. Because the Soviets will seek to place the stigma of "imperialism" on all such protection actions, the Navy-Marine Corps team must comport itself in such a way that the Soviet charges will not be credible. The operational guidelines for these kinds of diverse missions must be thought through with great care and sophistication.

The Navy can make a major contribution to land battles in northeast Asia and Europe by use of sea-based cruise missiles (of the Tomahawk and Harpoon types, for example), naval air and air launched missiles, and

ship-based tactical ballistic missiles, as well. The Pacific theater is less heavily armed with nuclear weapons than the Atlantic-NATO theater. This may change as the Soviet naval forces increase and the submarine threats to U.S. and allied forces increase. Soviet deployment in the Pacific of SSBNs with long-range missiles will also increase, and the U.S. ASW problem against both attack subs threatening naval forces (including U.S. SSBNs) and Soviet SSBNs threatening the CONUS in all oceans will establish new requirements in space, in surface ships, shore installations, as well as in attack subs equipped with advanced nuclear as well as conventional ASW weapon systems.

The advocates of the "maritime strategy" urge an offense-oriented, aggressive U.S. stance, wherein the U.S. Navy "takes it to the enemy" in the North Atlantic and the northern seas. In the Pacific, an offensive strategy would provide a horizontal escalation deterrent by linking the Far East with extraregional conflicts, rather than a passive strategy concentrating on the defense of U.S. Pacific forces. The Pacific littoral is shared by the U.S. and the USSR, where the Soviets have their only major naval base on the open ocean, Petropavlovsk on the Kamchatka Peninsula in the Soviet Far East. It is one of the most important nuclear bases in the Soviet Union. The geopolitical situation has been well analyzed by William V. Kennedy:

Without Petropavlovsk and the straits through the Kurile Islands farther to the south, the Soviet Union would cease to be a Pacific or Indian Ocean power, the Soviet fleet in the Indian Ocean being supported from the Soviet north Pacific bases...Seizure of Petropavlovsk and the Kuriles by U.S. amphibious task forces would put American power ashore in the rear and on the flank of the Soviet forces defending lands that China regards as having been stolen during the 19th century. The nightmare of all Soviet nightmares is China. That is why nothing the U.S. has ever done in Europe so grabs Russian attention as the appearance of naval and marine amphibious task forces in the north Pacific.

¹ Wall Street Journal, July 10, 1987, p. 18.

Kennedy argues that the requirement for the 15 carrier, 600 ship U.S. Navy can be better supported by including a major carrier task force permanently based in the north Pacific, with Seattle as the home port.

In pursuing the maritime strategy, the Navy will be making a major contribution to the long-term security of the United States, as it carries out the concept of competitive strategy. As the Secretary of Defense said in his FY 1988 posture statement:

The central idea of competitive strategies is simple enough: aligning enduring American strengths against enduring Soviet weaknesses. Even within their strengths we should seek weaknesses--chinks in their armor--that we can exploit, thereby rendering Soviet military power less potent over time...we will not be able to do any of this without the continued support of the Congress...Working together, we can help the United States and our allies develop and field a truly robust deterrent that relies on advanced design, manufacture, and fighting doctrine, rather than on matching the Soviets tank for tank, ship, for ship, or aircraft for aircraft.

The continuing U.S.-Soviet competition raises the complex problem of developing a concept for a prolonged global war (which may involve the possible use of nuclear weapons). It is difficult in the current U.S. government structure to create the doctrine for the operational conduct of such a global war, to include the military resources of allies. This strategic doctrine is needed for pre-war plans and civil preparations, as well as for conducting combined arms operations and allied limited nuclear and conventional land, sea, air and space operations. The advent of strategic and tactical missile defenses will greatly enhance the ability to limit damage to civil population and resources, and to develop targeting doctrine for offensive nuclear weapons that avoid cities and populations. A secure reserve force of SSBNs can be used to hold Soviet cities in

¹ SECDEF Report to the Congress, op. cit., pp. 65-69.

hostage for intra-war deterrence of Soviet city targeting. A general statement of the U.S. concept of the post-war world, together with the surviving military forces held in reserve, necessary to enforce the peace and influence the post-war global order, is a pre-requisite to the national/allied vision of the post-war world.

Although there are difficulties in developing such a national/allied concept of operations, the Navy has a strategic opportunity within the structure of planning organizations at the national level. The Navy--the most globally ubiquitous military service--has major roles in all phases of competition, from peacetime presence to all levels of warfare. The Navy of necessity has an intra-service joint operating doctrine of its own (e.g., in coordinating the operations of submarines, carrier and land-based aircraft, surface ships, Marine Corps units, and space resources), and thus may be the most appropriate service to take the lead in military analyses that involve allied nations and their resources and self-defense capabilities. The "competitive strategy" policy has an intellectual component: Western strategic thinking and doctrines become ever more important ingredients of long-term victory in the era of nuclear parity and superior Soviet land power. The naval role encompasses requirements for naval superiority and command of the seas before, during, and after a major war, to include the possibility of a global nuclear-conventional war.

In sum, the U.S. Navy-Marine Corps team has two broad missions in the long-term strategy of the United States: first, it must be prepared at any time, present or future, to defend against the threat to the United States directly, to allies, and to U.S. global interests, conventional and nuclear, posed by the power of the Soviet Union. In particular, coping with the threat of the Soviet Navy, at all levels of potential warfare, is a primary global responsibility. Second, this key team must have the capabilities and the readiness to cope with the many and varied kinds of instability and violence--generally described as low-intensity conflict (LIC)--that are certain to continue to arise around the globe, mainly in Third World countries. The U.S. (with allied help, if possible) may have to intervene to preempt or contain LIC situations. The ability to cope with these two major areas of threat is an imperative that cannot be

avoided. Not only will this ability to respond deter and/or contain the threat to the security and territorial integrity of the free world, it will also keep the world's seas safe and usable for all nations, developed and developing, ensuring the vital free flow of trade and supply of the resources essential for national survival and growth. America--as is much of the free world--is a maritime nation; naval power is the first line of defense.

APPENDIX A

U.S. Navy "Brown-Water" Capabilities
For Central American Operations

Appendix A

U.S. Navy "Brown-Water" Capabilities For Central American Operations

"Brown water" is an unofficial term, generally used to encompass riverine, inshore, and coastal operations. "Riverine" is an inland or coastal area, characterized by both land and water, with limited land routes and extensive water surface and/or inland waterways. "Inshore" relates to coastal areas and is generally used to indicate activities adjacent to the shore, i.e., in very shallow water. "Coastal" is the least defined term, generally taken to mean over the continental shelf (i.e., a depth of 600 feet or less).

a. Historical Perspective

The U.S. Navy operated extensive riverine and coastal forces during the American Civil War and, again, in the Vietnam War. In World War II an extensive coastal combat force was employed, consisting mainly of motor torpedo (PT) boats; these were almost exclusively attack craft, used against German, Italian, and Japanese coastal shipping.

The extensive river complex of Indochina led the French and, in the 1960s, the United States, to operate massive riverine forces in an effort to use the rivers for troop movement, support of friendly villagers, and denial of the rivers to the enemy. In the Vietnam War the United States employed Navy waterborne combat craft and helicopters; Army troops based on river ships, barges, and combat craft; and SEAL unconventional warfare units. (The SEA-Air-Land teams were established during the Vietnam War; they have been subsumed by the Naval Special Warfare Forces.) In addition, the U.S. Navy and Coast Guard established an offshore "blockade" of South Vietnam in an effort to interdict the waterborne flow of men and arms from North Vietnam to the South. (Not a "blockade" in the strict sense, this was really coastal patrol and interdiction.) Finally, the Navy employed

fast patrol boats (PTFs) to carry out raids and intelligence-collection missions along the coast of North Vietnam and offshore islands. The Navy also evaluated several advanced-technology craft in the riverine-coastal environments, especially air cushion vehicles and hydrofoil gunboats.

In 1970-1971, as part of the "Vietnamization" of the conflict, about 650 coastal and inshore craft in country were transferred to the South Vietnamese Navy. With this shift the U.S. Navy lost most of its expertise in "brown water" operations except for a very limited capability retained in the two Naval Special Warfare (NSW) Groups and Naval Reserve. (The two NSW Groups are based at San Diego and Norfolk.)

b. Organization

The Navy's two NSW Groups each have a Special Boat Squadron which operates PB Mark III and Seafox special warfare craft -- light (SWCL). The NSW Groups also make extensive use of rubber boats, especially for personnel insertion from submarines.

The Special Boat Units (SBUs) in each squadron are manned by designated SEAL officers who are employed as small boat officers. They have little training or experience in coastal patrol and interdiction activities, and are removed from "main-line" SEAL activities. A recent report of the Secretary of the Navy's Research Advisory Committee (NRAC) stated that coastal patrol/interdiction was not an appropriate mission for NSW forces and should be removed from their purview.

The Naval Reserve has four SBUs and 16 Mobile Inshore Undersea Warfare Units (MIUWUs). The reserve units primarily operate PBR river patrol boats and ATC armored troop carriers.

Most of the Navy's smaller combat craft are assigned to Special Boat Units under Special Boat Squadron 1 at Naval Amphibious Base Coronado (San Diego), California, and Special Boat Squadron 2 at Naval Amphibious Base Little Creek (Norfolk), Virginia. These boat units are both active and in reserve.

The active SBU-12 at Coronado and SBU-20 at Little Creek provide direct support of SEAL teams but has only a limited capability for interdiction operations. SBU-12 has four PB Mk III, 12 Seafox, two converted LCUs, and several lesser craft; a detachment at Subic Bay in the Philippines has another pair of PB MK IIIs and three Seafox craft. SBU-20 has nine PB Mk IIIs and 12 Seafox craft in addition to smaller craft, with two Seafox craft at Roosevelt Roads, Puerto Rico. These SBUs regularly deploy detachments overseas.

The reserve SBU-11, 13, 22, and 24 operate PB MK IIIs and a number of riverine craft, PBRs, and mini-ATCs as well as the Seafox craft.

c. Riverine

The NSW Groups operate approximately 35 Seafox SWCL, 36-foot craft that are highly suitable for inshore/riverine operations. These have a maximum speed of 32 knots and carry about a dozen men for limited distances. The normal operating crew is three, with small arms only. A SEAL platoon and a single rubber boat can be carried.

The Naval Reserve Force units have some 25 PBR Mark 2 craft, which are 32-foot, 25+ knot patrol boats. They were developed for Vietnam and have pump-jet propulsion for operation in shallow water. A crew of 4 or 5 can handle the boat's 60-mm mortar, 40-mm grenade launcher (Mk 19), and three .50-caliber machine guns. The Naval Reserve also has about 20 ATC armored troops carriers, which are 36-foot craft capable of 28 knots. These carry 15 troops in addition to a two-man crew.

The Sea Fox craft were delivered from 1981 onward; the PBRs and ATCs are of 1960s design and are reaching the ends of their effective service lives.

d. Coastal Patrol/Interdiction

The NSW Groups have 17 PB Mark III patrol boats. These are multi-purpose craft, 64-feet long and (now) capable of about 25 knots. Most if not all have been fitted with an automatic 40-mm gun mount forward, and can mount several machine guns. Their design provided for carrying mines, missiles, torpedoes, and heavier guns.

The PBs normally have a crew of five, which is augmented for heavier weapon loads. the PB Mark IIIs will reach the end of their effective service lives about 1990. The Sea Viking special warfare craft -- medium (SWCM) was designed to replace the PBs.

The Sea Viking is a 36-foot surface effect ship (SES) intended to perform both the coastal patrol and SEAL delivery missions. However, it is not really suitable for the SEAL mission because of its large radar cross section (RCS) and infrared (IR) signature.

Nineteen Sea Vikings were planned (for a total cost of \$248 million). The lead ship is the only one under contract, with the firm (RMI of San Diego) having declared bankruptcy prior to completion of the craft. So far the Sea Viking program has been a failure from a viewpoint of meeting special warfare requirements, as well as from a construction viewpoint. The Sea Viking fiasco, like the problems with the mine countermeasure programs (MCM and MSH types), again demonstrates the U.S. Navy's inability to effectively develop small combatant craft for a variety of reasons. A new start has been taken on the Sea Viking which, hopefully, will provide a series of craft suitable for the coastal patrol and interdiction role as well as the SEAL support role.

e. Offshore Capabilities

The Navy operates six PEGASUS hydrofoil patrol craft (PHM). These are ocean-going, 147-foot craft, completed from 1977 to 1983. They carry a 76-mm OTO Melara rapid-fire gun and eight Harpoon anti-ship missiles (75-mile range) at speeds of 40+ knots. Their range is 600+ nautical miles

at 40+ knots. They carry a crew of 23. These craft are based at Key West and are considered extremely effective for interdiction operations, with a significant anti-ship capability; they do not have an anti-submarine or minelaying capability.

A force of 30 PHMs was planned in the early 1970s (under the aegis of then-Chief of Naval Operations Admiral Elmo R. Zumwalt); subsequently the Navy cut the program to the one unit then under construction, but Congress forced the Navy to procure all six under contract at the time.

A follow-on class of six multi-mission patrol craft (PXM) has been proposed for operations in the Caribbean area. These ships would have PHM-type weapons/surveillance capabilities and an ASW capability, probably the AQS-13 series dipping sonar and/or a towed array. The program has not been funded, and its future is doubtful at this time.

If funding is forthcoming, these craft will probably have a high-speed displacement or hydrofoil-lifted hull; the Navy is seeking a mature design that can be produced without extensive research and development efforts. A modification of the Boeing PHM design was considered a leading candidate for the PXM, as the Navy believes that Surface Effect Ship (SES) technology is not sufficiently mature for this program. The expenditure for the lead ship is planned at \$70 million for hull and propulsion and \$30 million for weapons and sensors. Armament for the PXM will consist of Harpoon anti-ship missiles and a defensive gun system, probably 30-mm or 57-mm rapid-fire weapons. No ASW capability will be provided.

The Navy also has a large force of destroyers and frigates that are suitable for "quarantine"-type interdiction operations, as are the Coast Guard's larger cutters of the WMEC and WHEC series. (Obviously, availability is a major factor for this employment.) Since about 1983, U.S. Navy frigates have been employed in an intelligence-gathering role off the coasts of Nicaragua.

f. Mine Warfare Craft

During the Vietnam War the Navy's ocean minesweepers (MSOs) proved to be extremely effective in patrol and interdiction roles. The MSOs are stable, long-endurance platforms; their wooden construction made them highly suitable for coming along-side and inspecting wooden junks.

The Navy now has 21 outdated MSOs, all 172 feet in length. They can mount a 20-mm gun and small arms with a crew requirement some 75 officers and men in the minesweeping mode. At this time, 18 are assigned to the Naval Reserve Force (NRF) and three to the active Navy; the NRF ships regularly undertake operational missions. Completed between 1954 and 1958, the MSOs have only limited minesweeping capabilities and are reaching the ends of their useful service lives. The MSOs would provide a limited coastal patrol/interdiction capability, although they are highly vulnerable to heavy weapons fire; their long-endurance capabilities would make them ideal platforms for "selective blockades."

The active Navy also has seven minesweeping boats (MSBs). These 57-foot craft are of a type that were heavily armed and used extensively in the Vietnam War as riverine patrol craft. The survivors (at Charleston) and a few others employed for utility purposes have a limited potential for riverine patrol and interdiction operations.

Belatedly, two new mine countermeasure classes have been initiated: the mine countermeasure ship (MCM) and mine hunter (MSH). A total of 14 of the MCM and 17 of the MSH craft were planned. Both designs have experienced major technical difficulties and, in 1986, the MSH program was cancelled completely. In its place, the Navy has adopted an Italian minesweeper design with a program to construct 13 of these units (designated MHC). These ships will be fully dedicated to their mine warfare roles and would probably be unavailable for quarantine operations.

g. Coast Guard

During the Vietnam War the Coast Guard provided a large force of patrol boats as well as larger cutters that were forward deployed, with Navy logistics and maintenance support, to participate in the offshore/coastal patrol and interdiction operations. Twenty-six of these 83-foot patrol boats were transferred to South Vietnam in 1969-1970.

The Coast Guard's drug enforcement and fisheries enforcement missions provide an excellent grounding in the type of operations that would be necessary to support a "quarantine."

The U.S. Coast Guard has a large force of patrol boats (WPBs), which is now undergoing a modernization program. In general, the Coast Guard provides a force of superb boat handlers with extensive inshore/coastal operational experience. The current WPB force consist of:

<u>Class</u>	<u>Number</u>	<u>Completed</u>	<u>Length</u>	<u>Speed</u>
Island	16	1985-1986	109 ft	29.5 kts
Cape	17	1953-1959	95 ft	20-21 kts
Point	53	1960-1970	83 ft	22-24 kts

Eight of the Island-class WPBS were authorized for drug enforcement and the other eight (similarly employed) were replacements for the outdated Cape class; 16 more replacement ships are planned to replace the remaining Cape boats. The Island-class WPBs are armed with a twin 20-mm gun mount. Most of the other craft carry .50-caliber MF and small arms, although they can be fitted with 20-mm guns and 81-mm mortars.

In addition, the Coast Guard has three Sea Bird-class surface effect ships. Delivered in 1982-1983, these are 110-foot craft capable of 33-knot speeds. They were procured specifically for drug interdiction. A crew of 18 is assigned and a pair of .50-caliber MGs are mounted. A prototype SES

of this design was initially evaluated by the Coast Guard and has since been transferred to the Navy for additional evaluation.

h. Miscellaneous Assets

The Navy operates about 40 seamanship training craft (designated YP). These are used at the Naval Academy and officer Candidate School for seamanship training. They are wooden-hulled craft; about half, delivered from 1984, are 108-feet long and the others, built from 1965 to 1979, are 80-feet long. The craft are unarmed and would have a limited interdiction capability. Further, they are relatively slow (12 knots for the newer craft and 13.5 knots for their older units). Their significance is that they provide a useful cadre of junior officers and enlisted men with extensive small boat handling experience who are now employed in the training role.

The Navy also has a large number of torpedo (weapon) retrievers (TR/TWR). These vary in length from 63 to 102 feet, with some of recent construction (capable of 18 knots). The newer craft have a significant payload (up to 17 tons) and could be adopted for inshore patrol (as has been done in large numbers by the Soviet Union with their craft of this type).

i. Mobility Issues

Mobility is an issue for inshore and coastal forces because of their severely limited endurance. The MSO/MCM minesweepers have a long-range endurance (3,300 nautical miles) but at a speed of only 10 knots! The smaller craft have significantly less endurance. The PBRs and some of the other smaller craft can be air-lifted by C-5A/B Galaxy aircraft, but this requires aircraft available, a safe landing field near a port or suitable land transport to move the craft to a port, and that port to be within cruising range of the objective area.

The most suitable way to move these craft to an operational area is by a docking-well ship, such as a dock landing ship (LSD). The Navy currently

has 16 of these ships in service, which can accommodate essentially all small craft discussed above. There are also 13 slightly larger amphibious transport docks with similar wells. The large number of these ships, which have a long-range endurance and sustained speed of 20 knots, indicates that some would probably be made available to provide suitable sealift for coastal patrol and interdiction craft to a Central American operational area.

j. Logistics and C² Requirements

The riverine and inshore craft have limited endurance and must be provided with logistics and maintenance support every few days. In addition, an effective quarantine/interdiction force must have effective command and control.

These requirements demand the employment of larger ships to support sustained "selective blockade" operations. Such ships must be able to (1) provide effective self-defense, especially against air and small combatant attacks, (2) provide effective command and control facilities, and (3) provide limited logistic and possibly maintenance support to the small craft.

Command and control includes facilities for a senior officer and his staff to coordinate the operation. Such a "flagship" should have ample communications gear, accommodations, and, if possible, a helicopter facility. Logistic support for the small craft means providing fuel, provisions, and hot showers while the small craft come alongside every few days. A small maintenance team (for small craft engines, radars) should be embarked if possible.

In the Vietnam War several modified LST-type ships -- self-propelled barrack ships (APB) and small repair ships (ARL) -- were employed in the support role for coastal and riverine craft, as were partially modified LSTs.

There are three APBs available (now designated IX), all employed as stationary barrack ships at shipyards. Employing these ships in the support role would take them away from their current role as berthing/mess ships for crews of ships in overhaul.

The Navy retains one ARL, which was recently reactivated from the reserve fleet, modified to the intelligence-collection role, and employed off Central America.

The 20 LSTs of the NEWPORT (LST 1179)-class now in service (18 active and 2 NRF) are rather large for the support role and are definitely required for Marine amphibious lift, both on a peacetime deployment basis and in wartime. There are, however, nine older LSTs (completed 1953-1957) laid up in the National Defense Reserve Fleet, which could be taken out of mothballs if so required.

These LSTs are ideally suited for limited modification to support CP&I operations. One ship of this type, the GRAHAM COUNTY (LST 1176) was actually converted to a tender for small combatants (AGP 1176) and deployed to the Mediterranean in the 1970s. A similar conversion to support the PHMs was intended for the WOOD COUNTY (LST 1178), but that project was deferred.

These ships could be converted in a few months to provide berthing, mess, command and control, and light repair facilities for patrol craft. Further, their broad LST decks as well as the tank deck can accommodate several containerized shops, and a helicopter landing deck already exists.

These LSTs have a limited, albeit outdated, self-defense capability in the form of three 3-inch/50-caliber twin gun mounts (Mk 33). Some or all of these could be easily replaced by a 20-mm Phalanx "Gatling" gun or conventional 20-mm gun mounts could be easily installed to provide self-defense against hostile small craft and light aircraft.

The LSTs have sufficient endurance and storage space to remain on station for several months, if necessary. Their shallow draft (17 feet

maximum) makes it possible to anchor them in small bays and coves, where they could tend a brood of small craft. (Alongside pontoon platforms and, possibly, non-self-propelled service craft could complete an austere offshore support base for a sustained coastal patrol and interdiction operation.)

Again, suitable logistics and C² support are mandatory for a successful, sustained "brown water" operation. At this point modification of existing, mothballed LSTs appear the most practical means of accomplishing this.

k. Air Support

Patrol aircraft are invaluable in a blockade or surveillance operation of this type, to search out shipping and to provide early warning of possible hostile forces approaching the patrol area. The latter could be of major concern in the Caribbean in view of Cuban naval forces.

The U.S. Navy has 24 active and 13 reserve maritime patrol squadrons that fly various models of the P-3 Orion. This is an excellent, long-range patrol aircraft, with radar, visual, and electronic intercept search capabilities, plus a magnetic detection and sonbuoy capability for search for submarines. Anti-submarine and anti-ship weapons can be carried on wing pylons and in a weapons bay.

In addition, the Coast Guard operates a number of HH-130 Hercules, also powered by four turboprop engines, that are configured for long-range search (and rescue) operations. These aircraft are unarmed, and neither they nor the P-3 Orions have a self-defense capability.

The distances to the coasts of South America would require the availability of bases in the region. Panama, Grenada, and Venezuela are candidates, although all would be limited by political considerations. The only alternative would be to commit an aircraft carrier to the operation, but these ships are already tightly scheduled to maintain forward deployments in the Mediterranean, Western Pacific, and Indian Oceans.

These operations, coupled with exercises and training, make their availability for Central American operations limited without a drawdown elsewhere, and are certainly "overkill" in the context of patrol operations in support of a blockade or quarantine operation.

Air surveillance and support may be the greatest shortfall to a U.S. operation of this type unless carrier air is available.

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