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RESHAPING CONVENTIONAL CAPABILITIES:

OPERATION "DESERT STORM" AND THE NEW WORLD ORDER

HARVARD UNIVERSITY

John F. Kennedy School of Government

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The United States, as the pre-eminent national power in the world today, must continue to develop strategies for the employment of military force. The continued relevance of military force in the support of national objectives should be more apparent today than even a short time ago.

Implementing change will be difficult. Barriers to change must be identified and overcome. Maintaining individual service charters within a joint operational framework must continue to progress. However, some factors will not change. Superiority over the sea and air access routes continues (in the absence of nuclear war) to be vital to the basic survival of the nation. Yet, global naval superiority, critical in crisis management and in long term conflicts, is less relevant to the prosecution of mid-intensity armed regional engagements. Coalitions in regions where we have interests will continue as a fundamental tenet of our global involvement. We will continue to

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plan to fight beyond our borders, working with allies abroad to control crises. Once engagements begin, the ability to influence events on the ground through conventional capabilities remains the decisive element of combat. Our ability to project power through a balance of complementary air, sea and land capabilities remains the key to effective employment of conventional military force.

EXECUTIVE SUMMARY

The United States, as the pre-eminent national power in the world today, must continue to develop strategies for the employment of military force. The continued relevance of military force in the support of national objectives should be more apparent today than even a short time ago. In this regard, our principal assumptions regarding this force are the following:

- Conventional deterrence will increase in importance.
- Despite resource constraints, we must reshape conventional capabilities to address the growing diffusion of military power.
- Increased flexibility in conventional force posture is needed to meet the spectrum of challenges we are likely to face.

Based on these assumptions, we conclude that, in a resource-constrained environment, there are specific implications for future conventional military force posture:

- Deterrence, increasingly provided by conventional force, must be more relevant to regionally specific threats.
- Balanced power projection capability through increased strategic mobility for lethal, sustainable, self-sufficient active forces is necessary.
- Intelligence capabilities need a more global, less East-West, view with the ability to focus assets on regional hot spots.

- Conventional arms control must be thoroughly integrated into national strategy to reduce potential conflict risk.
- The ability to integrate forces in rapidly formed coalitions must be planned and exercised.
- We need improved flexibility through more self-sufficient, probably smaller, warfighting organizations that can be brought together under ad hoc command and control headquarters.
- Warfighting and acquisition strategy should stress our capabilities in information technology and management, training, leadership, and synchronization of combat power to benefit our enduring competitive strengths.

Implementing change will be difficult. Barriers to change must be identified and overcome. Maintaining individual service charters within a joint operational framework must continue to progress. However, some factors will not change. Superiority over the sea and air access routes continues (in the absence of nuclear war) to be vital to the basic survival of the nation. Yet, global naval superiority, critical in crisis management and in long-term conflicts, is less relevant to the prosecution of mid-intensity armed regional engagements. Coalitions in regions where we have interests will continue as a fundamental tenet of our global involvement. We will continue to plan to fight beyond our borders, working with allies abroad to control crises. Once engagements begin, the ability to influence events on the ground through conventional capabilities remains the decisive element of combat.

Our ability to project power through a balance of complementary air, sea, and land capabilities remains the key to effective employment of conventional military force.

CHAPTER 1

THE UTILITY OF CONVENTIONAL MILITARY FORCE

The recently concluded military confrontation in the Persian Gulf has shattered the hope for a more peaceful world that would follow "automatically" as the Cold War ended. Even in the absence of this latest conflict, many argued that there would be no guarantee of a tranquil future as the inherent stability of a bipolar world would begin to give way to a period of uncertainty, if not of greater instability. In partial recognition of these uncertainties, President Bush has described the present circumstances as a "defining moment" both for the future course of America's role in the international system and for the system itself.[1]

Within a few hours during the early days of August 1990, three important events occurred that serve to highlight the principal themes that will be discussed in this paper. The President delivered a major speech in Aspen, Colorado, which outlined a vision of a new world order in an era "beyond containment"; the Department of Defense proposed a military structure that was designed to support that vision; and the first major challenge to the still-undefined international security regime was presented in the form of the Iraqi invasion of Kuwait.

We need not abandon hopes for a future that could be less conflict-prone than the past and the present, but these hopes should be grounded in some consensus of what the international system may look like in the twenty-first century. The crumbling of the Berlin Wall has left an uncertain world where the predictable stability of the bipolar relationship between the acknowledged superpowers is being replaced by the realities of growing economic competition, shifting alliances, blossoming irredentism and transnational ideologies, diffusion of military technology, and an apparently reawakened global thirst for democracy and economic liberalism.

But we must also acknowledge that our future world will likely be shaped by the employment of military force in a variety of settings. We understand that the military that was relied upon to contain the Cold War may not be the force we need or can afford to meet tomorrow's challenges. However, the United States, as the pre-eminent national power within the international system today, must continue to develop strategies for the employment of military force within that system. This is true whether or not the system evolves to reflect norms based on international agreement, perhaps within the framework of the United Nations, or upon a more anarchic law of the jungle.

The continued relevance of conventional military force to support national objectives and, in some instances, multilateral or international requests, should be more apparent today than even a few months ago. This paper addresses broad concerns about the

design, conditions for employment, and structure of these forces. Its primary purpose is to focus on a prospective look at what is termed "military posture," a term used to describe the relationship of force capabilities to perceived strategic requirements to sustain a new world order. We believe that now is an opportune time to reexamine this relationship in light of both the transformation of the post-Cold War order and the challenge offered to widely accepted standards of international conduct by Saddam Hussein. As a result of these and other recent events, a "national debate" is commencing that concerns America's future role within the international system. This discussion has called into question some of the assumptions and policies of the national strategy that has been prosecuted in a fairly consistent pattern since the end of the second world war. As America's future role is being discussed, it is time to return to "first principles."

THE STRATEGIC ROLE OF CONVENTIONAL FORCES

One of our purposes is to influence the terms of this hoped-for and important discussion, especially as they relate to the future role of conventional military force. It is our belief that what has been called the "strategic role" of conventional forces will play an increasingly important part in determining the limits and direction of future national policies.[2] But the ability to fulfill this role has been put at risk, given our understanding of much of the current discussion. This preliminary conclusion relates to the manner in which conventional force capability had traditionally been justified in the past as the necessary

counterpoint to a powerful and ideologically opposed Soviet threat. As the Soviets have "disappeared" as a short-term conventional threat with the ending of the Cold War, so the argument goes, the possibility for substantial cuts in similar forces of the United States should be pursued. The "peace dividend" should be cashed in.

Americans prefer a Manichean world view -- or so it seems. As the "bad guys" appear to be vanishing, it becomes much more difficult to focus security policy or the strategy on which it is based. Instead of asking basic questions regarding the purposes toward which our strategy should be directed, we tend to look for the next enemy.

While we recognize the need to restructure conventional military force, not as an end in itself but as part of a broader and more fundamental look at future US national strategy, we also feel it important to urge caution on those who would dismantle our force structure "prematurely," especially in the absence of such a reassessment of basic aims. In one sense, the "peace dividend" might be viewed as the price that Americans should be willing to pay in order to maintain a superpower status, if that is seen as a desirable future national goal. We recognize the critical economic (and other) implications of maintaining a credible military force to support such a status, and many of these considerations will be discussed in this paper. The basic point is that any military capability must exist solely to support national strategy. If the "cost" of this capability is excessive, then its very existence may

contribute to a strategy that is unattainable. As an example, is six percent of our Gross National Product devoted to defense spending an excessive cost?[3]

We suggest that discussions of a peace dividend might be more productively undertaken by way of an analogy -- that of purchasing some form of insurance. The insurance is purchased to cover possible future "diseases," or threats, each of which has a low probability of occurrence. If a cure is found for one particular disease, there are still other threats that must be overcome. You do not cancel your health insurance just because a cure has been found for one deadly disease; there are others. Simplistically, but very much to the point, the insurance must be affordable and should be seen to be viable against those threats.[4] That is the critical point that appears to be missing from many of the present demands to drastically cut our conventional forces. These demands are being made because our former adversary and many of the assumptions associated with a potential NATO-Warsaw Pact confrontation in Europe are undergoing major transformations as one alliance has disintegrated and the other undergoes a reexamination of its charter.[5]

THE RELATIONSHIP OF STRATEGY TO FORCE STRUCTURE

The importance of matching, as best we are able, military strategy and its associated force structure to future national strategy implies that we should have a clear concept of the latter before drastically altering the former. Although some would argue that strategy is only the label that we apply to what it is that we

are doing anyway -- that it is an ex-post rationalization as opposed to a guide to action and policy -- it is prudent to make the admittedly difficult attempt to be clear about our national purposes before the fact. It has also been said that there is a dearth of "intellectual capital" about what constitutes a viable strategy in the post-Cold War era.[6] Where is the successor to "Mr. X" today?[7] Although our claims are considerably more modest, we do have some thoughts about conditions affecting future national strategy. Our principal concern is how can we most effectively design and employ our conventional military forces to support overall national objectives, given the uncertain conditions of the future?

It is worthwhile to remind ourselves that basic shifts in US national strategy, in our view, have not often taken place in the past. Several excellent studies have been dedicated to explaining, labeling, and placing in context these major national strategic shifts, and it is not our intention to review the literature on this point.[8] But it is helpful to emphasize the strategic constancy, if not consistency, whether by design or by default, that the United States has experienced throughout most of its history. Two principal factors have contributed to this. The first is the continental protection that we have enjoyed, which has resulted from friendly and cooperative neighbors and the immediate protection afforded by these relationships and great expanses of ocean. These conditions have fostered an "isolationist" tendency, which has been reflected in both our thinking and our strategy.

The second factor relates to an "interventionist" tendency that has manifested itself in "coming to the rescue" of friends and allies in time of need or in preaching to others about our own moral and political values. The interventionist tendency has been strongly influenced by the nuclear dimension of national strategy in the more recent past (although some might argue that the relationship is the reverse).

There has been a natural tension between these two factors, but the result of that tension in terms of national strategy has been to produce a greater consistency than one might expect. To repeat, our nation has not often shifted its basic strategy throughout its history.

Despite increased economic strength and international involvement after World War I, the United States returned rather comfortably to its prewar isolationist policy. Wilsonian "moral interventionism" was a noted failure.[9] The dramatic shift in national strategy that took place after World War II has remained remarkably consistent for almost forty years, although it required a five-year "wait-and-see" period, a Soviet nuclear explosion, and another major armed conflict to crystalize the policy of containment as laid out in NSC-68.[10]

Our contention is that while the conditions that led to the strategy of NSC-68 have changed, and have changed markedly in the recent past, the objectives remain sound. As we try to make sense out of the many trends within the international system that are occurring today, we would do well to keep the distinction between

conditions and objectives clear. The crumbling of the Berlin Wall was a dramatic visual affirmation of momentous developments taking place within the political-ideological realm, and this has helped us to focus on the more evolutionary, but equally important, changes in the international economic order. In short, these impressive changes have led to calls for substantial cuts in the defense budget based partly on hopes that the new order will be inherently more peaceful than the old. In the absence of a fundamental debate over the objectives of national strategy, such truncation may be unwise. It is with this note of caution that we begin our study.

OUTLINE OF THIS STUDY

In much of any discussion concerning national strategy or national security strategy, confusion reigns. This is primarily due to the fact that there is no agreed meaning on several concepts used to explain or describe the process by which a given strategy is operationalized or implemented. Figure 1-1 represents an attempt to show some of the relationships among key concepts that will be developed or referred to throughout the remainder of this study.

In terms of figure 1-1, our principal focus is on the box labeled "Military Posture." The figure depicts some of the key factors that influence military posture and, by extension, conventional military posture. These influences are based upon its position as a link between strategy and force capabilities,

although there are certainly other factors that can influence conventional military posture.

We have chosen to use the term "posture" to represent this link between military strategy and force capabilities, rather than another frequently used term -- doctrine. This was done purposely to avoid (if possible) confusing the concept of strategic doctrine[11] with its more narrowly defined military usage as a relatively rigid set of procedures to be implemented at the operational or tactical levels.[12] In any case, two other important points regarding figure 1-1 should be noted. First, conventional force posture is dependent on the "logic" of the downward flow from national values through national strategy to force capabilities and, ultimately, force structure. There is a reverse chain of influence, indicated by the weaker upward-pointing arrows, which simply represents the reality that a logical downward flow is not the only possible outcome. Second, the perceptions of threats or potential challenges have a direct bearing on the formulation of national strategy. It is the changing perception of the threat that is leading to the previously discussed debate concerning national strategy that is currently taking place.

Figure 1-1 should also prove useful to the reader as a guide because it helps to make clear what we will not discuss in great detail, as well as what we will. As an illustration, we will not discuss the details of force structure (on the lower end of the downward chain), nor will we discuss in detail national interests or values.

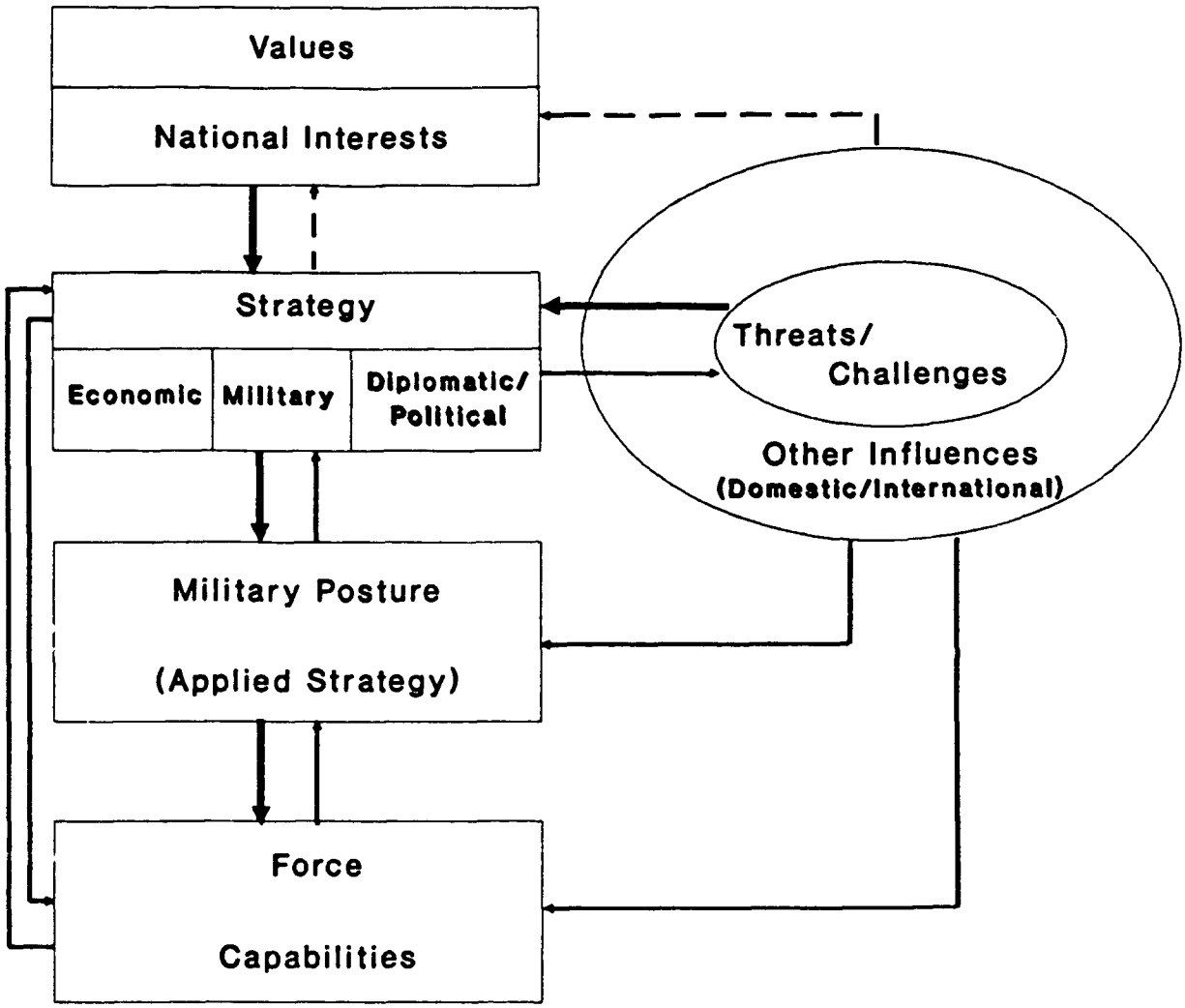

Figure 1-1. A Framework: The National Security Policy Process

We have selected two organizing themes for this study -- a more or less chronological description of the background, present conditions and prospects for the future that have led to the need to reexamine the issue of conventional force capabilities and an identification of several specific problems that must be addressed to offer a guide for policy. In the best tradition of the Kennedy School of Government, we will attempt to both describe and prescribe.[13]

The main point of this study is that there exists a pressing need to re-address certain fundamental issues associated with conventional military force posture before making major policy decisions that may be difficult, if not impossible, to overcome should the need arise in the future. In short, we are urging some tough preliminary thinking be done about national strategy -- and even what constitutes our national interests in the post-Cold War era. To significantly degrade our conventional military capability in the absence of such thinking is unwise.

The next three chapters describe the relevant history of how these issues were addressed in the recent past, the context within which decisions on conventional military forces are made, and an analysis of the difficulties of achieving political ends by using military means. The latter be done place by looking at our general and somewhat theoretical issue through the specific and very real lens of Operation Desert Storm. It must be emphasized at the outset that our effort is not meant to be a comprehensive "lessons learned" from this significant military action. That must await

events. However, Desert Storm does provide both a convenient focus and a pressing stimulus for this study. We will conclude by offering some thoughts about future prospects for the use of conventional military force.

NOTES

1. This idea was expressed in the President's "State of the Union" address on 21 January 1991.

2. Although the Navy and the Air Force have defined a "strategic role" for their conventional forces for a number of years, the Army has not emphasized this role until recently. For the current Army view, see the presentation by General Carl Vuono in A Strategic Force for the 1990s and Beyond (January 1990 Army "white paper," Washington, DC: GPO, 1990). The concept of the strategic role of conventional forces is not identical for each of the armed services, as the very real interservice obstacles that have existed in the past continue today. Even though each service defines its strategic vision in markedly different terms, the services are moving toward the development of a joint perspective on many fundamental strategic issues. See also The Air Force and U.S. National Security: Global Reach - Global Power (Washington, DC: GPO, June 1990) and Michael M. McCrea, Karen N. Domabyl, and Alexander F. Parker, Center for Naval Analyses (CNA) Research Memorandum 89-201, The Offensive Navy Since World War II: How Big and Why (July 1989).

3. There is, of course, another significant issue that must be addressed when discussing the cost-capability relationship. In basic terms, this is the fact that increases in defense spending (cost) do not necessarily translate into corresponding increases in "capability." In other words, increases (or decreases) in defense spending are the necessary, but not sufficient, conditions that contribute to increases (or decreases) of relevant capability. The "efficiency" by which financial resources are translated into military capability is a critical variable.

4. For a discussion of many of these issues, including the use of similar analogies, see Caspar W. Weinberger, Department of Defense Annual Report to the Congress - Fiscal Year 1987 (Washington, DC: GPO, 5 Feb. 1986) 13-25, 41-42.

5. For a controversial but interesting discussion of some of these basic assumptions in the post-Cold War era, see John J. Mearsheimer, "Back to the Future: Instability in Europe After the Cold War," International Security vol. 15, no. 1 (summer 1990): 5-56.

6. As an illustration, one popular sobriquet that has been given to national strategy today is the not-very-original label "Beyond Containment." The idea concerning the paucity of new thinking on strategic issues was discussed by Graham T. Allison in a presentation to the National Security Fellows, John F. Kennedy School of Government, Harvard University on 29 August 1990.

7. "Mr. X" was the author of a famous article that outlined the rationale for what came to be known as the strategy of "containment." This author was later identified as George F. Kennan, the former Director of the State Department's Policy Planning Staff. The original article was entitled "The Sources of Soviet Conduct" and appeared in the July 1947 edition of Foreign Affairs.

8. Sam Huntington, in a presentation to the National Security Seminar of the Center for International Affairs, KSG, Harvard University, (17 September 1990) proposed that the United States has gone through four distinct strategies for national security. These are (1) from 1776-1815, externally focused strategy with a European orientation; (2) from 1815 to the 1890s, the United States turned inward; (3) from 1900-1945, expansion of naval power coupled with better planning mechanisms for external conflict, but no large standing army; (4) from 1945-1990, containment and deterrence.

9. The reality is not as simple as described here. Some have argued that the return to isolationism after WWI deprived our erstwhile allies of the ability to resist German hegemony, which led to the appeasement of Munich. If one accepts this line of reasoning, Lend Lease and other attempts by Roosevelt to re-institute interventionism, resisted strongly by the isolationists, could be seen as perhaps a more pragmatic attempt to revive Wilsonianism in moral terms. The basic point remains, however, that there has been a tension between these two factors in the conduct of American foreign policy.

10. NSC-68 is a document that has been frequently described as "the first comprehensive statement of national strategy for the Cold War." See Alexander L. George and Richard Smoke, Deterrence in American Foreign Policy: Theory and Practice (New York: Columbia University Press, 1974) 26.

11. See, for example, Henry A. Kissinger, ed., Problems of National Security (New York: Frederick A. Praeger, 1965) 9.

12. US, Department of the Army, Field Manual 100-5: Operations (Washington, DC: GPO, 5 May 1986) 6.

13. We are grateful for the many opportunities afforded by the National Security Fellows Program at the John F. Kennedy School of Government, Harvard University, in allowing us to undertake this study. It became clear to us as we continued to research our topic that there exists the need to bridge a gap between two groups of the larger interested public concerned with issues of conventional force posture. In an oversimplified form, the need can be expressed as follows. The "academics" have credibility and a familiarity with the larger and complex strategic issues, but many lack an understanding of the nuts and bolts of conventional force capabilities and characteristics. The "defense establishment" (uniformed and civilian) possesses knowledge about these issues but may lack credibility (in the eyes of many of the "academics"). As we are part of the latter group, we came to feel that our competence to present the findings of this study would be questioned by some because of our presumed inability to take a step back from our personal experiences and see the larger picture. In order to try to overcome this tendency, we made a special effort to submit previous drafts of this study to several interested individuals, mostly outside of government. We are grateful for their thoughtful comments and hope they have made our presentation more credible.

CHAPTER 2

FORCE EMPLOYMENT DURING THE ERA OF CONTAINMENT

The preceding chapter provided a framework within which conventional military posture can be evaluated. This chapter will describe how conventional force was employed during our nation's recent past. The effort will be directed to taking a "snapshot" of the national security policy process in order to place the observations that are made within the context of the framework that we previously introduced.

Of course, it matters very much which dates are selected to form the basis of this description. The act of determining the "relevant history" of an issue may be more of an art than a science.[1] We will take a pragmatic approach to this admittedly difficult task by focusing on conventional force employment during the nuclear age. There has been almost universal agreement that the nature of warfare has changed categorically since the advent of these weapons of mass destruction and this overriding fact has been a major formative influence on security issues.

The principal shortcoming of our analytical framework is that it attempts to describe a complex, dynamic process by means of a static approach, by taking a "snapshot" of that process at a point in time. But it still offers a starting point. If we recall that

the focus of our study is conventional military posture, then the framework suggests several perspectives that may be useful in examining issues associated with military posture. The basic perspectives are vertical and horizontal (keeping in mind the layout of figure 1-1). The vertical perspective has two variations:

(1) a downward view that considers conventional military posture as the logical result of a given national strategy. This posture, in turn, drives capabilities and force structure.

(2) an upward view that considers the effect that our capabilities and posture can have on the "larger" national strategy.

The horizontal perspective (in terms of our framework) is useful in analyzing the relationship of defense needs to other pressing national needs, and especially in determining what other factors directly influence our national strategy, such as threat assessment.

KEY ISSUES

From these perspectives, we have identified several key questions that will be examined throughout this study. They are

(1) Can conventional military forces be made more relevant to specific regional threats? How?

(2) How can strategic mobility be improved?

(3) In what ways can intelligence assets be better focused to counter future threats?

(4) What are the prospects for conventional arms control?

(5) How can planning for coalition warfare be improved?

(6) How can organizational improvements lead to improved warfighting capability? What are these improvements?

(7) What is the US "comparative advantage" in warfighting and acquisition? How can we best profit from our relative strengths?

While it is true that each of these issues has been, and will probably continue to be, the subject of separate and detailed studies, we feel that there is value to introducing them as a group here. This is because these issues do not stand alone; they are interrelated in complex ways in the same manner that the separate components of the national security policy process are related.

Our discussion of the "relevant history" will, therefore, be based on its relationship to these questions. The starting point for this history is post-Korean War, when the need for containment of what came to be seen as an expanding and increasingly hostile Soviet Union was recognized.[2] This history includes the "anomaly" of the Vietnam War: an anomaly because many observers maintained that the relationship of that conflict to vital national interests was not immediately apparent. However, the obvious hold that this chapter of our relevant history has on the nation ("this will not be another Vietnam" was said in reference to the Persian Gulf War) makes it important to try to interpret the Vietnam experience as it relates to the willingness of Americans to use conventional military force on a massive scale.

ASSUMPTIONS REGARDING THE ERA OF CONTAINMENT

What were the conditions of the international system, from the perspective of American policymakers, when the strategy of Containment prevailed? This fundamentally defensive strategy, as outlined clearly in the document known as NSC-68,[3] was a unifying principle on the national level. In addition, it was seen as a guide to our military strategy, both nuclear and conventional. To summarize in a few points the underlying conditions under which the Cold War was fought may open us to charges of oversimplification. We accept that possibility as we offer the following:

- The principle of "collective security," as outlined in the Charter of the United Nations, came to be viewed as irrelevant in resolving serious conflicts.
- The Soviet Union was acknowledged as the major threat to our security. "Balancing" its power was our answer to this threat.
- From a security perspective, much of the world was organized into various formal alliance relationships that reflected the bipolar confrontation between the two superpowers.
- Deterrence of nuclear war came to be recognized as a fundamental tenet of the security policy of both superpowers. An "uneasy alliance" on the nuclear level thus lent a certain amount of stability, or at least predictability, to the overall relationship. "Spheres of influence" were recognized.
- US security strategy was Euro-centered due to a fundamental assumption that the world was basically organized into two

hostile "camps" and a more amorphous "third world." This led to superpower involvement in serious military conflict on the "fringes" but not in the "center" of this world.

- The United States made a conscious policy decision to provide a security umbrella for its defeated WWII enemies (and new allies) and to assist in the economic rebuilding of both Europe and Japan. Our position as the only "economic superpower" to emerge relatively unscathed from that war came under increasing challenge as a direct result of this conscious policy.

In summary, our military policy was based on containment through deterrence, our economic policy was founded on the principle that the US economy would serve as an engine of growth for forces of economic liberalism, and our political strategy was built on alliance structures that were dedicated to preserving democracies and protecting perceived national interests. While these assumptions about the underlying conditions of most of our post-WWII history are admittedly generalizations, as an aid to understanding policy they are useful.

While these assumptions help to describe the overall context within which decisions on the design and employment of conventional forces were made, mostly at the level of national strategy, there were other important factors impacting military posture. The following represents a synopsis of major trends affecting conventional military posture during the Cold War era:

(1) The evolution of NATO (as well as other alliances) gave US military forces and their political leadership some experience in resolving warfighting issues within coalitions. This had particular importance regarding "high level" Command, Control, Communications and Intelligence (C^3I) issues.

(2) The All Volunteer Force (AVF) came into being as a direct result of the political unpopularity of the Vietnam War.

(3) Partly as a result of the beginnings of the AVF, the appropriate mix of active forces and reserve forces was modified. The "Total Force Policy" was geared primarily to the perceived need to reinforce Europe on a massive scale, should that be required.

(4) "Contingency operations" were conducted on an ad hoc basis. Both the role of reserve forces in these operations and the ability to garner appropriate lessons learned were, respectively, unclear and undeveloped.

(5) Significant questions arose concerning our ability to mobilize both manpower and the industrial base in order to support a major conflict.

(6) Service-oriented views of roles and missions remained central to both peacetime planning and warfighting, although unified commands were developed and joint perspectives are being developed. The Cold War period could not be characterized as one in which the Joint Chiefs of Staff (JCS) had a major impact on fundamental defense policy decisions.

(7) Our intelligence capability was focused primarily on the Warsaw Pact and global East-West relations, as human intelligence (HUMINT) resources were relatively degraded when greater dependence on high-technology collection means became the norm.

(8) Conventional military force was used primarily in a defensive, deterrent role in "critical" areas (Europe, for example) and in a warfighting role on the periphery. In addition, conventional military force was frequently employed in crisis management situations as a "show of force" and was infrequently utilized during superpower confrontations. The employment of conventional military force by the United States was always assessed within the context of the overall nuclear relationship.

While containment of the Soviet Union provided an organizing principle for American policy, the concept of deterrence helps us to understand the relationship of actions to strategy during this period. This was especially true on the nuclear level, where deterrence can be "assumed" to have worked. It is not clear, however, that conventional deterrence is a concept that offers sufficient explanatory power to be useful, at least during this period of our history. This is because it is very difficult to separate the "nuclear" and "conventional" dimensions of deterrence from each other. The major failure of conventional deterrence - failure in the sense that the Cold War period was not characterized by a lack of armed conflict between states, or even involving the

superpowers - is that deterrence was almost always associated with nuclear conflict. It was, therefore, a valid measure of the global superpower confrontation, but less useful in non-nuclear situations and so-called "regional" confrontations that may or may not have involved one of the superpowers.

We believe that the employment of conventional military force in regional settings will become more possible, if not more likely, in the future than it was during the period of the Cold War. Because of this, it is important to try to distinguish those factors that apply to the employment of that force in a specific region from those factors that would apply to any region.[4] This is not an easy task. Our basic assumption is that if we examine this issue in a region that is "highly likely" (if not most likely) to experience armed conflict, then it would not be unreasonable to assume that necessary adjustments could be made to apply the conclusions resulting from our analysis to other regions. We have chosen the Middle East for this analysis because it has been a region that has exhibited substantial unrest and that is and will continue to be vital to US interests.

REGIONAL CONFRONTATION IN THE MIDDLE EAST

As we have suggested, the management of regional confrontation within the overall global context became one of the key challenges of the Cold War era. Even the possibility that such confrontations could be "managed" at all was not taken for granted. This was especially true in the Middle East, where a series of armed conflicts among several groups of states (or non-state groups) made

conflict the norm, and periods of calm (much less peace) the exception. In recent years, the following trends have been identified that seem to explain much of the conflict and historic unrest of the region:[5]

- resurgent Islam and Islamic "revivalism."[6]
- the tension between separate Islamic movements and "mainstream" Islam.
- the conflict between conservative monarchies and their policies, some of which encourage political pluralism and popular participation as an outcome of modernization and change.
- secular ideologies and their conflict with religious movements and conservative, tribal states.
- the problem of resource distribution and demographics, both within and among states.
- the trend toward growing state and non-state nationalism and the apparent shift away from pan-nationalist, pan-Arab movements.
- Arab-Israeli relationships and the Palestinian issue.

Along with these trends, which contribute to regional instability, is the historical legacy of traditional boundary disputes. Many of the state boundaries within the region are a direct outgrowth of the efforts of surveyors of the British Foreign Office and, as such, reflect little regard or understanding of demographic forces or other realities. They have become rallying points for the populations of newly emerging states preaching newly

developed nationalisms. There are at least eleven unresolved boundary disputes in the region, three of which have led to armed conflict. Most of these disputes also involve known oil-producing areas.[7]

AMERICAN POLICY OBJECTIVES

American policy objectives in the Middle East, at least since the end of World War II and the birth of Israel, have been clear and consistent. They are

(1) support for and security of the state of Israel.

(2) the guarantee of access to oil resources.

(3) promotion of regional stability.

(4) until recently, the limiting of Soviet influence and access to the region. This regional objective was a direct outgrowth of our previously discussed global strategy.[8]

These major regional objectives were pursued consistently during the period of the Cold War, much as our overall national objectives remained consistent. Although the relative priority of the regional objectives shifted as required by changing political and economic considerations, American strategy toward the nations of the Persian Gulf in particular has traditionally been based on the careful maintenance of a regional balance of power designed primarily to limit Soviet influence. This effort to maintain an acceptable regional balance was made after recognizing that those states that possessed the greatest energy resources were too weak

to defend themselves. In practical terms, the United States effected "balancing" in the region through a proxy or proxies.[9]

Until the Iranian revolution of 1979, US policy was centered on support of a specific regional balance of power, based on the "twin pillars" of Saudi oil and Iranian military might. This policy was outlined in the Nixon Doctrine, first announced in 1969.[10] Many have argued that this doctrine represented more a reflection of the need to "Vietnamize" the major conflict that we were involved with at that time than of a new strategic direction. In any case, our ability to support a given regional conflict was continually revised in light of our potential for a so-called "global confrontation" with our principal adversary.

THE CARTER DOCTRINE AND THE CREATION OF THE RDJTF

The next major shift in our Middle East policy came with the Carter Doctrine of 1979, after the Iranian revolution and ouster of the Shah and at the time of the Soviet invasion of Afghanistan. President Carter stated:

> Any attempt by an 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.[11]

Although the necessity of employing military force in the protection of vital national interests was recognized, no forces were dedicated to accomplish this. As a result, the National Security Council proposed, in the crisis atmosphere of early 1979, that a Rapid Deployment Force, later renamed the Rapid Deployment Joint Task Force (RDJTF), be created for possible use in Southwest

Asia. The plans for the employment of this "contingency force" were almost exclusively tied to contingencies focused on the Soviet threat, not threats emanating from the region.[12]

This early attempt to plan for the projection of military force in the Middle East was severely resource-constrained. Former Secretary of Defense James Schlesinger characterized the RDJTF as neither "rapid, deployable, nor including a force."[13] He was not alone in this description. The conventional forces identified for possible use as part of the RDJTF were "borrowed" from their major purposes in Europe or Asia, and there were serious deficiencies in their "strategic lift capability," both air and sea.[14] Service priorities were not in line with newly developing joint notions of force projection: the Army tended to buy heavy equipment geared for the European theater and few spokesmen in the Air Force and Navy favored the development of lift assets over frontline combat systems such as fighter aircraft or new cruisers.

THE REAGAN COROLLARY AND US CENTRAL COMMAND

In 1983, the Carter Doctrine was augmented with the "Reagan Corollary," which reflected an American willingness to assume the role of regional protector from both internal regional threats and those viewed as externally based. In a sense, this made explicit what was implied by the Carter Doctrine and represented an acknowledgment of the need to respond to the rising challenge posed by Iran and the military weakness of Saudi Arabia - the last remaining shaky pillar of our Middle East policy. Later in the same year, the RDJTF was redesignated as US Central Command

(USCENTCOM), a unified command reporting directly to the Secretary of Defense.[15] But no new forces were created for CENTCOM in recognition of this presumably increased status. Many have argued that the Iran-Iraq War, which began in 1980, allowed breathing space for the development of some regional force projection capability on the part of the United States.

In any event, the possibility of a major conflict faced by CENTCOM highlighted numerous difficulties that would have to be resolved. These difficulties were certainly operational, based as they were on fighting in a remote and hostile environment, but more significantly they were tied to a continued shortage of resources. As a result, US force posture in the region and the capability to project force into the region remained inadequate as one chapter of the Cold War drew to a close and a new threat emerged in the form of a potentially hostile regional hegemon.[16]

One positive development should be mentioned. With the passage of the Goldwater-Nichols Bill in 1986, some progress was made toward development of joint doctrine and in streamlining command and control relationships, especially in unified commands such as CENTCOM.[17] The practical effect of this streamlining was to give the unified (regional) commander greater authority in dealing with his subordinate component (separate service) commanders. The result was, potentially, a more efficient warfighting organization. In the Middle East, many of the potential obstacles to making the concepts endorsed by Goldwater-Nichols a reality were worked out during the Persian Gulf

"reflagging operation" of 1988. Additional CENTCOM initiatives, including multilateral exercises with friendly Arab nations and escort operations, worked toward the same goals. Experience gained during these operations allowed USCENTCOM to better prepare for future challenges.

The preceding description of the national security environment during the Cold War period, on both a global and a regional level, was undertaken in order to present the background upon which future policy will be made. The next chapter fills in this background by discussing the theoretical underpinnings of conventional force posture. It is only by understanding the relevant history provided by the era of the Cold War and its associated strategy of containment that we will be able to make informed judgements concerning the future relationship of force posture to national interests. The events of 2 August 1990 mark a convenient dividing line between the recent past, of which we have some understanding, and the uncertain future.

NOTES

1. This is a major theme of the excellent book by Richard Neustadt and Ernest May, Thinking in Time: The Uses of History for Decision Makers (New York: The Free Press, 1986).

2. John Lewis Gaddis, "The Evolution of Containment," from Gaddis and Terry L. Diebel, eds., Containing the Soviet Union (New York: Pergamon, 1987) 1-12.

3. NSC-68, "United States Objectives and Programs for National Security," 14 April 1950, US Department of State, Foreign Relations of the United States: 1950 (Washington, DC: GPO, 1950).

4. Among the factors that could present the potential for conflict in any region of the globe are the following: conflicts between traditional and modernizing societies, conflicts between secular and religious ideologies or between different religions, conflicts over income distribution, and a generalized "anti-Western" or anti-status quo dissatisfaction.

5. For an excellent overview of the dynamics of the politics and culture of the Middle East, see James A. Bill and Carl Leiden, Politics in the Middle East (Austin: University of Texas Press, 1984) and Michael C. Hudson, Arab Politics: The Search for Legitimacy (New Haven: Yale University Press, 1977). Both works are classics on the subject of regional comparative political systems.

6. The term "revivalism" is used here instead of the frequently misused "fundamentalism" to denote that the Islamic movement to which we give reference is compatible with technologically based forces of modernization.

7. Lenore G. Martin, "Patterns of Regional Conflict and US Gulf Policy," from William T. Olson, ed., US Strategic Interests in the Gulf Region (Boulder, CO: Westview Press, 1987) 10-12.

8. William B. Quandt, Decade of Decisions: American Policy Toward the Arab-Israeli Conflict, 1967-1976 (Berkeley: University of California Press, 1977) 5-35. For an official statement of US regional objectives just prior to the Gulf War, see the testimony of General H. Norman Schwarzkopf before the Senate Armed Services Committee (Washington, DC: GPO, 8 Feb. 1990) 41-42.

9. Dave Gold, America, The Gulf, and Israel: CENTCOM and Emerging US Regional Security Policies in the Middle East (Boulder, CO: Westview Press, 1988) 25-28 and Gary Sick, "The Evolution of US Strategy," from Alvin Z. Rubenstein, ed., The Great Game (New York: Praeger, 1983) 60-68. Both works stress the shift of US strategic forces from the eastern Mediterranean to the Persian Gulf after the 1973 Arab-Israeli War.

10. Henry A. Kissinger, Years of Upheaval (Boston: Little, Brown and Co., 1982) 669.

11. Department of State Special Report No. 166, July 1987, "US Policy in the Persian Gulf," appendix C (Washington, DC: GPO, 1987) 88.

12. Jeffrey Record, The Rapid Deployment Force and US Military Intervention in the Persian Gulf (Cambridge, MA: Institute for Foreign Policy Analysis, 1983) vii.

13. James R. Schlesinger, "Rapid (?) Deployment (?) Force (?)," Washington Post 24 September 1980: A-18.

14. Maxwell Johnson, The Military as an Instrument of US Policy in Southwest Asia: The Rapid Deployment Joint Task Force, 1979-1982 (Boulder, CO: Westview Press, 1983) 68-70.

15. Thomas L. McNaugher, Arms and Oil: US Military Strategy and the Persian Gulf (Washington, DC: Brookings Institution, 1985) 14-18.

16. Johnson, 23-30.

17. This and related issues are discussed in C. Kenneth Allard, Command, Control, and the Common Defense (New Haven: Yale University Press, 1990). See also the statement of General George B. Crist, USCENTCOM Commander, in testimony to the Defense Subcommittee of the House Appropriations Committee, "Status of the US Central Command" (Washington, DC: GPO, 22 Feb. 1988) 25-28.

CHAPTER 3

RESHAPING CONVENTIONAL FORCE CAPABILITIES: BUILDING A FOUNDATION FROM CRISIS AND CHANGE

President Bush, in his Aspen speech on 2 August 1990, had but one line that mentioned Iraq's invasion of Kuwait. That speech had another purpose. It was designed to set a vision for the future in a time of change. Little could anyone have known that the unfolding crisis would become, as the President later stated, the defining moment in this period of change. Yet, Persian Gulf military operations -- a massive deployment in response to the invasion, an employment as a credible threat for use in diplomatic brinkmanship and, finally, a commitment to violent combat -- provide a fortuitous opportunity to examine our conventional force posture. Syndicated columnist David Broder wrote shortly after the August invasion:[1]

> The Persian Gulf crisis has provided a wake-up call for a government and a citizenry that has been wallowing in unearned complacency. It also has shattered a dangerous myth . . . that the need for a strong military ended with the Cold War . . . That needs to be borne in mind by those who would solve every budget problem by whacking the Pentagon.

In this chapter, we will expand our discussion of conventional military force posture in order to determine what is the appropriate policy direction to make conventional force

capabilities relevant to the evolving environment. We accept the argument that this environment is changing rapidly; perhaps, to use a now hackneyed expression, it is even undergoing "tectonic shifts." What is less clear is how the tectonic plates will settle. In any case, the fact that our military strategy as embodied in our capabilities must be relevant to this new environment remains clear. Our military posture must have applicable and appropriate instruments of force to attain, in combination with the other instruments of national power, the goals of national strategy. We believe that an analysis of the role of conventional force in support of national strategy will help to flesh out our previously introduced analytical framework and contribute to a more meaningful future discussion of needed capabilities in a rapidly changing world.

NATIONAL STRATEGY: ENDS, MEANS, AND WAYS

In chapter 1, a framework was introduced to help explain several concepts that we will explore. This framework included what we called "national strategy" and "military posture." In this chapter, we will develop in more detail both of these concepts, beginning with national strategy.

National strategy is succinctly defined in terms of the relationship among three factors: ends, means, and ways. This sounds simple, but experience shows that national strategy results often from the synthesis of evolutionary policies, as opposed to the outcome of a discrete planning effort. This history also demonstrates that there exists significant confusion among those

who discuss strategic issues concerning the interrelationship of these three concepts. This is not surprising considering that national strategy deals with providing direction in a complex, dynamic, and basically anarchic international system. Building from the framework established in chapter 1, we turn now to examine the internal relationships that comprise the block labeled National Strategy. Figure 3-1 is a guide to the discussion that follows.

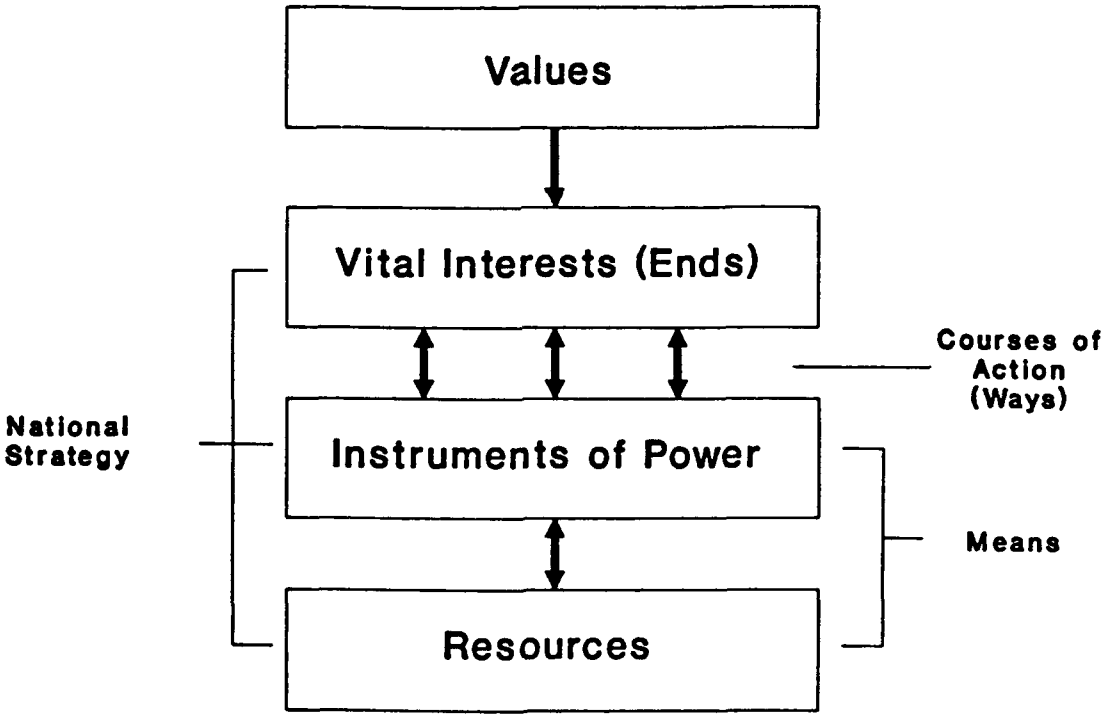

Figure 3-1. National Strategy: Ends, Ways, and Means

On the surface, the "ends" (goals, objectives) of national security are almost tautologically simple. President Bush has enumerated four goals. The first two -- survival of the United States as a free and independent nation and a healthy and growing US economy -- are fundamental goals that reflect the classic role of the state as the provider of protection and welfare. The second pair describes supporting goals in that they address conditions in the rest of the world -- a stable, secure world and healthy, cooperative relations with allies -- that aid in the attainment of the fundamental ends of the nation.[2]

There is little disagreement with these goals now, and they have caused little debate in the past. There likely will be basic agreement on them in the future. Problems arise, however, in two areas. First, the attempt to relate these enduring goals to specific issues is difficult. Thus, we see in the Kuwaiti crisis the difficulty the administration had in articulating a consistent answer concerning why countering the invasion by Iraq was something of vital interest to the United States. Secondly, initiatives undertaken to foster one goal may be perceived as detrimental to another. This point is particularly pertinent in an open society where policymaking is increasingly transparent. Interest groups have immediate access through modern communications to wide audiences. Debate focuses on trade-offs among objectives where the accompanying analysis is often strongly, if not exclusively, biased in favor of the short term. To use an economic analogy, it would appear that the discount rate for active external involvement,

especially for those activities resulting in military costs, is rising. Thus, if the gains are not obvious and immediate when the short-term costs are believed to be high, the people of the United States will demand an examination of trade-offs. This is not all bad as, to continue the economic analogy, trade-offs are what efficient, competitive markets are all about.

While national survival is normally ranked as the top priority goal, threats to national survival have been seen primarily in terms of a nuclear conflagration. It is therefore more difficult to justify the short-term costs of active external intervention under the mantle of securing intact the more long-term and less-measurable fundamental values of the United States and its survival as a free nation. This is because the short-term costs, economic and military as well as political and cultural, are normally much more visible than short-term benefits. This fact of political life, coupled with the tendency of many policymakers (especially those associated with the legislative branch of our government) to attempt to resolve domestic issues prior to foreign policy issues, has contributed to the current debate over the prioritization of ends and how they will be achieved. Some observers argue that these political realities force policymakers to operate in a Janus-like fashion, which makes resolution of competing aims difficult.

Returning to figure 3-1, the means (or instruments) of national strategy are derived from a nation's resources. While these resources may be hard (military and economic) or soft (diplomatic/political and cultural), they collectively provide the

instruments that generate the power through which a nation achieves its ends.[3] In a period of fundamental change, when the ends-means relationship is the appropriate focus of debate, both an examination of the relationship among the means and the relative importance of each of them are equally necessary. It is apparent that this debate is underway in the United States today -- what is not so obvious is the effect that the Gulf War may have on it. We will return to this point later. For now, however, we will offer some general observations on the means of strategy:

- In the short term, a direct external military threat to the survival of the state will always take priority over other national objectives in the employment of power instruments.
- In the long term, indigenous military potential is a function of economic capacity.
- The efficiency with which a nation converts latent resource potential into effective power is critical.
- A bedrock of hard power (economic, military) is necessary to gain influence through soft power (cultural, ideological).
- The externalities of national actions due to global interdependence are growing.
- The "shrinking globe" caused by modern communications and transportation implies that military conquest (holding land) is more difficult and costly to achieve and less useful in attaining national objectives.
- How an instrument is applied (compelling or co-opting) matters.

These observations have clear implications for the manners (ways) in which the means should be applied, especially the means of conventional military force.

The means of national security can be directed in three possible ways:

(1) Focused internally -- Isolationist

(2) Focused externally in a co-operating and co-opting fashion -- Coalition-based

(3) Focused externally in a coercive and compelling fashion -- Imperialist

In various combinations, these three approaches direct the means to achieve national ends. These combinations, complemented by the ability to convert means into usable power, determine the national strategy and the effectiveness with which a nation achieves its desired ends. When a breakdown in the ends-means relationship leads to the conclusion that a state is unable to secure its goals effectively, a nation is at risk and a change to national strategy or at least the recognition of that risk is essential.

It is not easy to identify, much less react appropriately to, fluctuations that occur within a nation or a group of nations concerning the ever-changing trends in the instruments of power or the priorities that are valued by individual states. The normal course is probably to proceed with what has been effective in the past. For example, as previously mentioned, despite the emerging international dominance of the United States in 1918, the United States attempted to return to its pre-war isolationist posture. It

took over a generation before the United States formally altered this stated posture. Today we see an atavistic call by some for a policy of neo-isolationism.

The argument for a neo-isolationist policy has been made either on the basis of geo-political realities or of cultural heritage. The former is usually made on an explicit basis, the latter implicitly. There do appear to be some underlying national characteristics that greatly influence our ability to convert latent capabilities into effective and usable power. These types of "national" characteristics constrain the range of options nations consider in the ends-means dialectic.[4]

THE ENDS-MEANS RELATIONSHIP: IMPERIAL OVERSTRETCH OR GLOBAL LEADERSHIP

The publicity Paul Kennedy's book received helped to crystallize the ongoing debate concerning the direction of our future external involvement.[5] While trying to avoid being labeled an "economic determinist," critics like Kennedy argue that long-term economic well-being is the critical mass of great power status. Categorized, perhaps pejoratively, as declinists, the school of thought represented by Kennedy proposes that imperial overstretch and its concomitant military spending have been the precursor to great power decline by undermining economic vitality.[6] Joining this school in arguing for reduced security entanglements beyond our borders are those who contend that, absent the rebirth of a threatening monolithic ideology, there is no

security interest that so threatens the nation to justify extended overseas commitments.

The declinists argue that the expense of overseas military commitments, made in times of great economic vitality, have become an albatross around the neck of the United States. They contend we are losing the race that really counts -- relative economic prosperity. The declinists point to the growing economic power of Japan and Germany as indicators of the dilemma. When compared to the United States' near six percent of Gross National Product (GNP) devoted to defense, the fact that Japan devotes approximately one percent of GNP to defense and Germany has allocated three to four percent of GNP for the same purpose frees each nation to provide more funds for investment in economic growth. As the Gulf War was being fought, the presumption could be made that the declinists would have argued that the fluid world environment offered a unique opportunity to refocus our security efforts away from nonproductive, overstretched military commitments toward the reinvigoration of the industrial fiber of the nation. To remain competitive in the global economic rivalries of the coming decades, retrenchment to commitments that do not stretch the defense effort beyond about three percent of GNP would be in order.

In an opposing view, the wave of so-called revivalists point out that great power status is more than military power derived from economic resources. Their arguments question how to measure US economic decline; if the decline is occurring, whether it will or must continue; and whether other instruments of power, along

with a balance of military power, cannot achieve the same national objectives. They argue further that US global leadership is necessary to provide stability in a potentially chaotic world and to promote continuation of the encouraging economic and political trends seen in Eastern Europe and Latin America.

The revivalists see the same juncture in history as the declinists, but do not accept the argument that military withdrawal is the cure for perceived inevitable economic decline. They see instead unique opportunities to shape the future along with the requirement to integrate military capabilities in the menu of options that will influence prospective directions.[7] While not the only means to influence other nations' behavior, many revivalists would contend that military power is still critical in supporting national strategy. It has served as a necessary foundation that has permitted the recent growth of market economies and flourishing democratic movements. This has led to "converging political identities and purposes" that have ameliorated the importance of relative economic wealth and military power.[8] These "converging political identities and purposes" are a function of US leadership, a role we are destined to maintain if present trends are to continue. Moreover, inherent in our leadership responsibilities is an ability to respond to military exigencies. Thus, the revivalists would conclude that the crisis in the Gulf was indeed a defining moment that demanded US leadership and the application of its military power.

Strict adherence to one school or the other would have profound effects on the future of conventional forces. Based on each side's arguments, the following policy prescriptions for military force can be deduced.

1. How much (or little) is enough?

Declinist: Try to attain the best military capability possible for a percentage of GNP that does not exceed our main economic challengers' defense expenditure efforts (less than 3% of GNP).

Revivalist: Retain military capability that assures no external military threat can challenge our sovereignty and maintain the capability to provide leadership in global crises that threaten our vital interests,[9] while avoiding growth in resources devoted to military power that would undermine the balance in economic, political, cultural, and military power that are unique to the United States.

2. When should military power be employed?

Declinist: Avoid employing in situations that may entail long-term, financially draining commitments. Employ as a last resort, especially when national wealth is threatened.

Revivalist: Use as an integrated instrument of power to provide leadership and protect the stability that allows economic liberalism and democratic practices to thrive.

The declinist prescription would result in a greatly reduced and domestically based active conventional force structure with minimal sustainable lethal power projection capability. The revivalist school would probably opt for a restructured conventional force with enhanced flexibility in power projection forces and an active forward presence. Revivalists would argue that, blessed with the mantle of global leadership, the opportunity to shape a more peaceful, prosperous world should not be lost because this leadership imposes certain short-term economic costs. . It is interesting to note that the current five-year defense program laid out by the administration attempts to straddle both camps. The rhetoric is clearly revivalist, but the percentage of GNP devoted to defense falls to near-declinist school levels by the end of the five-year period.[10]

From the above discussion, we observe that the application of military force as an instrument of power is changing. Paradoxically, despite the precision of today's so-called smart weapons, the military instrument, in general, is perceived as becoming blunter. The paradox exists due to the exponential growth in weapons system lethality and destructive ability, on the one hand, and the difficulty in relating those new capabilities to political goals on the other. This illustrates clearly the need to think hard about issues of force posture. The attack on the bunker/shelter in Baghdad by a stealth fighter with a smart weapon stands as a clear example of this phenomenon. While precision systems struck the intended target, the press coverage of civilian

casualties had potential political repercussions that may have outweighed the military success.

Another reason for the perceived bluntness of the military instrument is the previously described decreasing utility of military conquest to achieve political ends. The global message sent by the coalition reaction to Iraq's invasion is visible testimony. Finally, as noted above, the near-instant transparency of military operations in democratic societies has raised the awareness of the tangible and intangible costs of projecting military force. Combined, these factors make the already difficult task of defining military objectives that achieve political ends more difficult.

MILITARY ROLES: DETERRENCE AND WARFIGHTING

Military force is designed to achieve two roles: deterrence and warfighting.[11] These roles are sometimes complementary but, with the advent of nuclear weapons and long-range delivery systems, increasingly competing. An effective deterrent works on the enemy's intentions by convincing him that the risk-weighted costs of undertaking an action are not worth the potential gain. An effective warfighting capacity, on the other hand, counteracts an enemy's capability by "mitigating the adverse consequences for us of possible enemy moves."[12] We will look at the manner in which conventional force has supported each of these roles.

For a deterrent to be effective, a defender must have the capability and credibility to threaten something of value to the aggressor. This threatened punishment is achieved either by

denying the aggressor his objective or by having the capacity to retaliate against targets of higher value. Nuclear forces have generally performed the latter role. That their horrific punishment potential has been used only twice is testimony to their capability. Their credibility -- whether a nation would resort to their usage -- has always been the unknown calculus. The fact that the record of violent conflict between nuclear states is almost nonexistent is often cited to show the effectiveness of nuclear weapons as a credible deterrent.[13] The record of conflict between nuclear and non-nuclear states in this same post-World War II era is not so blank. The fact that nuclear states have not used nuclear weapons for warfighting against non-nuclear states would seem to reduce their credibility in future conflicts.[14]

Before the technological change that brought us first the strategic bomber and then the nuclear missile, warfighting forces and deterrent forces were essentially the same. Deterrence was obtained from the ability of military forces and their weapons to deny the enemy his objective and/or punish him for his aggressive efforts.[15] Technological innovation changed the role of conventional force in deterrence calculus. In the nuclear era, the conventional force role in deterrence has been in three areas:

(1) Tripwire. By placing a small conventional force in a specified location, the uncertainty of response and therefore the potential cost of an operation is communicated.

(2) Denial defense. By building a credible defensive force, the cost of an enemy's potential offensive operations is raised to unacceptable levels.

(3) Retaliation. While there was some academic debate concerning building a conventional ground retaliation capability[16] and some saw aspects of the deep battle associated with the Army's AirLand Battle doctrine as incorporating these concepts, the Navy's horizontal escalation concept is the closest to any extant conventional retaliation capability. Carrier battle groups, the signature vessels of horizontal escalation, include nuclear options as well.

The second role, denial defense, has been the most prevalent conventional deterrent application and has been seen as the *raison d'être* of the majority of the Army and tactical Air Force in the bipolar, nuclear confrontation era. The first role, tripwire, has been much discussed but little used by ground forces. The Berlin Brigade in Germany is the classic example, but we argue that the rapid deployment of the 82nd Airborne Division and Marines afloat to the Saudi oil fields during Operation Desert Shield could be viewed as an effective tripwire deterrent as well. Similarly, the minimal military operations conducted between the mid-July warning of a potential Iraqi military threat and the 2 August invasion of Kuwait failed as a deterrent.[17]

The use of the military instrument in a denial defense role is a critical element in preventing potential crises from flaring. Long-term visible presence of conventional force can provide, in

addition to deterrence, a foundation for the development of political stability by allowing other instruments the freedom to act to defuse potential conflicts. The conventional military operation used to achieve denial defense deterrence is forward presence. When this presence is permanent and contains the requisite materiel for combat it is known as forward deployment. The forward deployment in Europe of two numbered air forces, two US Army corps, and pre-positioned equipment for up to six more Army divisions has provided a viable warfighting capability as well as visible military stability to Europe. Other forward presence operations, while normally associated with naval commitments, encompass visible military force for stability purposes that either is less permanent or has minimal warfighting capability. Periodic exercises in a region, the maintenance of command and control organizations, or the conduct of logistics exercises would be examples of forward presence by air or ground forces. To achieve its denial defense deterrence, forward presence must have a capable, deployable follow-on force. As with forward deployment, forward presence is a visible commitment that is designed to provide a stabilizing influence and serves to signal intent.

Tripwires are often initially employed to signal resolve in crisis situations where the ability to dominate escalation is seen as the key to successful outcomes. This domination is normally accomplished through the ability to escalate vertically (increased lethality), but can also be achieved horizontally by increased mobility. Thus, in crises where tripwires are used, robustness of

force posture -- the ability to demonstrate vertical or horizontal escalatory dominance -- is critical. Conventional forces, especially naval forces, have played a major role in these types of crisis. The inherent mobility of carrier battle groups coupled with their self-contained vertical escalation options have signaled American resolve in scores of potential conflicts. Ground and air forces, generally more lethal but less self-sustainable and mobile, are not as versatile for this needed conventional force capability. When deployed, however, they often imply escalation and serve to strengthen credibility.

The second role of military force -- warfighting -- is employed to achieve two basic politico-military purposes: offensive or defensive. Furthermore, the principal military warfighting objective orientations are either enemy forces or terrain. Using these four concepts (offense, defense, forces, and terrain), the following observations illustrate the relationship between the warfighting purposes of military force and the nature of states employing that force:

- Offensive, terrain-oriented purposes are usually associated with the strategies of expansionist, often autocratic states.
- Offensive, force-oriented purposes are usually associated with states that feel threatened by shifts in relative power.
- Defensive, terrain-oriented purposes are usually the policy of coalitions and status quo powers.

- Defensive, force-oriented purposes are not normally purposes in and of themselves, but are often the reaction of states that are attacked.

The implications of these observations are important. Democratic states tend not to go to war with each other. However, the societal transparency and debate that inhibit democratic nations from seizing terrain to achieve external goals may not preclude expansionist, autocratic states from pursuing the same goals. Furthermore, as coalitions are normally established with the stated purpose of safeguarding terrain, they are less inclined to initiate offensive operations. Both the inability of NATO to address so-called "out of sector" security concerns and the difficulty in agreeing on offensive operations in Kuwait serve to demonstrate this point.

With these warfighting purposes in mind, a look at three areas that greatly influence force employment for warfighting -- "geographic extent," nuclear weapons, and doctrine -- is necessary to complete our conceptual framework.

"Geographic extent" concerns whether the conflict is localized within a region or is global in nature. It has been longstanding stated US strategy to attempt to contain any East-West conflict to a local area, but the Navy's Maritime Strategy with its view of our comparative geographic positioning advantage would seem to call this stated strategy into question.[18] Clearly, the strategic mobility requirements of naval forces differ under regional and global scenarios. In most regional scenarios the Navy would play

a supporting role based on local sea control and limited but focused power projection whereas, in a global conflict, strategically mobile power projection may prove decisive. Similarly, regional conflict allows the concentration of the more lethal air and ground forces without concern for other possible theaters of operation. Finally, the strategic mobility needs of ground and air forces are effected if the regional conflict is in an area where there are no forward deployed forces and no in-transit threats. In light of the global diffusion of technology and the proliferation of modern weapons, conventional forces, when employed, will face weapons systems, if not fighting organizations, that have substantially similar capabilities. This may necessitate significantly more logistics and other support than recent operations within our own hemisphere (Grenada and Panama) have required.

Conflicts between nuclear states have been characterized by limiting the conflict to ground conventional operations at small unit level (battalion) with modest terrain objectives. Other conventional conflicts have not had such constraints. With the exception of the Iran-Iraq War, the conflicts of the past 20 years involving belligerents where at least one state was non-nuclear have been relatively short, but have consumed massive amounts of equipment and have been highly destructive. A common thread that runs through the major conventional conflicts of the recent past is that quality matters. In fact, the nation with the lesser number of soldiers -- Israel in 1973, the United Kingdom in 1982, and Iraq

in 1980-88 -- emerged as the victor. Each enjoyed not only superior equipment but, probably more importantly, superior units in terms of training, leadership, and cohesion.

Once opposing forces engage in combat, deterrence does not end. Indeed, how a nation chooses to fight signals intentions and has deterrent implications. Thus, the way in which states employ their combat power in terms of purpose and doctrine has implications for both the deterrence and warfighting roles of the military instrument.

There has been much written in an attempt to explain the origins of military doctrines and how these doctrines have caused military conflicts to overwhelm political goals.[19] There are no simple explanations for doctrinal origins and their relationship to political goals, but some observations are possible.

Military doctrines differ from purposes in that they describe how the military forces will fight rather than for what they will fight. Doctrines are normally categorized as offensive versus defensive or attrition versus maneuver. Factors that influence national doctrine choices include geography, technology, heritage, and domestic politics. The United States, for a variety of reasons, has traditionally had an offensive bias reflected in each service's doctrine. Navy and Air Force warfighting doctrine have clearly advocated seizing the initiative and taking the battle to the enemy.[20] The Army, while espousing an offensive maneuver doctrine, has limited internal capability at present to execute it at tactical and operational levels. However, the synergy of the

land, sea, and air forces employed in the Persian Gulf exemplify the offensive maneuver spirit embodied in the Army's AirLand Battle doctrine. If there is an appellation that describes our force employment strategy to conduct intervention warfighting today, it might be called "Overwhelming Force." We will examine this approach in more detail in the next chapter. But, the importance of a doctrinal congruity that ensures that how we fight to achieve a military objective supports the political goals cannot be overemphasized. The parameters of military doctrine must be sufficiently robust to attain military objectives within the constraints of the political environment.

THE CHANGED GLOBAL ENVIRONMENT

To this point, we have examined conventional military force posture through the roles that force plays as an instrument of military power, keeping in mind the "geographic extent," as well as the conflict stage, on which that force acts. But there are other key factors that add robustness to our examination of force posture. We turn now to examine the environment within which conventional force will likely operate in the future and the resultant role those force capabilities will play to achieve national ends. We will accomplish this through a more detailed examination of the framework laid out in chapter 1. When viewed at the micro level, the portion of our framework labeled "Military Posture" can be depicted as in figure 3-2.

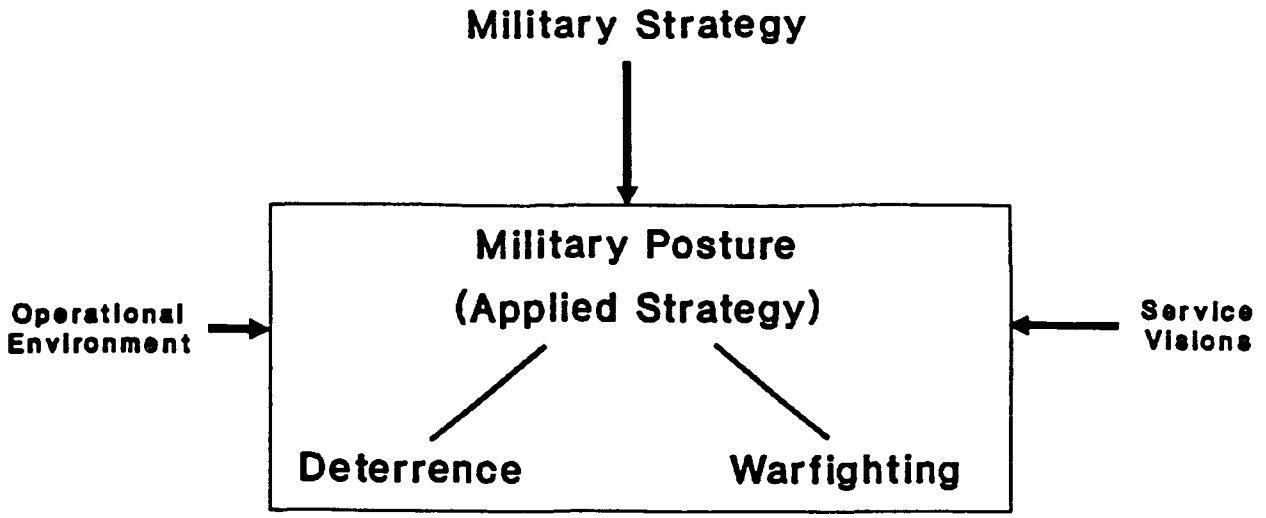

Figure 3-2. Military Posture

The inputs flowing from national strategy through military strategy drive fundamental planning assumptions. Absent guidance to the contrary, prudent military planners should prepare for continuing global active engagement by the United States. It appears unlikely and unnecessary to revise the basic interests that have driven foreign policy since World War II. In fact, as the only nation with a balance of all the instruments of power, we could likely be drawn into a regional power vacuum, even if our general policy preference was to retrench substantially. Thus, a mantle of unsought global leadership forces an active engagement in world affairs over concerns for "imperial overstretch." Other inputs from the operational environment have traditionally been geographic and framed in the bipolar context. Finally, service visions concerning the nature of the use of force have also driven force planning.

The simple statement that the "tectonic plates" of world order have begun to shift indicates that a period of relative stability is ending. Whether the future will involve more or less conflict is a matter of speculation, but after a period of euphoric bliss, many analysts believe that the conditions that foster conflict will grow. Some of the more pessimistic analysts have even, with some hyperbole, yearned for a return to the simple days of an ideologically-based bipolar world complete with nuclear standoff. Other more sanguine analysts, while acknowledging that the potential for conflict may rise, suggest that societal changes and interventionist means are available to dampen conflicts before they reach the violent stage. All would agree that we are entering a critical decade where our actions -- the ways in which we employ the means -- will set the stage for the future. Some of the main arguments made to support the thesis that the potential for conflict is rising are

- A bipolar world is inherently more stable than a multipolar world or, at a minimum, more stable than a world where structural order is in uncharted waters seeking new moorings.
- Ideologically-based nuclear stability has been a critical means of keeping potential internecine conflicts quiescent.
- Internal disorders triggered by hyper-nationalism, irredentism, and border disputes threaten to increase.
- Transnational actors and ideologies have more freedom to navigate across borders and threaten extant sovereignty.

- Technology in such areas as communications and transportation has led to a shrinking globe where more state actors have increasingly interdependent relations that contribute to greater potential for disagreement.
- The diffusion of technology, coupled with large disparities in the distribution of wealth, makes weapons acquisition and their more frequent use an inviting solution to some.
- Increased economic competition may spill over into a reawakening of neo-mercantilist approaches that then lead to potential conflict.

From these observations we draw two general conclusions:

(1) The credibility of nuclear forces as a deterrent is not established in a less ideologically divided, less bipolar world in which conventional force has not been perceived as a capable stand-alone deterrent.

(2) When engaged, conventional forces must be ready to address a plethora of technologically sophisticated weapons in increasingly disparate locations.

THE SPECTRUM OF CONFLICT

The spectrum of conflict is often the visual and verbal construct used to explain the range of confrontational situations with which military force must deal. Running the gamut from nation-building on one end to nuclear holocaust at the other, figure 3-3 juxtaposes likelihood of conflict with relative risks to national survival. In the bipolar, nuclear confrontation era, the spectrum could be represented as shown:

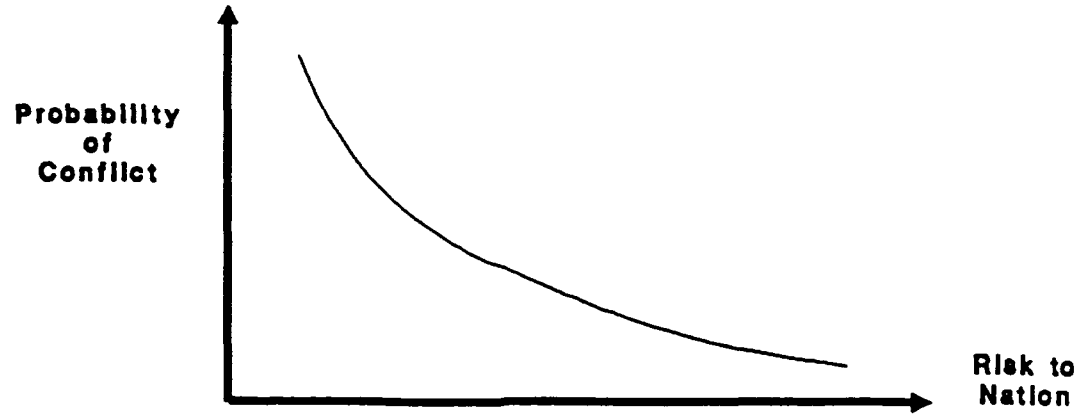

Figure 3-3. The "Spectrum of Conflict" in the Cold War Era

As can be seen, the graph depicts a high likelihood of low-risk military conflicts: for example, third world counter-insurgencies. On the other hand it shows a low probability of high-cost confrontations: nuclear war. The "continuity" of this curve is subject to different interpretations, as we will discuss.

We see the potential for a substantial shift in the spectrum. The shift reflects the potential disorders of the world and the nature of the military weapons that can be brought to bear. There may even be a near-discrete break in the spectrum. This break depicts a growing chasm in the linkage between conventional and nuclear forces. However, as nuclear weapons proliferate, this chasm will narrow. This view of a future conflict spectrum is illustrated in figure 3-4.

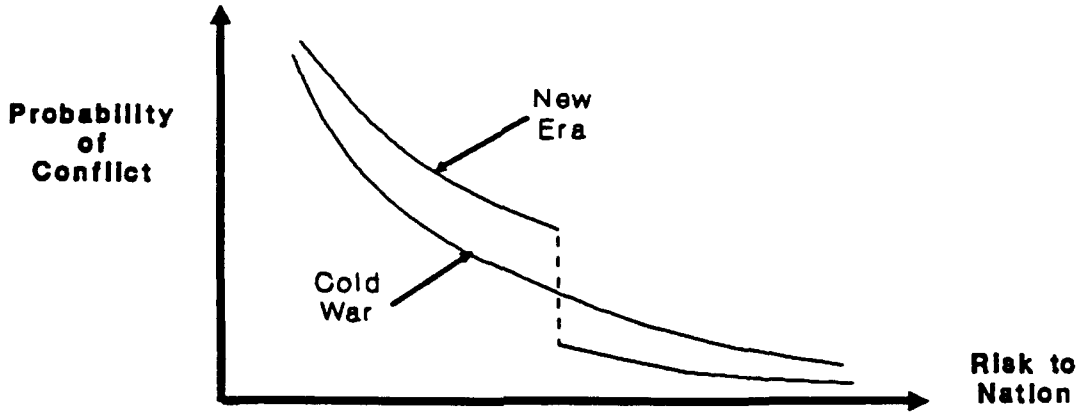

Figure 3-4. The Spectrum of Conflict in the Future

This potential shift in the spectrum of conflict implies that it will be increasingly difficult to dominate escalation at the conventional level by relying principally on nuclear capabilities.

THE CHALLENGE OF SERVICE VISIONS

If we acknowledge that the military we relied upon to contain the Cold War is not the force we need or can afford to meet tomorrow's challenges, then adapting to change may be today's most critical internal defense establishment dilemma. Well-publicized issues of defense procurement and so-called "jointness" are complementary to this dilemma. They will, in large part, be addressed within the constraints of the fundamental force posture decisions reached in the search for new directions.

The difficulty with which any organization, but especially a large bureaucratic organization, adapts to change is well known.[21] History is replete with tales of historical blinders that inhibit

progress and analogy blunders that result in disastrous changes.[22] The challenge in adapting to change for military organizations was well described by Edward L. Katzenbach when he wrote:[23]

> The military profession, dealing as it does with life and death, should be utterly realistic, ruthless in discarding the old for the new, forward-thinking in the adoption of new means of violence. But equally needed is a romanticism which, while perhaps stultifying realistic thought, gives a man that belief in the value of the weapons system he is operating that is so necessary to his willingness to use it in battle. . . . When there [is] no interest in the military . . . there [is] no pressure to change and the professional [is] given tacit leave to romanticize an untenable solution.

We will look at the "romanticism" that buttresses each service's efforts to "organize, train, and equip" its forces.[24] Only by understanding each service's "romanticism" can we work to ensure that the collective result of their policies is not "an untenable solution," but complementary capabilities relevant to the challenges of the future.

There are many humorous cliches used in Washington to describe how each service functions in the bureaucracy.[25] We laugh, but often agree. Each service does have its own character drawn from its peace and war heritage, its philosophic foundation, and its cultural style. We contend these different philosophies can be healthy and help challenge complacency. During times of growing defense budgets, the acrimony of different views can be controlled more easily. However, in a milieu where the reality of declining budgets clashes with efforts to achieve fundamental change, prudent compromises are more difficult to reach. The risk is that decisions may come about more to quell cacophonic debate than to

provide rational direction. Decision makers would be wise to understand that our ability to project balanced military power has been a national strength.

The Navy: Mahan, Power Projection, and Capital Ships

The US Navy emerged from World War I firmly convinced in the wisdom of the geo-strategic vision of Admiral Mahan.[26] They viewed the protection offered by their control of the seas to the "center of gravity" of the Allied Powers -- the US industrial base -- as justification for a post-war Navy that was balanced around carriers, deployed forward in areas of national interest, and second to none.[27] Their convictions, drawn from World War II experiences, were reinforced when the Cold War yielded a strategy designed to contain a continental military power. The relative stability of naval force structure over the past 40 years, despite changes in military strategy, threats, and defense budgets, is testimony to the persuasiveness of the Navy and its vision.

There is probably great truth in the argument that, whereas the Army views the seas as obstacles to reaching operational theaters, the Navy envisions seas as global highways for use in prosecuting grand strategy. In general, when compared to the other services, especially the Army, the Navy thinks globally. Their vision is based on the concept that the United States is an insular nation whose economic and military well-being is dependent on freedom to navigate the seas. This freedom, achieved by control of the seas, means that the nation must have a Navy "second to none" to ensure the requisite maritime superiority. The operational

doctrine to execute control of the seas may change, but the belief is maintained that a Navy of the first order in technology, capabilities, and power projection is the foundation of US military power.

A commitment to maintain a consistent forward presence in areas of interest is the next tenet of Navy philosophy. Designed to provide a stabilizing influence in the region, the forward presence becomes nearly a self-fulfilling prophecy. As long as the region remains stable (in a global, containment context), the forward presence cannot be withdrawn. Naval force structure is driven, therefore, by the deployment requirements of forward presence commitments. The rule of thumb has been that three to four carriers are required in the force structure for each carrier deployed forward.[28]

The third leg of the Navy's vision is based on capital ships, at the present time, carriers. Given the view that control of the seas secures the nation's well-being and forward commitments provide global stability, the carrier, along with its attendant ships and aircraft, offers a self-contained flexibility to control crises.

The Navy has viewed the conflict spectrum as a continuous curve and, from the perspective of our national "position" on the curve, prevention of slippage downward to a position of higher risk is critical to national strategy. The carrier battle group, with its ability to project power along the entire spectrum, is viewed as having the capacity to dominate escalation and, hopefully, to

prevent the higher levels of conflict that would result from the aforementioned slippage. This is shown in figure 3-5.

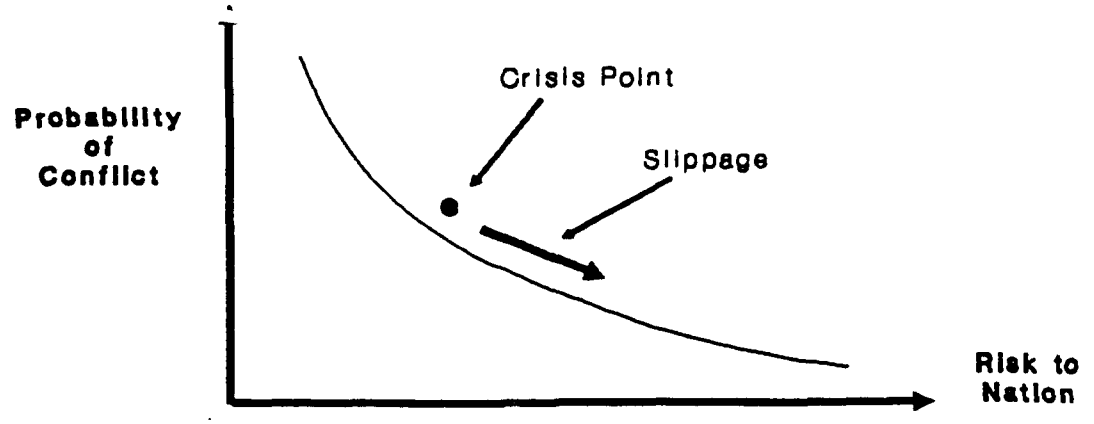

Figure 3-5. Navy View of Conflict Spectrum

It is from this Mahanian-based, deployment-oriented crisis escalation-dominance perspective that the Navy enters the debate on future requirements for conventional force. The relative stability of the Navy's posture over the past 40 years, the long lead time in acquiring new ships, and the long life of existing platforms portends reluctance on the Navy's part to reexamine fundamental issues.

The Army: Worshipping the Clausewitzian Icon from Jomini's Pew

Perhaps the most visible change in US military strategy emerging from World War II was the decision to maintain, by US standards, a large standing army. Furthermore, in the aftermath of the Korean War, the Army maintained substantial and permanent forward deployments as part of the containment strategy. These forward deployed forces, along with coalition allies, played a

denial defense role integral to the deterrence element of the strategy. To be effective as a deterrent, these forces had to have credible warfighting capability. This requirement, coupled with the existing Army perspective based on the European theater experience of World War II, reinforced a Jomini-like focus on the employment of force in military operations. In this theater-level view, the defeat of enemy forces in battle is paramount to achieving strategic goals. However, the cathartic experience in Vietnam led to some reevaluation. First, the Army attempted to re-embrace Clausewitzian concepts of war in searching for its strategic direction. At the same time, there was a desire to shed the rigid cloak of the universal applicability of Jomini's "scientific" principles as the sole basis for warfighting. Secondly, and related to the first, the Army, while acknowledging the dangers of sliding down the conflict spectrum, saw the requirements to prevent the fall toward nuclear war quite differently from the Navy. The Army viewed the spectrum more as a collection of steps, each requiring a unique package of capabilities tailored to a particular conflict or situation. This view of the conflict spectrum is illustrated by figure 3-6.

With its focus on operational warfighting, the Army grew to realize that forces designed to fight in Central Europe need substantial restructuring to be relevant to insurgencies in Central America.

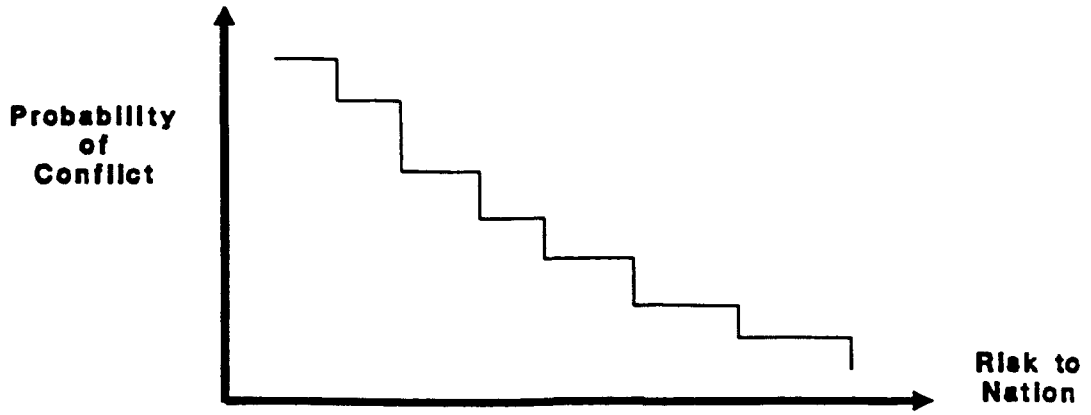

Figure 3-6. Army View of Conflict Spectrum

The Army's attempt to re-embrace Clausewitz at the expense of Jomini has only been partially successful. Certainly, the Army has accepted the concept that the friction of war belies simple military solutions to complex political issues. Thus, the Army is more circumspect in applying military power as the sole means to an end. Furthermore, the Army, more than the other services, eschews technology as a panacea.[29] However, warfighting and employing forces at operational and lower levels remain the Army's principal focus. Some observers offer the belief that the geographic constraints of land warfare require a concentration on disciplined execution of plans to achieve operational level military objectives.[30] Indeed, the recent Army effort to forge its future as a versatile, deployable, and lethal strategic force highlights the inherent difficulty of projecting land force in a global role.[31] Not only are air and sea movement required to achieve strategic deployability, but lethality and deployability are, with

presently developed land system and transportation technology, competing aims.

In addition to the recent emphasis on a strategic role for land forces, the Army has redesigned its forces to focus on particular spectrum threats, which is consistent with its "step-like" view of the conflict spectrum. The growth in Special Forces, Rangers, and Light Infantry Divisions reflects this belief that control of spectrum threats is best accomplished by forces tailored specifically to the threat. This increased versatility across the entire spectrum is achieved at the expense of capability at the mid- to high-intensity end of the spectrum. It has led some observers to claim that the Army has a bifurcated posture -- some forces that deter, but never fight (the heavy forces deployed in Europe and those stationed in the United States and focused toward Europe), and other forces that do all the fighting.[32]

The Army enters the new era with a 40-year record of large active forces focused primarily to be employed in campaign warfare in Europe. The ability to focus on and to prepare the prospective battlefield (Central Europe) logistically has guided much of the Army's planning. Adapting to the challenges of deployment to logistically barren theaters for deterrence and warfighting will test the resilience of the Army.

The Air Force: Neo-Mahanian in Vision, Douhet-like in Execution

Over 40 years after its establishment, the Air Force continues to fight for its unique identity. While debates rage over continental versus maritime strategies, few current theorists offer

the third option of an air strategy.[33] This was not always the case. In the aftermath of World War II and the development of nuclear weapons, air power was viewed as the future direction for military force. However, the reexamination of the effectiveness of air operations in World War II, coupled with the inability of air power to achieve victory in Korea and Vietnam, has dampened the enthusiasm of the Douhet, Trenchard, Mitchell school of the inter-war years that proclaimed that the technological revolution in air power would be the decisive factor in war. Today the Air Force offers a neo-Mahanian vision of air power from a global strategic perspective. Yet the Air Force clings to a revision of Douhet's maxim that "the bomber always gets through" when thinking about warfighting. Both the neo-Mahanian vision and Douhet-like warfighting philosophy require a close embrace with technology to achieve success.

The neo-Mahanian vision proposes that, as a minimum, control of much of the airways and seaways can be accomplished by the global reach of today's aircraft. Furthermore, with the shrinking globe making quick reaction more vital, the ability of air power to reach crisis points rapidly is a real and necessary advantage. Coupled with a forward basing capacity, this air power vision would provide rapid, flexible, and far more lethal power projection than the onshore projection capability of carrier battle groups.

Once combat begins, many air power enthusiasts still believe that air power by itself can prove decisive. They argue that the ability to attack targets of political and economic value can be

more critical in today's environment. To support this view, "the bomber must get through."[34] Therefore, reliance on what is seen as an American enduring advantage in technology to ensure the bomber's survival is both necessary and appropriate. The simple appeal of this clean approach to war wins substantial popular support.

The Air Force offers a technology-centered strategy to achieve both global objectives and operational warfighting aims. It clings to the vision that the manned aircraft offers a nearly pristine, yet effective way to win victory and maintain peace. Adapting this vision to a world where technological diffusion is increasing will challenge the most ardent air power enthusiasts.

Each service has its own "romanticism" about war. Each can point to historical justification for its view. Each can offer a vision of technological and other changes that justify its future. Inter-service debates have contributed to a conventional force with a balance of capabilities to meet the threats of the past 50 years. As fiscal pressures grow, how each service is able to adjust its vision to a new order is critical to the maintenance of the synergy possible with complementary capabilities.

THE FUTURE DIRECTION OF CONVENTIONAL FORCE

This chapter has laid the foundation for a reasoned discussion of future policy options regarding conventional force posture. It has been a theoretical look at this issue from the perspective of the present, in order to attempt to understand the character of conflict in the future. This discussion will be expanded in chapter 5, but a few preliminary observations can be made here. If

we do not have the correct tools to regulate potential crises, they may ignite. Without other appropriate tools, we may not be able to contain and extinguish small conflicts before they spread. The basic nature of armed conflict has not changed, but the efficiency and effectiveness with which military force is applied can change. We must try to understand the overall environment so that the military instruments that are fashioned to assist in achieving national objectives are relevant.

We view the role of conventional force changing in two complementary ways. First, we believe that conventional force will assume an increased role in deterrence. Secondly, we believe that the use of technologically-intensive weapons systems in regional conflict will grow. Our ability to deal effectively with the threats posed by growing regional military sophistication must become an increased focus for our defense community efforts. Successful efforts to enhance our warfighting capability in this regional arena will engender positive feedback and enhance the credibility of the deterrence role as well.

In the deterrence area, we see the role of denial defense, at least as it has been executed for the past 40 years through forward deployment in Europe, diminishing. However, the tripwire role and, perhaps, the retaliation role of conventional force in deterrence will increase. This is not to say that denial defense will no longer play a role in deterrence. Rather, we believe that the forward presence of forces in critical regions, coupled with the ability to transport small, capable forces rapidly, will be more

effective in preventing or limiting the effects of crises around the globe. In a world of growing regional threats, we will need the flexibility of forward presence more than the convincing but less mobile message sent by forward deployment. We will, however, need the ability to vigorously reinforce these versatile deterrent tripwire forces with highly mobile conventional forces for denial defense. The more rapidly the denial defense forces can reinforce the tripwire, the more credible conventional deterrence will become and the less likely a conventional offensive force for warfighting will be required.

At the same time, the potential ability to punish an enemy by threatening something of great value should be retained as a critical instrument of military power and deterrence. To accomplish this with conventional force will require pursuit of technologies that allow decision makers to pinpoint and threaten attack on targets well to the rear of forward elements. Furthermore, in an environment where uncertainty is the only constant, intelligence warning and flexibility to counter surprise take on increased deterrent value. Inasmuch as deterrent and warfighting ability are more complementary in conventional forces, improvements in the mobility and flexibility of these forces should assist warfighting as well.

A fundamental transformation in the so-called spectrum of conflict, highlighted by Persian Gulf military operations, portends a potential increase in mid-intensity conflict, but a decreased chance of global war and possible nuclear engagements. These

changes have important implications for future conventional force posture:

- Deterrence, increasingly provided by conventional force, must be more relevant to regionally specific threats.
- Balanced power projection capability through increased strategic mobility for lethal, sustainable, self-sufficient active forces is necessary.
- Intelligence capabilities need a more global, less East-West view with the ability to focus assets to regional hot spots.
- Conventional arms control must be thoroughly integrated into national strategy as a means of reducing potential conflict risk.
- The ability to integrate forces into rapidly formed coalitions must be planned and exercised.
- Improved flexibility through more self-sufficient, probably smaller, warfighting organizations that can be brought together under ad hoc command and control headquarters is needed.
- Warfighting and acquisition strategy should stress our capabilities in information technology and management, training, leadership, and synchronization of combat power to advantage our enduring competitive strengths.

Implementing change will be difficult. Barriers to change must be identified and overcome. Evolving individual service perspectives within a joint operational framework must continue to progress. However, some factors will not change. Superiority over

sea and air access routes continues (in the absence of nuclear war) to be vital to the basic survival of the nation. Yet global naval superiority, critical in crisis management and in potential long-term conflicts, is less relevant to the prosecution of intense regional armed engagements. The formation of coalitions in regions where we have interests will continue as a fundamental tenet of our global involvement. We will continue to plan to fight beyond our borders, working with allies abroad to control crises. Once engagements begin, the ability to influence events on the ground through conventional capabilities remains the decisive element of combat. Our ability to project power through a balance of complementary air, sea, and land forces remains the key to effective employment of conventional force.

NOTES

1. David S. Broder, "The Lessons from the Gulf," Boston Globe 29 August 1990, 15.

2. US, The White House, National Security Strategy of the United States (Washington: GPO, 1990) 2-3.

3. The concept of "hard" and "soft" power generated from a nation's resources comes from Joseph S. Nye, Bound To Lead (New York: Basic Books, 1990) 25-29.

4. There are useful discussions of the role of geo-politics and cultural heritage on strategy in Colin S. Gray, War, Peace and Victory (New York: Simon and Schuster, 1990) 44-55. and Edward N. Luttwak, Strategy: The Logic of War and Peace (Cambridge, MA: Harvard UP, 1987) 97-99.

5. Paul Kennedy, The Rise and Fall of the Great Powers: Economic Change and Military Conflict from 1500 to 2000 (New York: Random House, 1987).

6. The terms declinist and revivalist have certain unfortunate connotations that should not influence the debate. They are, however, the shorthand terms that are currently used to corral the writers' positions into opposing camps. See Samuel P. Huntington, "The US--Decline or Renewal," Foreign Affairs vol. 67, no. 2 (winter 1988-1989) 76-96 and Paul Kennedy, "Fin de Siecle America," New York Review of Books 28 June 1990, 31-40.

7. They argue from two positions, one hard -- economic and military -- the other soft -- ideas and culture -- to borrow again the current terms used to describe power. The revivalists' hard arguments question whether the United States is in relative decline, how to measure this decline, and whether the decline is not of our own doing and, therefore, reversible. They point to the stabilization over the past 15 years of the US share of world output, our relative dominance in critical leading technologies, and the strengths exhibited by the economy when a sense of national purpose was prevalent. In addition, they would argue that, whereas the United States devotes a greater share of GNP to defense than its major economic competitors, it is not an excessive percentage by historical standards. Further, there is no empirical proof that military expenditure directly stymies growth; and there is no guarantee that a reduction in defense expenditures would be channeled into productive investment. These arguments are made by many revivalists with Joe S. Nye, Bound To Lead, and Henry R. Nau, The Myth of America's Decline: Leading the World Economy into the 1990s (Oxford: Oxford UP, 1990), the most empirically impressive presentations.

8. Henry R. Nau, "The Persian Gulf Defeatists Misread the Changing Times," Boston Globe 28 October 1990: A31.

9. While the definition of vital interests is always difficult, the basic premises that have driven our foreign policy since NSC-68 and NSC-20 remain sound for most revivalists. Nations with shared values are in our interest; what happens in the rest of the world matters and warrants our engagement.

10. Dick Cheney, statement, Senate Armed Services Committee, Washington, 21 Feb.1991.

11. We do not attempt to address revolutionary or insurgency war. Our feeling is that this form of conflict is fundamentally different from interstate war. See John Shy and Thomas W. Collier, "Revolutionary War," Makers of Modern Strategy, ed. Peter Paret (Princeton, NJ: Princeton UP, 1986) 815-862, for a summary of revolutionary war theories. Harry Summers in his On Strategy: The Viet-Nam War in Context (Carlisle Barracks, PA: Strategic Studies Institute, 1981) implies that conventional forces were poorly applied in that conflict. A. J. Bacevich, James D. Hallums, Richard H. White, and Thomas F. Young in their American Military Policy in Small Wars: The Case of El Salvador (Washington, DC:

Corporate Press Inc., 1988) credit the conventional capabilities that were applied with some success, but argue that capabilities are missing from the conventional force package that are needed to achieve overall success.

12. Glenn H. Snyder, "Deterrence and Defense," The Use of Force, ed. Robert J. Art and Kenneth N. Waltz (Lanham, MD: University Press of America, 1988) 26. We have substituted the expression in common usage today, warfighting, for Snyder's defense to make the point clearer that, as Snyder states, defense is more than territorial denial.

13. While it is not our purpose here, there is a body of thought that argues powerfully that nuclear proliferation is sound policy. See, for example, Kenneth N. Waltz, "The Spread of Nuclear Weapons: More May Be Better," Adelphi Papers no. 171 (London: IISS, 1981), for an argument that proliferation is sound. John Mearsheimer makes a more muted, but theoretically similar argument for limited, managed proliferation in his "Back to the Future" article, previously cited.

14. In fact, the United States pledged in 1978 not to use nuclear weapons against non-nuclear states.

15. Snyder, 30.

16. Samuel P. Huntington, "Conventional Deterrence and Conventional Retaliation in Europe," International Security vol. 8, no. 3 (winter 1983/84) 251-275 and Richard Simpkin, Race to the Swift (London: Pergamon-Brassey, 1985) 304-306.

17. The only publicly acknowledged change in military operations conducted after intelligence agencies warned authorities about the Iraqi buildup along the Kuwaiti border was an incremental increase in naval activity in the Persian Gulf and a joint US-United Arab Emirates' aerial refueling exercise. Don Oberdorfer, "Missed Signals in the Middle East," The Washington Post Magazine, 17 March 1991, 38 and Bob Woodward The Commanders (New York: Simon and Schuster, 1991) 210.

18. The Navy's Maritime Strategy argues that in an East-West war, the Navy's offensive capability offers opportunities to escalate the conflict horizontally. This would not only relieve pressure on the Central Front, but conceivably wrest the initiative from the Soviet Union. See, for example, Linton F. Brooks, "Naval Power and National Security: The Case for the Maritime Strategy," International Security vol. 11, no. 2 (fall 1986) 58-88.

19. See, for example, Stephen Van Evera, "The Cult of the Offensive and World War I," International Security vol. 9, no. 1 (summer 1984) 58-107 and Barry R. Posen, The Sources of Military

Doctrine: France, Britain and Germany Between the World Wars (Ithaca, NY: Cornell UP, 1984) 47-80.

20. See John A. Warden, The Air Campaign (Washington: Pergamon-Brassey, 1989), for an excellent discussion of air doctrine and Brooks for a review of naval force offensive precepts.

21. See, for example, James Q. Wilson, Bureaucracy: What Government Agencies Do and Why They Do It (New York: Basic Books, 1990) for a specific discussion of organization theory and government bureaucracy and Posen, 47-56, for an analysis of organization theory on doctrine and change.

22. Edward L. Katzenbach, Jr., "The Horse Cavalry in the Twentieth Century," The Use of Force, ed. Robert J. Art and Kenneth N. Waltz (Lanham, MD: University Press of America, 1988) 125-151. Katzenbach provides a superb description of how some nations adapted and other nations failed to adapt between the wars to tank warfare. Similarly, Eliot A. Cohen and John Gooch, Military Misfortunes: The Anatomy of Failure in War (New York: The Free Press, 1990), analyze a series of cases that highlight failures in learning, anticipation, and adaptability.

23. Katzenbach, 171.

24. In addition to each service's own documents and those of their gurus, many comparative studies have been done to try to unravel the service mystics. Some of the more recent and acclaimed are Allard; Gray; Arthur T. Hadley, The Straw Giant (New York: Random House, 1986); and perhaps foremost, Carl H. Builder, The Masks of War (Baltimore, Johns Hopkins UP, 1989).

25. Civil servants in the Office of the Secretary of Defense talk about the three Ds of defense resource negotiations: the Navy is defiant; the Air Force is devious; and the Army is dumb. Another pithy comment allows that since the Navy predates the Constitution, it is not restricted to its provisions.

26. We will include marine forces within the Navy vision as control of the littoral areas is certainly part of this view and Marines are part of the forces for this mission.

27. McCrea, Domabyl, and Parker, 3.

28. However, this rule of thumb appears to be quite flexible. A ratio of seven to one was offered as the prospective rule of thumb to maintain a permanent carrier presence in the Indian Ocean by a Navy admiral involved in Navy planning.

29. Examination by the Department of Defense of technologies deemed critical to weapons systems for land, sea, and air warfare suggested that the US advantage in technology over the Soviet Union

was least in land system technology. This could be explained by several factors. First, it could be relative Soviet emphasis on land system technology (the continental power argument). Second, it could be conscious or unconscious US bias toward air and sea technologies. Finally, it could be relative de-emphasis by the Army of technology. Given the commanding lead in air and sea technologies, the latter two explanations seem most likely. See also Martin van Crevald, Technology and War: From 2000 B.C. to the Present (New York: Free Press, 1989) 228-229, where he proposes that the vagaries of geography and climate on land make technological advantage least relevant in that environment.

30. Gray, 56.

31. Vuono, 10-17. It is interesting to note that in a briefing on the Army's highest priority needs, airlift and sealift that is provided by other services topped the chart. Army Staff, briefing, Senior Service College Fellows Orientation, Pentagon, Washington, DC, 2 August 1990.

32. Daniel P. Bolger, "Two Armies," Parameters vol. 19, no. 3 (September 1989) 24-34. Whether this observation would still be made by the author, based on the Persian Gulf War and the changed environment in Europe, is subject to conjecture.

33. Colin Gray makes the point that states are categorized as land or sea powers. No one is labeled as an air or missile power; Gray, 57. However, in the aftermath of the Gulf War, there is growing talk of an air strategy.

34. While not overtly supporting this view, John Warden makes a strong case for air superiority as the preeminent requirement for air operations and as a precondition to attacking centers of gravity that can prove decisive; Warden, 7-20.

CHAPTER 4

ACHIEVING POLITICAL ENDS BY MILITARY MEANS: DESERT SHIELD TO DESERT STORM

Winston Churchill wrote, "great battles, won or lost, change the entire course of events, create new standards of values, new moods, new atmospheres, in armies and in nations to which all must conform."[1] It is with this thought in mind that we approach the just concluded war in the Persian Gulf. We are most cognizant of the pitfall of being too close to the event, but know that the impressions of the war will have immediate impact on our conventional force posture and, therefore, cannot be ignored.

On 4 August 1990, two days after the invasion of Kuwait, faced with the threat of continued Iraqi attacks and armed with urgent pleas from the Saudi government for direct intervention, the President of the United States ordered the execution of Operation Desert Shield. The political goals seemed clear and straightforward. They were announced as

- immediate, complete, and unconditional withdrawal of Iraqi forces from Kuwait.
- restoration of Kuwait's legitimate government.
- protection of the lives of US citizens held hostage by Iraq, both in Kuwait and Iraq.

- restoration of security and stability in the Persian Gulf region.

The President's statement on 5 August that "this assault against Kuwait will not stand" and that "their [Iraq's] withdrawal is the only acceptable outcome" proved to be more than an exercise in drawing a solid line in the sands of Saudi Arabia. The US military had to deploy credible military strength, first to defend Saudi Arabia and then to achieve the 5 August political aim.

From the early days of August until the initiation of hostilities in January 1991, the world witnessed a massive deployment of military forces along with escalating political events. Simultaneously, a national debate ensued that was centered on alternatives to the use of force. As the buildup continued on both sides, the objectives of the international coalition arrayed against Iraq were to demonstrate substantial military capability to the Iraqis and, equally as important, to demonstrate a resolve to use that capability. The hopes were that this visible military demonstration would act as a deterrent to further aggression and would lead the Iraqi leadership to realize that the price of defeat in war would not be worth the effort to hold Kuwait.

The focus of this chapter is to examine the deployment, employment and, ultimately, the violent commitment of conventional force to combat in the Persian Gulf. While our proximity to the event demands caution, the aim is to examine the impact the Gulf War will have on conventional military forces. While the presentation is mainly chronological, in that the chapter reviews

the use of force from the decision to execute deployment in August through the conduct of the war, much of the discussion highlights how the concepts established in the previous chapters were or were not validated. We will look at three different aspects of the conflict. These are

(1) the initial decision to use force in the region and the deployment of forces to reach a capability adequate to defend Saudi Arabia against attack.

(2) the decision to increase military capability in line with the intervention strategy of "overwhelming force" to achieve an offensive posture.

(3) the employment of force to compel Iraqi withdrawal from Kuwait.

OPERATION DESERT SHIELD: INTERVENTION, OBJECTIVES, AND DETERRENCE -- SUCCESSES AND FAILURES

At 4:00 PM on 6 August 1990, President Bush decided to launch Operation Desert Shield "despite the lack of a detailed war plan for fighting Iraq or a strong initial recommendation from his military advisors to commit US forces to Saudi Arabia."[2] While this statement may overemphasize military sensitivities and concerns over preparedness, the initial political decision was executed militarily via USCENTCOM Operation Plan 90-1002, the modified version of a plan first drafted in the 1980s. This plan was originally designed to counter the Soviet Union in the Persian Gulf, but had been adapted to address intra-regional conflict. In his guidance, President Bush gave the military leadership three

missions: "Deter further Iraqi aggression, defend Saudi Arabia, and improve the overall defense capabilities of the Saudi Peninsula. An hour after the decision, a wing of F-15 fighters left for Saudi Arabia."[3]

The Iraqi invasion of Kuwait showed US policymakers, in retrospect, to have been the victims of two important policy failures. First was a failure to understand the implications of the regional military balance of power resulting from the aftermath of the Iran-Iraq War. This imbalance resulted from the massive transfer to Iraq from the West and the USSR of large numbers of conventional weapons as well as the means to create unconventional weapons. The magnitude of the imbalance became apparent only in the final months of the eight-year war.

The second important failure was an inability to realize the extent to which the Iraqi military buildup would threaten the smaller Gulf Cooperation Council (GCC) states and, ultimately, vital US interests. US policymakers, perhaps blinded by eight years of myopic regional policy, often framed in terms of East-West tensions, reached tainted assessments of Iraq's military and political intentions. These assessments, shared admittedly by regional leaders as well, provided the backdrop to the implementation of Desert Shield.

The early stages of Operation Desert Shield can be described in two phases. First came the initial deployment and tripwire phase, lasting from 5 August until the end of September, during which time the United States faced a tense period of extreme

vulnerability on the ground. It was during these early days of the crisis that the power projection capabilities of the Navy, Air Force, Marines, and Army were so vital and the limitations of strategic lift so dangerously apparent.

On 7 August, when the decision was made to execute the entire OPLAN 90-1002 package, it was clear that the Chairman of the Joint Chiefs of Staff, General Colin Powell, as well as the entire political leadership, had eschewed any thoughts of gradualism. Rather, they supported the deployment of a large air and ground force as outlined in the war plan to achieve a clear capability to mount a strong conventional defense.[4] This effort took place across ten time zones and entailed the first major call-up of the military reserves since the Tet Offensive of 1968 and the first test of the reserves' front-line role under the Total Force Policy.[5] During the early days of August, the principal objective for US and coalition forces was to establish a terrain-oriented, asset-based defense, sufficiently supported by Air Force and naval air to protect the Saudi oil fields and major ports of embarkation.

The second phase of the operation began with the arrival of the heavy armored forces of the Eighteenth Airborne Corps that led to the increased force level that, by late September, clearly provided an adequate defensive capability. During this time, the infrastructure for the logistics and communications support was developed. In addition, a strengthening of the political and military foundations of the coalition occurred, which permitted a

subsequent decision to increase the size and composition of forces for potential offensive operations.

The most difficult and dangerous period for any contingency mission is the early days of deployment. Operation Desert Shield was no exception. The concept of deterrence as it was applied after both the Iraqi invasion of Kuwait and the American decision to intervene was designed to prevent a further invasion of Saudi Arabia. The credibility of the initial force resided in the ability of the air arm, both naval and Air Force, to protect the ground element, composed of light infantry and marines with limited armor. In our opinion, the period of time required to deploy a credible ground force to defend Saudi Arabia (estimates range from two to three months) under basically favorable circumstances represents a major shortcoming in our strategic capability.

DIPLOMATIC BRINKSMANSHIP AND THE DEVELOPMENT OF A "DESERT SWORD"

The use of military force in Operation Desert Shield changed on 8 November 1990. While the exact reason for the shift awaits historical analysis, President Bush announced a massive increase in US forces committed to the region. The way the forces were committed through the intervention strategy resulted from and complemented a change in overall policy from what is best described as a "long siege" to that of "diplomatic brinksmanship."[6] The new phase was quickly dubbed "Desert Sword" by the press.

In the "long siege" phase, military forces served three purposes. First, they served as a deterrent and, subsequently, a defense against attack on Saudi Arabia. While effective in this

purpose -- Saudi Arabia was not attacked -- the long period between the injection of a tripwire deterrent and confidence in the ability to defend adequately exposed serious shortcomings in our contingency mobility posture. The second purpose was to demonstrate resolve to friends and allies. The employment of over five divisions of US ground forces and a like number of air wings visibly demonstrated US commitment and was a key factor in the ability to establish and maintain a political coalition. Finally, military force, primarily naval, became the executor of the economic embargo, the initial weapon of choice to attempt to force Iraq from Kuwait.

The latter two uses of the military instrument remained unchanged after 8 November. But the military's role was expanded from defense of Saudi Arabia to the deployment of sufficient combat power to expel Iraq from Kuwait. The denial defense had deterred aggression against Saudi Arabia, but, along with the embargo, had not *ex post facto* proven credible in forcing Iraqi withdrawal from Kuwait. The decision was made that a credible offensive capability was needed. This rapid and substantial increase in capability provided the muscle behind two months of diplomatic maneuvering to achieve the political goal of forcing a peaceful withdrawal by Iraq.

By late October, plans for a rotation scheme to sustain a "long siege" were well along. Given the defensive mission, it was anticipated that the 82nd Airborne Division could be withdrawn by Christmas and a rotation of Marine and Army heavy divisions as well

as air wings on a six-month cycle could be established while maintaining a credible defense. Rumors surfaced that up to two additional heavy divisions would be required if offensive operations were deemed necessary.

The decision to surge the military force structure to nearly 10 Army and Marine divisions, more than 9 Air Force tactical air wings, and 6 Navy carrier battle groups caught many by surprise, but seemed to result from the confluence of several trends. The first was a political calculation that time was not an ally of the coalition.[7] This necessitated a strategy that would force a decision sooner rather than later. Second was the military's aversion to gradual escalation. This distaste for using military force against an enemy to alternately squeeze and pause, especially when the actual commitment of that force is anticipated, caused the discard of numerous buildup options. For example, equipment could have been sent without soldiers as a signal that we would go on the offense. Next, soldiers could be sent to exercise the equipment in Reforger-like operations. None of these gradually coercive escalation options was used. Finally, the evolving strategy for how to use force in contingency intervention operations is "Overwhelming Force." Seen first in Grenada and expanded in Panama, it too is a direct reaction to the Vietnam experience. All of these factors contributed to the military deployment being viewed as a "use-it-or-lose-it" situation that we could not sustain.[8] The military deployment strategy and the capability of the force -- supplemented by similar surges from Great Britain and

France -- gave the President the "Desert Sword" leverage to engage Iraq in diplomatic brinksmanship.

Intervention Strategy: Overwhelming Force

The evolution of Overwhelming Force as a US strategy for military intervention has its roots in both history and theory. How the United States executed the strategy had clear political repercussions prior to the outbreak of war and provides issues and lessons for our post-Gulf War conventional force posture.

The American military emerged from Vietnam bitter and frustrated. The general feeling was that the military battles had been won, but the political war had been lost.[9] As is often the case, however, the self-examination that results from defeat allows the candid analysis that gleans new concepts to overcome previous shortcomings. Two main lessons were learned. First, the concept of gradual escalation may have heuristic merit and be the basis for debate and scholarly articles, but in the harsh and practical world of conventional combat it fails the test. Secondly, the military learned once more that politics matter. Military objectives can not be divorced from political realities. To the extent that "the people," especially in democratic societies, influence political decisions, then their perceptions, however formed, are important. Military objectives must be shaped to conform to political realities and the influence the public has on those realities.

In the aftermath of Vietnam, as the political scientists searched for reasons why battle success was not translated into political victory, the most commonly quoted maxim of Clausewitzian

thought was "War is merely the continuation of policy by other means."[10] This provided a simple way to criticize both the political and military leadership for a military objective-political goal mismatch. The military, for the most part, accepted this criticism, but felt that this simple explanation of failure did not provide a complete prescription for future success. Rather, the military turned to another section of Clausewitz for guidance:

> War [is] a paradoxical trinity - composed of primordial violence, hatred, and enmity . . . of the play of chance and probability . . . and . . . as an instrument of policy. . . . The first of these three aspects mainly concerns the people; the second the commander and his army; the third the government.[11]

From this reading of Clausewitz came the military view that, whereas war is an instrument of policy, it is not like other instruments of policy. In fact, the simple "war is a continuation of policy" reading of Clausewitz can lead to a fatal misunderstanding of war. The military perception is that the influence that the violent nature of war, as well as the friction of war, has on public reaction tends to overwhelm the political impact of subtle applications of military power. From this view, therefore, gradual escalation ignores two legs of the Clausewitzian trinity -- the people and the army. Secondly, as all three components of the trinity describe the phenomenon of war, a collapse of any of the three parts can lead to failure. This led to the military's view that the so-called center of gravity for US war efforts was public support. Failure to generate or maintain that support could lead to political defeat. Thus, we see an

increased reluctance by the military to use force, especially ground force, but when used, a commitment to achieve military objectives quickly.[12] The Vietnam experience, combined with a great deal of analysis and study on the part of the professional military, evolved into the intervention strategy of "Overwhelming Force."

With the political decision to develop an offensive capability and the military intervention strategy in place, the task of assembling the force began. We will look at four aspects of the growth in the force to achieve a "Desert Sword." First, the approximate doubling of the size of the US force commitment led to a great increase in the requirement for Reserves, primarily Army Reserves, and the decision to activate combat reserve units. We will examine the use and performance of reserve forces in more depth later, but these decisions serve to highlight the extent to which our force capabilities are dependent on reserve units and the impact that dependence has on political calculations. In general, we can not deploy more than a tripwire force to contingency missions without activating reserves, and we cannot sustain ground offensive capability without reserve support units.

Second, to achieve the ground capability required, well over half the additional forces were drawn from Europe. It is ironic to note that these European forces would probably not have been made available twelve months prior to the Gulf crisis due to the then-current fixation on East-West relations and will not be available three years hence, if planned reductions reach fruition. Next, the

coalition was able to achieve a balance in capabilities that Iraq could not match. This balance translated into a predominance of combat power and led to great advantages in air power, technology, and operational flexibility. Finally, the ability to project the force and its capabilities were a manifestation of preparations for a different war. As the final units from Europe were arriving in mid-January, roughly 25 percent of the tactical Air Force was deployed; the Navy had surged to almost 50 percent of their carriers; the Army had nearly half its active maneuver forces in the Gulf, including about two-thirds of the heavy divisions; and the Marines had nearly two-thirds of their capability deployed as well.

OPERATION DESERT STORM: COMBAT OPERATIONS

As Operation Desert Storm commenced on 16 January 1991 with a massive air campaign, a new chapter in conventional warfare was written. The deterrence value of our global conventional forces had failed to prevent Saddam Hussein from attacking Kuwait and our "Desert Sword" had failed to persuade him to withdraw under the threat of attack. The dismantling of the world's fourth largest military began with a synchronized assault conducted by Air Force fighters, carrier-based Navy aircraft and Army attack helicopters, spearheaded by stealth fighters and sea-launched cruise missiles. Based on accepted Air Force warfighting doctrine, a systematic and continuous air campaign took place without significant loss to coalition forces. After five weeks of air and sea operations, the ground offensive was launched on 23 February 1991. The final

defeat of Iraqi forces was certain; 100 hours later a cease-fire was announced. Important lessons were learned as the campaign progressed that will have a significant impact on the future of our conventional forces.

One of the most crucial results of this operation will be upon the credibility of US conventional forces for deterrence. The US resolve to deploy and commit a very effective military force will likely have a great impact on the aggressive tendencies of any potential regional hegemon. The effectiveness of our weapons systems, manned by a highly trained, motivated, and well-led military force, will give the threat of future use a much greater deterrence value. Any future failure of deterrence will not be due to a lack of understanding of our conventional force warfighting capabilities.

Weapons systems that had been maligned as expensive and ineffective had great impact on the battlefield. Electronic jamming, stealth technology, and extremely accurate bombs and missiles quickly shattered Iraq's air defense system and, within a few days, ensured air superiority, followed quickly by air supremacy. Concurrently, the Iraqi ability to manufacture weapons of mass destruction was neutralized, eliminating this threat from the region. The ability to intercept and destroy a ballistic missile in flight was clearly demonstrated as, night after night, Patriot missiles rose to meet incoming Scud attacks on Saudi Arabia and Israel. Having achieved air supremacy, disrupted the Iraqi command and control system, and destroyed several strategic

military targets, the air campaign turned to the task of isolating and destroying the Iraqi army. By day 33 of the war, Secretary of Defense Dick Cheney was able to report to Congress that 30 to 40 percent of Iraqi tanks, artillery, and armored personnel carriers had been destroyed by coalition air and artillery forces.[13]

As ground forces rapidly advanced across Kuwait and southern Iraq, tens of thousands of Iraqi soldiers surrendered voluntarily, were captured, or were killed. The synchronization of air and ground combat systems called for in AirLand Battle doctrine was a reality. Allied ground, naval, and air forces worked well as an integrated entity, coordinating myriad complex tasks to overwhelm and defeat a demoralized adversary. Casualties to coalition forces were remarkably light, with less than 100 allied soldiers killed in the ground phase. The opinion of many pundits and self-proclaimed military experts that technology (especially air technology) could and should do it all alone proved to be suspect.[14] The balance of air and ground forces, complemented by a naval embargo, bottled up the Iraqi occupation army, dismembered the Iraqi Air Force, disrupted the economic fabric of the country, and finally, forced the withdrawal of the Iraqi force faced with imminent destruction. Although air power made a significant, perhaps decisive, contribution to the success of the overall effort, especially in the favorable environment of air supremacy, ground forces were still required to conclude the campaign. The somewhat hyperbolic, but graphic, statement by an observer of a previous contingency seemed still to be appropriate:[15]

> You may fly over a land forever; you may bomb it, and wipe it clean of life...but if you desire to defend it, protect it, and keep it for civilization, you must do this on the ground, the way the Roman Legions did...by putting your young men in the mud.

A plethora of "lessons learned" will result from various analyses concerning what really won the war. While some claimed that the dominance of technology was a myth and the United States had needlessly wasted billions on expensive weapons, most acknowledge that the technology worked, if only to lower US casualties. From smart bombs severing bridges to Patriot missiles striking Scuds in flight, technologically sophisticated systems performed as advertised. However, technological success must do more -- it must aid the overall objective.[16]

A clear example of the use of new technology integrated in joint procedures was the use of the Army and Air Force Joint Surveillance Target Attack Radar System (JSTARS). Deployed to the Persian Gulf because of enthusiastic reviews given by US forces in Europe while it was still in development, the system is mounted in an aircraft similar to the Air Force AWACS. The JSTARS has a synthetic aperture radar/fixed target indicator that can detect ground targets at ranges measured in hundreds of kilometers. The targeting data is instantly transmitted to the ground commander, presenting him with a real-time portrayal of enemy dispositions. Used with the new Army Tactical Missile System (ATACMS), the combination of JSTARS and ATACMS was employed to engage Scud missile sites as well as Iraqi armored columns.[17] Successful in helping the coalition forces "see the battlefield" to a great

depth, this combination of new technology in combat and intelligence systems demonstrated a critical capability to execute the deep attack tenet of AirLand Battle doctrine.[18] As JSTARS can provide continuous coverage, this capability was especially useful. The limitaions of national reconnaissance means, as well as their contributions, have been discussed by several analysts.[19] Even though the combination of technology and doctrine was important, "people matter most. While all this hardware is dandy, all the software -- the men and women of the armed forces -- have been the best."[20]

Training programs, including exercises at centers like the Army's National Training Center (NTC) in the Mojave Desert of California and the Air Force's Red Flag Training Center at Nellis Air Force Base in Nevada, have provided the clear proving grounds for standardization and synchronization of the drills and tactics that were so dramatically successful in the Persian Gulf. Exercises in deployment and operational coordination such as those in Egypt and Germany have also been crucial to the coalition's ability to fight smoothly and quickly prevail.[21]

After initial problems with coalition command and control relationships, an apparently efficient and workable solution was reached to execute the ground phase of the campaign. In early January 1991, a British request for attachment to US Army forces instead of to the Marines was honored. Even though the British argument was primarily political, their position was strengthened by pointing out that since they conducted frequent exercises and

had long-established contact with the US Army in Germany, the standardization of command and control would be better than with the Marines. They also felt that the mobile nature of their Armored Division would be more compatible with a like Army force.[22] French forces also broke with a tradition of operational autonomy and agreed to assignment under US control.[23] These agreements permitted coalition command and control to function in a successful and cohesive manner.

As the encirclement and ultimate defeat of the huge Iraqi Army was completed, early reports reflected a textbook synchronization of conventional force capabilities by the coalition forces. Technology, training, effective command and control, and a doctrine appropriate for the times were clearly evident. The President promised early on that this would not be another Vietnam. It was not.

STRATEGIC MOBILITY

In the forty-four days between 7 August and 20 September, the Army, Navy, Air Force, and Marines deployed more troops and equipment to the Persian Gulf than they had sent to Vietnam during the 259 days of the 1964-65 build-up in Southeast Asia. Despite this prodigious effort, there was an intense feeling of vulnerability due to the long period between the initial deployment of combat units and the arrival of sufficient force to defend critical facilities. Strategic mobility, a function of three interrelated elements -- airlift, sealift, and prepositioned

materiel -- has been highlighted as the cause of this vulnerability.

The Airlift Program

With its complete strategic fleet of 283 transport aircraft and with the mobilization of the entire Civilian Reserve Air Fleet (CRAF) of 506 commercial planes, the Military Airlift Command (MAC) has roughly a 48 million ton/mile (MTM) capacity. Well below the estimated 66 MTM requirement for war against the Soviet Union in Europe, the kind of regional contingency missions that Desert Shield exemplified still required activation of nearly one-half the CRAF aircraft.[24] These aircraft flew over 1900 missions -- more than 17 percent of those logged by MAC during the buildup -- transporting the bulk of the troops to Saudi Arabia. The vital contribution of the CRAF program included more than the aircraft -- the pilots, aircrews and support personnel that the airlines provided were equally important.[25] In the words of Transportation Command Commander General H. Johnson[26]

> Airlift is what stabilizes a crisis because if we relied on fast sealift, Saddam Hussein could have done all sorts of things, and been finished long before we got there, and the fact is our airlift is not adequate. People who say it is don't realize that our forces arrived late. If we had been in a shooting war, we couldn't have afforded that.

The bottom line, however, is that airlift operations in support of Desert Shield, though massive in effort (amounting to over 11,000 flights and ferrying more than 385,000 passengers and 352,700 short tons of equipment -- about 2,200 short tons a day), came to less than five percent of the total cargo required.[27]

Yet, as General Johnson observed, the requirement to deploy people and equipment in the early days of a conflict is dependent on airlift. It took nearly 20 days to close the first Army division. To face regional conflicts of the future, our strategic airlift must be maintained as a robust and capable force. In addition to airframes, we must consider people, airfields, ground support equipment, and associated maintenance capability as a package.

The Sealift Operation

In contrast to airlift, the more important sealift capability performed less capably. It was and always has been sealift that is the critical link in the strategic lift system. As General Johnson testified to the Senate Armed Services Committee prior to the war in March of 1990:

> In any major overseas deployment, sealift will deliver approximately 95 percent of all dry cargo and 99 percent of all petroleum products. The sheer magnitude of the capability represented by modern ocean-going vessels makes strategic sealift a critical link in strategic mobility. . . . Our unilateral capability continues to decline despite significant accomplishments in government maritime industry cooperation, and the signing of the National Security Sealift Policy. The continued erosion of our sealift capability is a national problem which poses a significant threat to the security of this country.[28]

Even more than their counterparts in Military Airlift Command, planners at the Military Sealift Command (MSC) headquarters in Washington rely on civilian equipment and personnel. Unlike the relatively healthy commercial airline business, the US-flagged merchant fleet and merchant marine have atrophied in the face of foreign competition. Since 1970, the US-flagged merchant fleet has

shrunk from 893 to 367 vessels, and billets to merchant mariners have fallen to just 13,000 from over 30,000 in 1970. As a result of this decline, the Navy invested $7.5 billion during the Reagan defense buildup in a Ready Reserve Fleet (RRF) of 96 used cargo vessels.[29]

On 10 August, the Commander of MSC began ordering activation of the Ready Reserve Fleet and simultaneously began looking for additional US and foreign-flagged charter ships. One of the main reasons that additional chartered ships were needed was the fact that the RRF did not live up to their required schedules. According to Vice Admiral Paul Butcher, TRANSCOM's Deputy Commander-in-Chief, this was due principally to the following:

> Only a third of the ships activated for Desert Shield have ever been broken out . . . they average 24 years of age, [and] many of the "pick-up" crews are unfamiliar with their antiquated steam engines. We in the Navy know that if you keep a ship lying in mothballs, then activate it with a crew off the street that is unaware of its idiosyncrasies, you're going to have problems getting under way.[30]

A second sealift force was a mini-armada of eight SL-7 fast sealift transport ships. The first of these ships departed Savannah, Georgia, loaded with initial elements of the 24th Infantry Division (Mechanized) on 16 August. They began arriving in Saudi Arabia 11 days later. While the performance of the SL-7s was generally good and they were the major contributors to the critical, early movement of heavy Army armored forces, there were some embarrassing breakdowns. One noteworthy example was an SL-7 that was carrying the entire load of spare parts for the 24th

Division, which broke down in the middle of the Atlantic and had to be towed at great expense in cost and time.[31]

On 13 September, CENTCOM Commander General H. Norman Schwarzkopf stated that the buildup of troops had been slowed by breakdowns of ships carrying heavy combat equipment. The military, according to Schwarzkopf, had been forced to contract slower ships to transport some tanks and heavy artillery because of mechanical problems with one of the Navy's eight fast sealift vessels.[32]

The planned solution to shortfalls in the sealift assets available was the charter of dozens of foreign vessels to carry the additional requirements. The 96 retired US-flagged commercial ships of the RRF were unable to meet the needs of the mission. Despite very high costs and questionable availability, by September the Navy was forced to charter 38 foreign vessels and 10 other US commercial ships. It should be noted that only 14 of the 41 RRF ships tasked to support Desert Shield were ready in the time frame required.[33]

Prepositioned Materiel

At the same time they were trying to resolve problems with the deteriorating merchant marine fleet and the obvious inadequacies of the RRF, planners were taking additional measures to increase strategic mobility. They developed the concept of prepositioning ships that were loaded with equipment and material; this process was later termed Maritime Prepositioning Ships (MPS). Primarily for the marines -- the army had only four ships with stored material -- these ships were capable of supporting a Marine

Expeditionary Brigade (MEB) -- an organization that has both ground combat power and organic air assets, coupled with the necessary logistical support. The MPS departed from Diego Garcia and Guam on 7 August, and one week later their cargo was being offloaded in Saudi Arabia. The initial units of this MEB deployed from Twenty-nine Palms, California, and by 25 August, they had married up with their MPS stores, including 50 M60A1 tanks, and occupied defensive positions outside of Al Jubayl. They were the first US heavy armor force to reach the theater of operations.

In summary, the strategic lift capability of the nation conducted a monumental task: the movement of the heaviest military force since World War II to a theater of operations thousands of miles from our home ports. Fortunately, the Iraqi army never tested either the timetable needed for this movement or our resolve in the early days of summer. In the hot days of August and September there were great opportunities for military and political setbacks.

While the fast sealift ships, the Maritime Prepositioning Ships, and ultimately the Ready Reserve Fleet were effective, they also allowed a window of vulnerability. Future contingency force missions cannot afford 45-day windows of vulnerability if we hope to deter any potential foe.

COMMAND AND CONTROL: THE FORCE, ITS ORGANIZATION AND STRUCTURE

The challenge of command and control in a coalition environment is enormous. In Desert Storm, the first level of challenge was at the joint level. Despite the experience in

Panama, Desert Storm was potentially a major test for the reforms fostered by the Goldwater-Nichols Act. The second level of challenge was at the combined level. Having formed an ad hoc coalition, the lack of established procedures and the great disparity in technical systems and operational experience required unique and detailed coordination of rules of engagement, guidance to the force, and plans and orders across a series of battlefield systems ranging from fire support and tactical air support to intelligence and logistics.

At the combined level, the tensions of multi-national command in a region of the world that is so culturally different from our own were made clear early in the operation:[34]

> From the outset of the US deployment, the US military has had to split its mission down the middle to abide by the Saudi stipulation that US forces in the kingdom be strictly in a defensive mode. . . . After King Fahd requested US forces to come to Saudi Arabia's defense, both Schwarzkopf and the Pentagon drafted memorandums on how the command structures should operate. The Pentagon wanted to name a senior Saudi official as supreme commander for all US, Saudi, and multi-national forces, but Schwarzkopf favored "parallel" command structures that would leave him firmly in command of US forces.

The parallel command structure was adopted. This rather awkward structure allowed the United States to leverage military advantages in communications, control, and operational experience while preserving Saudi Arabian political input. The arrangement met the coalition challenge:

> Of all the tangibles of coalition command and control, mutual trust between coalition partners is perhaps the most important. This prevails when objectives are mutually accepted; when a way of operating is mutually agreed; when members see that there is more to be gained by working together than there is by not; when the

> coalition military leaders' good faith is evident; and when hidden agendas are absent.[35]

The command apparatus evolved into a completely parallel structure running from Riyadh to the field. In the field, the United States supplied 30-man detachments to all Arab forces to assist in command and control while Arab units assisted US units in cultural and language sensitive areas.[36]

Many of the most evident positive steps that have evolved in joint operations have been credited to the impact of the Goldwater-Nichols Reform Act. Taking advantage of this act and "lessons learned" from recently conducted joint operations in Grenada and Panama, General Schwarzkopf was able to streamline the CENTCOM command and control structure. In addition, the President and the Secretary of Defense, as well as the Chairman of the JCS, supported him with a "hands-off" policy regarding tactics and operational decisions. While not directly related to the reforms of Goldwater-Nichols, this change reflected more the spirit of 1980s military reforms. Another less visible, but perhaps ultimately more important, effect of the legislation is the following:

> Perhaps as important as the legal provisions is the new attitude change the law has produced at the Pentagon, administration officials say. Top quality young officers once stayed away in droves from jobs on joint staffs. Now they seek out such jobs.[37]

However, looking at the conduct of the war, it is not clear whether "jointness" was really tested. The distinctly different campaigns -- a Navy-dominated embargo, an Air Force-dominated air campaign, and the Army-led ground war -- allowed each service to

pursue its own vision concerning warfighting. The tough trade-offs between sea control and power projection or between air interdiction and close air support did not have to be made. Improvements in joint coordination were evident, but service differences remained visible from foxholes to the Pentagon.[38]

THE RESERVE COMPONENT

From the beginnings of Operation Desert Shield, it became apparent that the Reserve and National Guard would play a major role. By far the greatest need for reserve forces was in the Army. Driven by budget constraints and a decreased need for active duty personnel after the Vietnam war, reserve forces had become increasingly more important. Under the Total Force Policy, a policy that integrated the Active and Reserve Components into one force, the armed services (particularly the Army) were structured with much of the support and logistical functions embedded in the Reserves. Therefore, any military intervention, regardless of how small, that lasted more than a few weeks could not be sustained efficiently without calling up the Reserves. As Lawrence Korb points out:[39]

> The political leaders bought the total force concept because it allowed them to reduce the size of the active force and thus end the draft and to curry favor with the Reserve lobby on Capitol Hill. Moreover, in the early 1970s the politicians felt that any sustained military action would involve the Soviet Union. Thus, Reserves would have to be mobilized regardless of how they were structured.

Additionally, and perhaps even more significantly, the Army assigns some of the Reserve Component to combat brigade-sized units

integrated to "round out" CONUS-based regular Army active duty divisions. As a result, when Secretary of Defense Cheney authorized activation of reserve units after the Iraqi invasion of Kuwait, the fact that the corresponding reserve roundout brigades of the 1st Cavalry Division and the 24th Infantry Division (Mechanized) were not called became a glaring indictment of the system as well as a major political controversy. The premise of roundout had been designed for a different environment. It became obvious that adjustments to the concept were needed. Even when these National Guard units were called in November, it was felt that significant "recertification training" would be necessary at the National Training Center (NTC) before their deployment overseas.[40]

While the air war raged successfully in the Persian Gulf, roundout brigades were being prepared for combat operation: two at Fort Hood, Texas, and one at the NTC at Fort Irwin, California. These brigades were probably among the best-trained maneuver reserve units and were equipped and qualified on weapons systems that had already been deployed to the Gulf.

By the time of the cease-fire, only the 48th Brigade of the Georgia National Guard had undergone extensive training and evaluation at the NTC.[41] This brigade, like all other National Guard units, had trained the standard 39 days a year during weekends and a two-week summer encampment. However, the 48th was unique in that it had also been on a 21-day rotation to the NTC the previous year. As such, it was likely the best-trained maneuver

unit in the Reserves. After almost 6 weeks of evaluation, the feeling emerged that Army National Guard combat units "cannot be relied on, in future planning, for a quick activation like the one under way."[42]

Secretary Cheney, in an assessment of these units in testimony before Congress, maintained that reserve maneuver combat units should not be expected, in the 39 days per year available to train, to be able to sustain the complex and demanding skills necessary to deploy immediately to combat situations.[43] Senator Sam Nunn, Chairman of the Senate Armed Services Committee, visited the 48th National Guard in early February 1991 while they were undergoing training at the NTC. In answer to reporters' questions, he stated, "I did not find any of the personnel out there from the 48th who felt that they should have deployed immediately with the 24th Division [last August]." It was his opinion that we would have to re-look at the details of roundout brigades, especially if the active unit had a rapid deployment mission.[44]

Despite the controversy with the roundout units, it is clear that the Reserve Components played a critical and successful role in the victory in the Persian Gulf. The Army had by far the largest contingent of reservists in the Gulf. From artillery battalions to support detachments, their performance justified a continuing role for the citizen soldier in military operations. Similarly, the successful integration by the Air Force and Marines of reserve forces, albeit in a different manner, validated their contribution. As we transition to a new structure, a sense of

mutual confidence in the ability of the reserves to execute assigned missions is critical.

MAINTENANCE AND THEATER LOGISTICS

As the massive air and sea lift of personnel and equipment began to get underway, it became increasingly apparent that the success of Operation Desert Shield depended on an ad hoc logistics and maintenance support plan developed by a small staff of planners located in Riyadh. Equally as dangerous as the lack of heavy armor in the early "tripwire" phase of the buildup was the growing realization that the requirement to support an expanding force over thousands of miles was a momentous challenge. The requirements were tough. For example, the logistics structure of CENTCOM would have to support almost one-fourth of the entire strength of the Armed Forces and about one-half of its combat strength.

If approbation is merited for any one aspect of the Gulf conflict, the buildup of forces during Operation Desert Shield and, ultimately, the logistical support for Desert Storm should be recognized. Some of the contributing factors to that success were

- the pre-established Saudi logistics infrastructure of roads, ports, and air fields. Without this critical factor, the operation as it evolved could not have been executed. The CENTCOM Deputy Commander for Logistics has stated:

  > By most estimates, much of the allied advantage would disappear without the existence of the massive infrastructure of ports, air fields, and highways that the Saudi government has built in the last 15 years. Some would say that the Saudis designed the sophisticated transportation system almost

as if they knew it would be needed to support a war effort of this size.[45]

- the forward basing in Europe of immense stockpiles of equipment, spare parts, and the logistics infrastructure designed to support a major conventional war. This basing provided not only additional important assets but redundant capabilities at somewhat closer distances.
- the six-month buildup available to logistics planners. This allowed time to develop systems and facilities, in some cases through trial and error, in other cases based on experience gained in training exercises such as Bright Star, that would not have been possible if the Iraqi army had decided to threaten US installations in Saudi Arabia.

The logistical buildup in support of Operation Desert Storm appears to have been an unprecedented success. How much that success would have been mitigated without the benefit of the Saudi infrastructure, the European theater logistics operations support, and the massive stockpile of equipment and material already in being is food for thought for future contingency planners. Furthermore, the rapid success of the operation may hide other potential shortcomings. Many accounts indicated that high-technology munitions were employed to such an extent that other theaters' reserves were drawn down. Furthermore, the ability of the industrial base to react to shortages in parts to other basic material was not tested.

Clearly, the downside of the operation was the unacceptable amount of time required to get the heavy offensive force into place and the problems associated with establishing forward bases for those forces.

SUMMARY

If the Persian Gulf War reflects the style and type of operation to which our conventional force will be committed in the future, then the most important lesson the early stages of Desert Shield/Storm has taught us is that conventional deterrence must be relevant to be effective. Many of the functional areas discussed in this chapter have demonstrated the need to reexamine strategic mobility, the command and control apparatus, the mobilization process, the role of the Reserve Components, and how we establish the logistics base. All of these elements were designed during the Cold War for a cold-war environment and are, as a result, entrenched in the concrete of that era. Clearly, these molds must and will be broken. In the next chapter, we will make some recommendations that bear on many of the major issues that we have discussed.

NOTES

1. Winston Churchill quoted in Eliot A. Cohen, "After the Battle," New Republic 1 April 1991, 19.

2. Bob Woodward and Rick Atkinson, "Mideast Decision: Uncertainty over Daunting Move," Washington Post 28 August 1990: 1-A22.

3. Woodward and Atkinson A22.

4. For an excellent account of the early considerations involved in the movement of forces to the Gulf see James Kitfield, "Dash to the Desert," Government Executive November 1990: 14-26.

5. Peter Greir, "Clock Ticks Away on Standoff," Christian Science Monitor 13 November 1990: 1-2.

6. The first use of the term "long siege" known to the authors was by Barry Posen; the first use of "diplomatic brinksmanship" was by William Quandt, both in presentations to the authors.

7. See Thomas P. M. Barnett, "You Can't Tell the Gulf Pundits Without a Scorecard," Washington Post National Weekly Edition December 24-30: 24 for an interesting assessment of how the press coverage was increasingly questioning our involvement after initial enthusiasm.

8. This was, in fact, more a political rather than military sustainment issue. See Rick Atkinson and Molly Moore, "Gearing Up for a Long, Expensive Stay in the Desert," Washington Post National Weekly Edition 24-30 December: 31.

9. Harry Summers's citation of his conversation in Hanoi with his North Vietnamese counterpart is a classic example of this frustration. During postwar negotiations, COL Summers stated, "You know you never defeated us on the battlefield." After pondering, the NVA colonel replied, "That may be so, but it is also irrelevant." Summers 1.

10. Carl Von Clausewitz, On War, eds. Michael Howard and Peter Paret (Princeton, NJ: PUP, 1984) 87.

11. Clausewitz 89. As we have stated earlier in this paper, it was primarily the Army that turned to Clausewitz. It is interesting to note that the Chairman of the Joint Chiefs of Staff for each of our most recent interventions -- Grenada, Panama, and Kuwait -- was an Army officer and the operational commander for the last two was also an Army officer.

12. These principles were first captured by former Secretary of Defense Caspar Weinberger in his six criteria for the commitment of US forces.

13. Dick Cheney, Secretary of Defense, "The Cost of the War in the Persian Gulf," testimony before House Armed Services Appropriations Subcommittee, CSPAN II, Boston, 19 Feb 1991.

14. General Michael Dugan, "Sorting Out the Mixed Signals," Time 18 Feb 1991: 26.

15. T. R. Fehrenbach, This Kind of War (New York: Macmillian, 1963).

16. Gary Hart, "The Military's New Myths," New York Times 30 Jan 1991: 23.

17. "Scud Killer," Newsweek 11 Feb 1991: 6. The ATACMS has a range reported to be in excess of 50 miles and fires over 600 anti-tank "bomblets."

18. "Two Joint-STARS Aircraft to Support Allied Operations in Persian Gulf Region," Aviation Week and Space Technology 14 Jan 1991: 24.

19. As an example, see the interesting article by Vincent Kiernan, "War Tests Satellites' Prowess: Military Space Systems Put to Work During Desert Storm Conflict," Space News 21 Jan - 3 Feb 1991: 1.

20. Ken Adelman, "Valuable Military Lessons," Washington Times 23 Jan 1991: G-1.

21. The authors have participated in numerous exercises of this sort over the past ten years. "Bright Star" is an XVIII Airborne Corps exercise to Egypt and "REFORGER" is an annual deployment exercise for CONUS-based units to deploy and exercise with other NATO units. The National Training Center and its equivalent in Hohenfels, Germany, provide the Army and Air Force frequent opportunities to practice facets of joint warfighting doctrine.

22. Peter Almond, "British Troops in Command Tussle," London Daily Telegraph 12 Jan 1991: 10.

23. William Drozdiak and R. Jeffery Smith, "French Decision Makes Coalition Complete," Washington Post 17 Jan 1991: 27.

24. For an excellent statistical analysis of the operation see David Garner, "Desert Shield/Desert Storm," briefing prepared for Logistics Management Institute, 26 February 1991.

25. Molly Moore, "Pentagon Strains to Move Forces," Washington Post 14 August 1990: 1-A17.

26. Kitfield 18.

27. John G. Roos, "MAC, Reserve Air Fleet Pull Off 162-Day 'Surge' for Desert Storm," Armed Forces Journal International February 1991: 28.

28. "Threat Assessment: Military Strategy and Operational Requirements," Senate Committee on Armed Services, 101st Congress, 2nd Session (Washington, DC: GPO, 1990) 818.

29. Sean D. Naylor, "Strategic Lift Strains with the Saudi Load," Army Times 27 August 1990: 16.

30. Sean D. Naylor, "Moving 1 Billion Pounds Takes a Herculean Effort," Army Times 3 September 1990: 14.

31. Eric Schmitt, "US Cargo Fleet Is Found Wanting," New York Times 27 September 1990: A-10.

32. Molly Moore, "Buildup in Gulf Reported Behind," Washington Post 13 September 1990: 1.

33. For two excellent articles on the problems with sealift, see Daniel Machalaba, "Does This Old Fleet Ever Go to Sea, Hardly Ever," Wall Street Journal 19 September 1990: 1 and L. Edgar Prina, "Two If by Sea ... Are We Ready?" Army December 1990: 12-21.

34. Patrick E. Tyler, "Bush Intervened Between General, Saudis," Washington Post 4 September 1990: A-1.

35. John H. Cushman, Command and Control of Theater Forces: Issues in Mideast Coalition Command, Program on Information Resources Policy, Harvard University, (Cambridge, MA: HUP, December 1990).

36. MG Paul Schwartz, luncheon address, Harvard University, 1 June 1991.

37. Gerald F. Seib, "Military Reform Has Given Field Commanders Decisive Roles and Reduced Interservice Rivalry," Wall Street Journal 24 January 1991: A12.

38. In an interesting and revealing letter, the commander of the 101st Airborne Division's aviation brigade salutes Air Force performance while lamenting problems that linger: "Air Force units and Army units living at the same location in Saudi Arabia lived a vastly different quality of life. Air Force units placed 'off limits to Army' signs on their showers, PXs, and mess halls and lived in air-conditioned luxury while Army lived its usual way -- in the dirt -- 100 yards away. Army personnel were not sure who to be mad at, the high-living Air Force or the ill-equipped Army." Thomas W. Garrett, letter, Parameters vol. 21, summer 1991, 103-104.

39. Lawrence J. Korb, "The Reserves - Should They Be in the Front Lines?" Christian Science Monitor 1 October 1990: 1.

40. Grant Willis, "Refresher Training Calls Reliability into Question," Army Times 3 September 1990: 6.

41. Seth Mydans, "Limbo of Mojave Tests Mettle for Hell of War," New York Times 17 Feb 1991: 20.

42. Seth Mydans 20. He quotes Pentagon planners for this assessment. The authors, who have personal experience with this unit, and peers serving at the NTC have confirmed this assessment.

43. Dick Cheney, remarks, House Armed Services Appropriations Subcommittee, 19 Feb 1991.

44. A. L. May, "He Says Guard Troops Admit They Need Additional Training," Atlanta Journal and Constitution 10 February 1991: 14.

45. Michael R. Gordon, "Saudis Provide Wherewithal for a Growing US Force," New York Times 27 August 1990: A8.

CHAPTER 5

FUTURE DIRECTIONS

The implications that flow from the previous chapters lead to the realization that new initiatives should be taken as we plan for the future of our conventional forces. These future directions, as seen through the "defining event" of Operation Desert Storm, must be tempered with an understanding of the challenges that will accompany the era before us. As Alfred Thayer Mahan has said, "Defeat cries aloud for explanation, whereas success, like charity, covers a multitude of sins."[1]

Two similar overwhelming victories bear witness to this point. In 1898 in the Battle of Omdurman, a British force under Kitchener met a dervish army of over 50,000. Outnumbered by more than two to one, the superiority of British firepower embodied in technologically advanced artillery and machine guns routed the dervish force, with the loss of some fifty British soldiers. Estimates of dervish losses run to 10,000.[2] British newspapers proclaimed a new era in warfare. But within a year, the British were bogged down in a very different war against the Boers in South Africa. And within a decade and a half, British blood was being shed in still another type of war in the trenches of France. A second, somewhat different, example is Germany in 1939. Having

studied the failures of World War I offensives, the Germans developed the blitzkrieg doctrine and attacked Poland. While overwhelmingly successful, they still studied this campaign closely after the fact. Many German generals, particularly von Manstein, attributed their success against France in 1940 to the improvements in doctrine and tactics made in the aftermath of the Polish victory. It is ironic to note, however, that Germany could not convert operational success on the battlefield into strategic success in the war.

With these cautions in mind, now do we begin to shape a military force flexible enough to deter and respond to a variety of crisis situations? First, we must shed the intellectual constraints captured in the concept of "how much (or little) is enough?" This quantitative approach implies a measurable, stable threat where marginal analysis dominates. The threat is no longer monolithic and now is not the time for precise, analytical adjustments on the margin. General Powell has defined the new environment by stating:

> You've got to step aside from the context we've been using for the past 40 years, that you base [military planning] against a specific threat. We no longer have the luxury of having a threat to plan for. What we plan for is that we're a superpower. We are the major player on the world stage with responsibilities around the world, with interests around the world.[3]

While he has talked of a set of enduring realities against which we must prepare -- generally as a response to regional challenges -- it is against the "unknown -- of the uncertain" that we must prepare as well.[4]

POSTURING FOR FUTURE DIRECTIONS

The simple model of military posture introduced in Chapter 3 is in turmoil. The military strategy upon which we have based our planning for 40 years no longer provides as clear a focus. The operational environment based on geographic containment of an ideological threat is no longer valid. Finally, service visions, honed for the Cold War, struggle to adjust to a new era. Yet, the basic model is not entirely irrelevant; it provides a useful starting point to discuss future directions.

Figure 5-1 below depicts a more detailed vision concerning conventional force posture in the new environment.

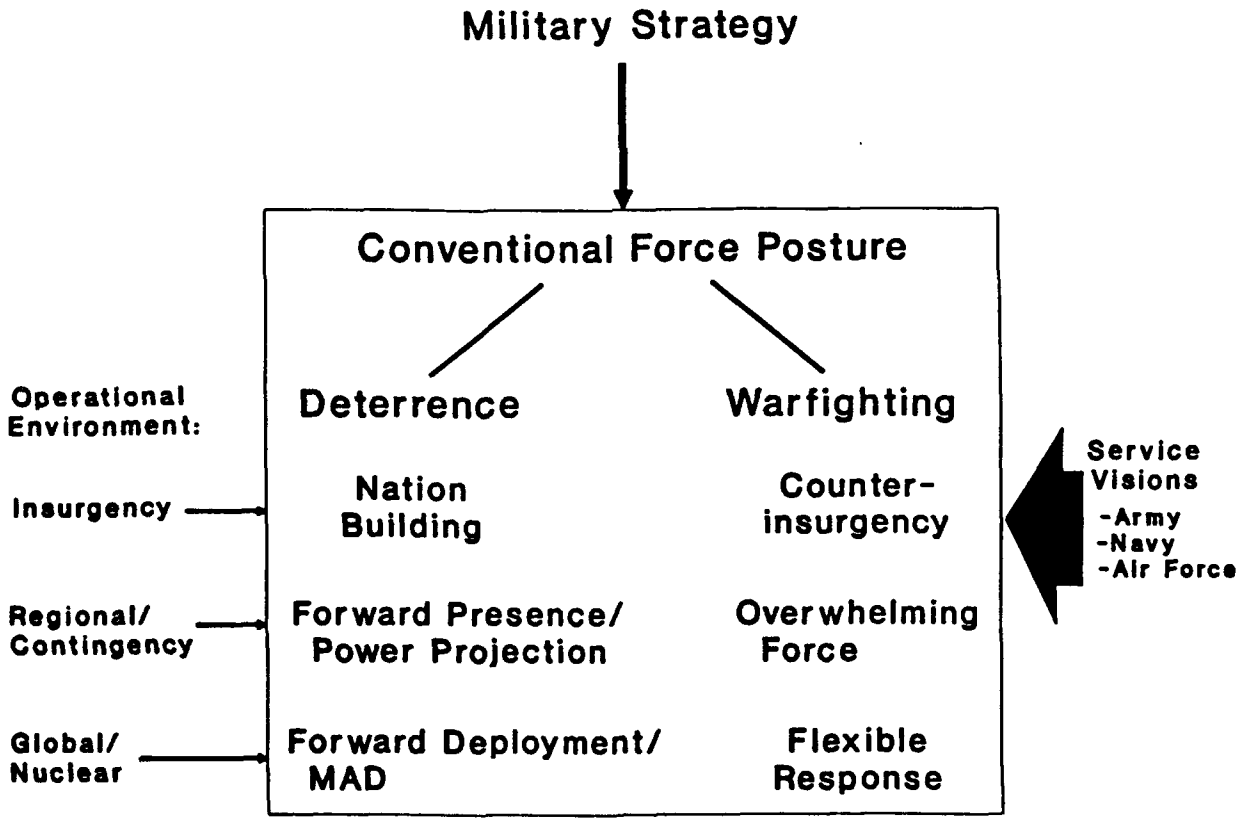

Figure 5-1. Factors Affecting Conventional Military Force Posture

As military strategy evolves as an integral part of national strategy, we consider a fundamentally stable course to be prudent and likely. The ends established after World War II remain sound and, although the means have been altered, the basic way (course of action) of actively engaging with partners to achieve ends has proven successful. Our expanding dependence upon markets and natural resources in various regions of the world makes an isolationist approach to world affairs unlikely. Even those who say we are an "empire in decline" would deny this as an advisable approach to the new era.[5] We must remain engaged in the world with a credible and capable force to provide the "hard power" of military strength that has served as the bedrock for expanding economic liberalism and democratic pluralism.

Given this broad strategic outline, we can no longer base our conventional military posture on an East-West vision of the operational environment. This vision led to a geographic focus where planning was based on countering a discrete, known threat. Today, we are faced with three distinct operational environments that require different conventional force capabilities to accomplish the military roles of deterrence and warfighting. We can no longer look at the operational spectrum as a continuum. The risk of sliding down the continuum to nuclear conflict has receded. Today's challenges are unique to each level of the operational environment, and we must appropriately posture our conventional capabilities to that environment.

While much of the focus of this paper has been on regional conflicts and contingency operations, as shown in the recent Gulf War, it would be foolhardy to totally neglect the other two operational environments. First, conventional force plays a far different deterrent role in both the insurgency environment and in the global nuclear environment. Conventional force in the deterrent role in insurgencies tends to be made up of support forces -- engineer, medical, logistics, intelligence -- rather than combat forces. In global nuclear deterrence, the conventional force role remains much the same as during the past 40 years. However, as nuclear threats subside, a resurgence in the importance of mobilization capabilities and the ability to generate conventional forces and equipment will be required. Turning to warfighting, the debate continues as to the relevance of conventional force in both of these "other" operational environments.[6] As the record of success in warfighting with conventional force in insurgencies is bleak and the record in global nuclear war blank, concentration on conventional force capabilities for deterrence seems more critical.

New thinking about conventional force capabilities in the regional contingency operational environment is urgently needed. As we examined earlier, it is this environment in which we see a potential for increased conflict with the collapse of a bipolar world. Furthermore, the level of violence may rise as technology proliferates. Finally, some fundamental changes in conventional force posture are required to meet the contingency deterrence and

warfighting needs. With the drawback of much of our overseas force, deterrence rests increasingly on the ability to respond to crisis through rapid power projection. The warfighting strategy of Overwhelming Force employed in the Gulf War has also defined a standard that impacts on conventional capabilities. It is not the intent of this paper to recommend specific numbers of weapons systems or units, but to offer certain proposals that will make the combined capabilities of our conventional forces better able to deter and, if necessary, prevail in any future conflict. The following elements of these new directions, initially discussed in chapter 3, will be examined more thoroughly in this chapter:

- Deterrence, increasingly provided by conventional force, must be more relevant to regionally specific threats.
- Intelligence capabilities need a more global, less East-West view with the ability to focus assets on regional hot spots.
- Conventional arms control must be thoroughly integrated into national strategy as a means of reducing potential conflict risk.
- Balanced power projection capability through increased strategic mobility for lethal, sustainable, self-sufficient active forces is necessary.
- The ability to integrate forces into rapidly formed coalitions must be planned and exercised.
- The appropriate mix of active and reserve components in each service is critical to the deterrent and warfighting credibility of our conventional forces.

- Warfighting and acquisition strategy should stress our capabilities in information technology and management, training, leadership, and synchronization of combat power to advantage our enduring competitive strengths.

DETERRENT CAPABILITY

The success of Operation Desert Storm has established the capability of today's conventional force to deliver a lethal blow against an entrenched foe. Similarly, Operation Desert Storm established a willingness to employ force and, therefore, enhances the credibility of its future use. As we look forward to the unknown in an uncertain world, several factors loom as critical to ensuring that conventional force remains relevant for regional deterrence. First, we must remember that the relationship between warfighting and deterrence is more closely linked with conventional force.[7] Thus, while tripwires are legitimate deterrent means, there must be relatively rapid follow-on forces available to make the tripwire credible. Similarly, the image of overwhelming force as the warfighting intervention strategy for the United States means that we must maintain the ability to generate this type of force to ensure the effectiveness of deterrence. Second, if the threat is unknown, then

> as a glittering generality, this means U.S. programs should sacrifice some incremental additions of combat striking power to an emphasis on strategic lift, in-theater mobility, better maintenance for higher readiness, and tactical flexibility.[8]

To retain this response flexibility would imply reliance on high readiness active forces for deterrence. Furthermore, efforts to

reduce the surprise inherent in the unknown drives a refocusing of intelligence capabilities and more comprehensive arms control regimes. These latter two areas will be the subject of our next two points.

Intelligence Focus

The shift from a world dominated by two superpowers focused primarily on each other to a more regionally oriented multipolar world requires a corresponding shift in the focus of our intelligence effort. The ability to respond appropriately to a crisis in any one of a variety of regions will require that our national and military intelligence capabilities take on a more global view. Rapid deployability requires warning and assessment of a wider variety of military and political threats than just those of the Soviets or their clients.

While all the lessons are not tabulated from the Gulf War, it is apparent that sufficient raw intelligence was available to conclude that Iraq would invade Kuwait. The failure was not in gathering data, but in analysis of the information by regional experts and in understanding intent through a non-bipolar lens. Clearly, there are technical and human gaps in our intelligence system, but exuviation from the Cold War shell of intelligence analysis is a first step that must be taken.

The weapons systems of each potential regional threat must be carefully monitored to ensure that accurate assessments are available. The dramatic success of high-tech weapons in the Persian Gulf War will likely encourage regional powers to acquire

these potential advantages for themselves. Adequate intelligence monitoring will be critical to the success or failure of arms control and non-proliferation efforts.

While numerical and qualitative evaluations must be made to assist potential employment decisions concerning the size and mix of US conventional forces, more focus is needed on assessing the level of training, unit strength, and morale of regional forces. One of the key differentials in the conflict against Iraq was the high state of readiness of US forces compared to Iraqi forces. This became a key "combat multiplier" for our forces. The logistical capabilities of support elements must also be known to plan any potential campaign properly. For instance, it was known that Iraqi artillery lacked the transport to rapidly move their ammunition. This was a vulnerability that was exploited with our relative advantage in mobility and targeting.

Our knowledge concerning the geography and terrain data of each region must be continuously updated to plan for military operations. Current maps must be available in a variety of scales to permit thorough navigation and operations planning. Details about roads, railroads, communications facilities, and sea and airports are all elements of critical information.

Conventional Arms Control

Secretary of State James Baker has said:

> With the spread of missiles and chemical weapons throughout volatile regions, conflicts in the Third World are likely to take on a more dangerous character. Regional conflicts are likely to engulf more countries, and be more susceptible to escalation.[9]

The growth of the Iraqi military into the fourth largest in the world has demonstrated the great risk that uncontrolled proliferation of arms can cause for a given region. Control of the sale and transfer of arsenals to would-be hegemons must be a key part of the national security strategy of the United States. In addition, our strategy must be carefully coordinated with that of other potential arms suppliers. Secretary Cheney has stated in his Annual Report to the President and Congress that "through arms reduction agreements, the United States seeks to reduce military threats to US and allied interests, inject greater predictability into military relationships, and channel force postures in more stabilizing directions."[10]

The ongoing Conventional Armed Forces Europe (CFE) talks, which are a part of the package of arms control efforts described by Secretary Cheney, are having a significant impact on the future of our conventional force structure and indicate the significance that conventional arms control has in determining conventional force needs. In recent testimony before Congress, Secretary Cheney stated that a lack of further progress in negotiations with the Soviets may preclude us from making planned reductions of the scope currently envisioned. Similarly, our conventional force needs in the new environment will be effected by our ability to limit the global proliferation of arms.

As the United States looks to other regions, we should not assume that efforts to stop proliferation will fail. We offer no clear prescription, but feel that concentration on systems of great

lethality and long-range delivery are obvious areas of emphasis.[11] Furthermore, confidence building measures such as those instituted in Europe in the late 1980s may provide the framework for a beginning. Clearly, our efforts to maintain a technological edge must continue as we seek a solution.

POWER PROJECTION CAPABILITY

Just as power projection is critical to crisis response for deterrence, it is also integral to warfighting. As noted in chapter 4, one critical lesson learned from Operation Desert Shield was that there were many high-risk weeks between the initial deployment of the 82d Airborne Division, US Marine forces, and the arrival of a heavy ground force. These light tripwire forces were vulnerable to Iraqi attack while heavy forces were en route. As was also discussed, only eight SL-7 fast sealift ships were available to move heavy divisions rapidly. It took until February 1991 for the last elements of 3rd Armored Division to arrive in Saudi Arabia and complete the buildup necessary for offensive operations.

We need to reexamine our entire strategic mobility posture to ensure the triad of sealift, airlift, and prepositioned materiel is balanced to meet today's needs. This requires a reassessment of deployment doctrine to maximize flexibility and take advantage of new technologies and commercial opportunities. As we reexamine strategic mobility, two important principles must be kept in mind. First, the strategic mobility triad must be maintained in balance. For example, an overemphasis on prepositioning at the expense of

other lift means can actually slow deployment. Based on aircraft allocation in Operation Desert Storm, it would take as long to get a heavy division in place to draw prepositioned material following initial Army, Air Force, and Marine tripwire forces as it would take to flow the division by fast sealift.[12] Second, a balance of land-based and maritime-based power projection should be maintained. Land-based power projection (Army and Air Force) is a far more frugal approach (estimates indicate that acquisition cost is one-third that of maritime-based), but is dependent on allies or forced entry.[13] A modicum of more expensive maritime-based power projection is necessary for flexibility. In a future crisis, we may not have the luxury of six months to wait for the arrival of a sufficient force.

Sealift

If the United States has forces, stationed in the US or overseas, capable of prevailing in a potential conflict, then a critical factor in measuring the deterrent value of these forces is the time necessary to deploy to the crisis region. Since better than 95% of all cargo (for other than light forces) must be moved by sealift, the following data is informative.[14]

COMBATANT REPOSITIONING STEAMING TIMES

From	To	Steaming Days(1)
US East Coast	Indian Ocean(2)	18
US West Coast	Indian Ocean	24
Mediterranean	Indian Ocean(2)	6
Western Pacific	Indian Ocean	14
US West Coast	Western Pacific	9

NOTES: (1) Based on 20-knot speed of advance
(2) Using Suez Canal

To move a capable force requires three categories of ships. Fast sealift ships are needed to move the heavy equipment of the Army. Fast sealift provides the maximum flexibility to deploy a credible, capable, and lethal force globally to reinforce tripwire forces. However, fast sealift is expensive, not only in ship acquisition cost, but in training and readiness of the force as well. A second type of ship is the immediately available roll-on/roll-off (RO/RO) ship to provide sustainment for initially deployed forces. There needs to be a balance of fast sealift and afloat prepositioned material to take advantage of both capabilities.[15] While some additional RO/RO ships are needed, the current RO/RO ships in use by USTRANSCOM are somewhat inexpensive when compared to the cost of a single destroyer. One estimate suggests that seven or eight of the RO/RO ships could be purchased for the price of one modern fast frigate.[16] Finally, there must be guaranteed access to commercial shipping to reinforce the initial power projection.

Prepositioning

Another way to lessen demands on the transportation system would be to preposition equipment in the region. Prepositioned materiel configured to unit sets (POMCUS) stocks in Europe have long been a mainstay of US plans to rapidly reinforce our forward deployed forces.[17] Prepositioned material has the political advantage of providing presence. Its military advantage is less clear. Not only must it be properly positioned for expected conflict, but it must be defended to ensure access. Since a

percentage of military equipment cannot be efficiently stored, a deploying unit must bring many of its critical items with it, doubling the airlift requirement it would otherwise have.

If land-based prepositioned equipment cannot be arranged for political reasons, then this equipment could be afloat. The Marine Corps' Maritime Prepositioning Ships (MPS), demonstrated in the Persian Gulf, are of conventional hull design and are moved to regions as threat situations dictate. Marine forces then use many of these empty ships, following off-loading, for command and control and medical support. Army forces, operating farther inland, would not need this secondary function of "empty" hulls and could use a different, probably cheaper, approach to MPS.[18]

Airlift

As previously discussed, the airlift effort during the Gulf War was a massive undertaking that stressed our capability to the limit. Crews were kept flying almost continuously from early August until well into the final stages of the deployment. The activation of the Civil Reserve Air Fleet (CRAF) and many Air Force Reserve personnel was paramount and made the problems less severe. US Air Force C141, C5, and C130 transport aircraft were able to move the combat equipment of the 82d Airborne Division to Saudi Arabia in a matter of a few days, while charter aircraft from commercial carriers carried the majority of personnel. Increased reliance on prepositioned material would make airlift the "long pole on the tent." As airlift is the most expensive mobility option, this condition should be avoided.

The problem, as we look into the future, is the likelihood that the next crisis will occur in a region that has the extensive facilities available in Saudi Arabia. Clear-thinking US military planners prepared numerous installations during the recent past in anticipation of just such an eventuality as Desert Storm. The next requirement for deployment of our forces of this magnitude may necessitate operations in a substantially more austere environment. Except for the small C130 cargo aircraft, the other planes mentioned above must operate from long concrete runways and need extensive taxiways to unload and stage for a return trip. Many of the current fleet of transport planes are nearing the end of their useful life cycle and will need to be replaced.

Secretary of Defense Dick Cheney, in testimony before the House Appropriations Subcommittee, described the aging state of the C141 and C5 fleet and strongly urged the acquisition of the C17 transport as a replacement aircraft.[19] An increased long-haul, heavy-cargo capability that could operate on unimproved airstrips seems prudent to enhance flexibility.

While the present "mobility triad" of airlift, sealift, and prepositioned equipment and stocks should be retained, its composition should be modified. The current Gulf war has shown that our existing capability for strategic mobility is inadequate to execute the national military strategy in a short-warning scenario without excessive risk. Greater surge capability to deploy by air and sea is essential for both deterrence and warfighting. Just as importantly, a smaller Army must be more

deployable and, in light of changing regional security priorities, it is time to redistribute the Army's prepositioned equipment. This equipment, to include theater reserves, prepositioned war reserves, and prepositioned materiel configured to unit sets (POMCUS), needs to be available globally.

Strategic mobility is only one component of power projection. The force that arrives must be capable of influencing the situation. This implies lethality and sustainability. In general, this means that warfighting organizations need to be more self-sufficient. The recent trend in Army organizational doctrine toward building warfighting capability around brigades is a recognition of this necessity. Similarly, the composite wings proposed by the Air Force would meet this test. The Marines already posture in self-contained organizations. Second, enhancing strategic mobility requires a trained and ready force. This means primary reliance on active force for rapid deployment.

Coalition Warfare

The necessity to conduct coalition warfare, as seen in the Persian Gulf, may be the norm in the new world order. Furthermore, as previously discussed, projecting land-based power is far cheaper than projecting power from maritime sources. The United States is involved in various security agreements, ad hoc coalitions, formal alliances, and collective security arrangements throughout the world.[20] These and others would likely come into play in any future crisis. Preparing to operate with these partners will take training, knowledge of their doctrine, and a flexible command and

control structure. It should be noted that many of the procedures adopted by the Gulf War coalition forces were based on long-tested NATO procedures. However, fighting with a known coalition in Europe will be different from fighting with an ad hoc arrangement in other regions of the world.

The results of Operation Desert Shield strongly support the requirement to improve the manner in which we plan and fight with our allies. Our analysis describes a few of the challenges facing us in a region when quickly arranged coalitions are formed. There are some useful initiatives that could help in any future crisis of this sort:

(1) Leaders of US forces must better understand and anticipate the unique geographic, political and threat potential in those regions where we may deploy. The strengths and weaknesses of our partners should be understood to integrate them effectively into the combined force.

(2) One specific area for improvement is that of command, control, and intelligence. Trained liaison teams must be included in our command and control organizations. If possible, they should speak the language of the host force and understand their unique doctrinal differences. This may require a refocusing of the services' "area specialization" programs away from the embassies of the world and into warfighting commands. The close cooperation between US and Saudi Air Forces is an excellent example of coordination in air operations. Combined US-Saudi exercises that have included

AWACS utilization and related fighter operations have been conducted for several years. US military experience in Bright Star exercises to Egypt has proven invaluable in planning for deployment and subsequent operations in the Middle East.[21] The US Navy's recent experience in reflagging operations in the Persian Gulf has also had a positive impact on the success of the naval portion of Operation Desert Storm.

(3) Logistical problems associated with Operation Desert Shield have shown that we will require a more robust capability at higher levels. Corps and theater logistics capabilities had to be significantly augmented from the United States and Europe to support the massive requirements. Egyptian, Syrian, and Saudi forces were organized to operate primarily within their boundaries and over short distances and thus had very austere logistics infrastructures. They lacked sufficient trucks and other transport to conduct offensive operations independently and therefore required significant US support. To integrate smaller coalition partners effectively into our logistics systems, we will have to provide a greater haul and distribution capability than would be normal for our own forces.

(4) Frequent exercises should be conducted to test the deployability of contingency forces and resolve problems with associated alliance partners. The Joint Chiefs of Staff conduct many exercises annually; they should include more potential alliance partners. An expansion of this effort will

require close coordination with higher-level "political" decisions and initiatives.

Active/Reserve Component Mix

The role of the Reserve Component forces in Operation Desert Shield has proven the validity of the concept of the Total Force, but shown that it needs adjustments. The "Total Force Policy," first promulgated in 1973, was designed to meet the requirements for reinforcing NATO if the Warsaw Pact should attack.[22] Over one-third of the Army's combat units and two-thirds of its combat support units are currently in the National Guard and Reserve. The Air Force has approximately 50 percent of its strength in its Air Guard and Reserve units, while 10 to 20 percent of the Navy and Marine forces would be drawn from the reserves.[23] The activation, deployment, and performance of most of these units during Operation Desert Storm was impressive, but changes are necessary. Without a declaration of national emergency or congressional approval, there is a six-month limit that constrains the President's use of these forces in contingency operations.[24] The President needs more flexibility in the early stages of crisis management. Significant mobilization decisions, if made too early in the crisis, could cause an unnecessary escalation.

As previously discussed, the issue of Army National Guard combat units was significant because of the time required to prepare them for combat. From activation to deployment, approximately 90 to 120 days were required to conduct training to raise their level of readiness to an acceptable standard.[25]

Deterrence in a regional crisis may well depend on high levels of readiness in a rapidly deployable and sustainable force. National Guard and Reserve forces train on the average of 39 days a year, which is not sufficient time to sustain the required levels of combat readiness above small unit (battalion and below) level. The complexity of "synchronization tasks" required at higher levels of combat units is a major reason for this. The requirement for the 48th Infantry Brigade of the Georgia National Guard (which was a "well-trained" Guard unit) to spend more than six weeks at the National Training Center to reach high levels of combat readiness demonstrates that reserve combat brigades cannot meet the quick reaction times for crisis deployment to threatened regions.

The critical role of reserve component forces must be understood in light of requirements in today's operational environments. In a global conflict today, reserve forces would be key to the effective reconstitution and regeneration of adequate forces to counter a Soviet threat. In a regional crisis, there may not be adequate time to activate and train them to required readiness levels to be relevant for deterrence. As described earlier, this time generation of combat power is primarily a challenge for Army combat forces. If the crisis is short-lived, then many service support units could come from the reserve components without declaration of war or national emergency. The excellent performance by Air Force Reserve airlift crews is an example of how these forces can quickly respond in a crisis situation. Those forces necessary to help in port handling and

with other requirements for deployment should continue to come primarily from the reserve component. In general, highly technical, transferable skills are best maintained in the reserve component. Contingency forces for deployment to the crisis area should be primarily in the active component to meet the needs for rapid deployability and high readiness levels.

Although some changes are needed, it would seem on balance that the elements of the nation's reserve mobilization system that were essential to this crisis were effective. The most important changes that need to be instituted include

- a restructuring of the combat role of the army reserve force to provide the basis for generating combat power during a longer mobilization and reconstitution process focused on a global or multi-theater war.
- development of active units with integrated combat support and combat service support elements capable of joining joint operations in a coalition environment.
- a refocusing of reserve missions, toward providing the robustness necessary in coalitions and, perhaps, toward deterrent missions in the insurgency operational environment.
- significant changes in federal legislation dealing with reserve mobilization in order to allow greater flexibility in the call-up of individual reservists to meet selected critical needs.

The conflict in the Gulf has been an excellent litmus test of not only the readiness of the reserve component of the armed forces

but also the adequacy of its structure. We must incorporate these results in our future posture.

SYNCHRONIZATION OF COMBAT POWER AND SERVICE VISIONS

There are still significant differences between the services concerning the appropriate strategy for conduct of operations. Each service has its own vision of war. As was pointed out in chapter 4, each service was able to run its own campaign. It is, therefore, unlikely that service visions will change substantially. In the current resource-constrained environment, we can ill afford the inefficiencies of attempting to execute separate service strategies. Service visions are necessary and even desirable. They provide a professional and detailed look at unique environments -- land, sea, and air -- and translate these concepts into sometimes competing warfighting strategies. Synergy results from a combining of effort in a coordinated manner. Each service has accepted this principle within its own doctrine. The Navy relies upon the carrier battle group, which maximizes the capabilities of the air, surface, and undersea elements to survive. The Army has long espoused the virtues of combined arms as it integrates infantry, armor, and artillery into the battle, and the Air Force also synchronizes the efforts of reconnaissance, air defense suppression, and air superiority to gain complete control of the air.

To move toward a "joint strategic paradigm,"[26] where the synergy services strive to achieve is reached at a higher level, requires more effort in areas of enduring comparative strength.

The US advantages in information management and technology, training, and leadership development should be stressed as vehicles for developing a joint ability to synchronize the combat power of air, sea, and land forces. As the military strategy evolves and the armed services prepare for missions in the various operational environments, the ability of service visions to adjust to the new world order will be critical. We can ill afford stagnation in thought in a time of dynamic change.

SOME CONCLUDING THOUGHTS

If there is an overriding message resulting from our analysis, it is one imbued with caution. We have tried to discuss many of the complexities that relate to the design and use of conventional military force and its relationship to overall national strategy. However, we suffer from no delusions that we have examined all these complexities.

"If it ain't broke, don't fix it" is one part of our conclusion.[27] In other words (but not more eloquent words), there is much that is "right" about current policies driving our conventional military force. The training and readiness standards are impressive and reflect the quality of the people in our armed services. We must not forget that the military is ultimately made up of people. They make the difference. We must take care not to learn the wrong lessons from the overwhelming military successes of Operation Desert Storm. Changes in force structure and employment policies will take place in response to a changed global environment. But premature dismantling of a significant part of

our conventional military capability is a course that we do not urge.

The issues that we have raised will not be solved with simple measures. For that reason, they are worthy of our attention. We trust that those charged with providing for the security of the United States will take the time to think long and hard about the sustained and steadfast sacrifices required to provide for that security.

NOTES

1. Alfred Thayer Mahan, Naval Strategy Compared and Contrasted With the Principles and Practice of Military Operations on Land (Boston: Little, Brown and Company, 1911) 384.

2. Cohen 22.

3. Don Oberdorfer, "Strategy for a Solo Superpower: The US Plans to Keep Its Powder Dry," Washington Post National Weekly Edition 27 May - 2 June 1991: 8.

4. General Colin Powell, "Enduring Defense Needs," Retired Officer October 1990: 23.

5. Kennedy, Rise and Fall 534. Kennedy argues that "even when it declines to occupy its 'natural' share of the world's wealth and power, a long time into the future, the United States will still be a very significant power in a multipolar world, simply because of its size."

6. In a new book, Van Crevald challenges the conventional view of Clauswitzian war. He points to the history of insurgencies and their recent records of success in changing regimes as reasons for their pertinence. Martin Van Crevald, The Transformation of War (New York: The Free Press, 1991).

7. We contrast this linkage for contingency operations with the less obvious linkage in nuclear war and insurgency conflicts.

8. Richard K. Betts, Surprise Attacks (Washington, DC: Brookings Institution, 1982) 296.

9. James A. Baker, "Points of Mutual Advantage," speech before the Foreign Policy Association, New York, 16 October 1989.

10. US, Department of Defense, Annual Report to the President and the Congress (Washington, DC: GPO, 1990) 3. Negotiations currently under way include the Conventional Armed Forces in Europe (CFE) talks, the Strategic Arms Reduction Talks (START), Defense and Space Talks (DST), Nuclear Testing Talks (NTT), chemical weapons negotiations, and negotiations regarding Confidence and Security-Building Measures (CSBMs).

11. The administration has initiated an effort along these lines in the wake of the Gulf War. While it is too early to judge its success, it does not seem to be getting off to a fruitful beginning. Many observers believe that more emphasis is needed to ensure success. See Leslie H. Gelb, "Arms Sales Heaven," New York Times 24 Mar. 1991: E-17.

12. Information based on discussion with members of the Army Staff.

13. William W. Kaufmann, A Thoroughly Efficient Navy (Washington, DC: Brookings Institution, 1987) 87-88.

14. Admiral James D. Watkins, Chief of Naval Operations, "The Maritime Strategy," Proceedings January 1986: 8.

15. Ernst Frankel of MIT has described a proven method for construction of fast bulk sealift ships that can be bought for a fraction (approximately 1/8) of the cost of current cargo ships. He suggests the use of current technology by which ship hulls are designed for "float on, float off" operations. This design requires that cargo be placed in barges that are floated onto the deck of the semi-submerged ship that is then raised and sailed in a conventional manner. Combined with unmanned below-deck propulsion systems, this design significantly reduces the cost to build and operate. Ernst Frankel, lecture, "The Future of the Surface Navy," Massachusetts Institute of Technology, Cambridge, MA, 17 October 1990.

16. Frankel.

17. All of the authors have participated in exercises where units were deployed from the United States to draw heavy equipment stored in warehouses in Germany or Belgium. These unit sets of equipment are referred to as Prepositioning of Material Configured in Unit Sets, or POMCUS. Individual weapons and equipment are carried by soldiers on transport aircraft from their home station to the POMCUS sites where they draw the heavier equipment needed for combat. Many days are saved in the deployment and fewer ships are needed to transport it.

18. The Ernst Frankel "float on, float off" hull design could be a more cost-effective and flexible way to construct ships for the afloat prepositioned mission. Equipment could be placed in floating barges that could be locally moved by relatively few tugs

or moved longer distances by the "float on, float off" ships. Placing equipment in barges would also allow for speedy reconfiguration of unit equipment based on a given threat without the requirement to completely load and reload the ship, as is the case with the current Marine operational concept. Frankel.

19. Dick Cheney, Secretary of Defense, testimony Before the House Appropriations Subcommittee, 19 February 1991. Secretary Cheney stated that he was confident that the technological problems had been solved in order to make the C17 the right replacement for the C141 and C5 aircraft.

20. Department of Defense, 1990 Annual Report, 5. The United States currently is party to seven formal alliances: the North Atlantic Treaty Organization (NATO), the Australia-New Zealand-United States (ANZUS) pact, the Treaty of Mutual Cooperation and Security with Japan, the Mutual Defense Treaty with the Republic of Korea, the Mutual Defense Treaty with the Republic of the Philippines, the Southeast Asia Collective Defense Treaty, and the Inter-American Treaty of Reciprocal Assistance (the Rio Treaty).

21. One of the authors has planned and participated in Bright Star Exercises as a member of the 24th Infantry Division.

22. Colonel James L. Gould, US Air Force, Office of the Assistant Secretary of Defense for Reserve Affairs, "Toward Fuller Realization of the Total Force Potential," US Army War College Selected Readings AY 1991 (Carlisle, PA: 1990) 493.

23. Gould 492-493.

24. FORSCOM Commander's Mobilization Command Readiness Program (Atlanta: FORSCOM, 1987) figure 1.

25. Army National Guard brigades were activated in mid-November 1990 and deployed to CONUS posts for initial individual and unit training. They were then moved to the National Training Center (NTC) at Fort Irwin, California,where they were evaluated by the NTC staff. The earliest they would likely have been "available for deployment" was March or April 1991.

26. This term comes from Allard.

27. Anonymous quote long favored by those with a "conservative bent," including many within the military profession.

WORKS CITED

Adelman, Ken. "Valuable Military Lessons." Washington Times 23 Jan. 1991: G-1.

Allard, C. Kenneth. Command, Control, and the Common Defense. New Haven: Yale University Press, 1990.

Allison, Graham T. Address. National Security Fellows Luncheon. Harvard University. Cambridge, MA: 29 Aug. 1990.

Almond, Peter. "British Troops in Command Tussle." London Daily Telegraph 12 Jan. 1991: 10.

Atkinson, Rick, and Molly Moore. "Gearing Up for a Long, Expensive Stay in the Desert." Washington Post National Weekly Edition 24-30 Dec. 1990: 31.

Bacevich, A. J., et al. American Military Policy in Small Wars: The Case of El Salvador. Washington, DC: Corporate Press Inc., 1988.

Baker, James A. "Points of Mutual Advantage." Speech before the Foreign Policy Association. New York, 16 Oct. 1989.

Barnett, Thomas P.M. "You Can't Tell the Gulf Pundits Without a Scorecard." Washington Post National Weekly Edition 24-30 Dec. 1990: 24.

Betts, Richard K. Surprise Attacks. Washington, DC: Brookings Institution, 1982.

Bill, James A. and Carl Leiden. Politics in the Middle East. Austin, TX: University of Texas Press, 1984.

Bolger, Daniel P. "Two Armies." Parameters vol. 19 no. 3 (September 1989) 24-34.

Bradsher, Keith. "Pentagon Paying High Prices for Shipping Supplies to the Gulf." New York Times 24 Dec. 1990: 34.

Broder, David S. "The Lessons from the Gulf." Boston Globe 29 Aug. 1990: 15.

Brooks, Linton F. "Naval Power and National Security: The Case for the Maritime Strategy." International Security Vol. 11. No. 2 (Fall 1986).

Builder, Carl H. The Masks of War. Baltimore: Johns Hopkins UP, 1989.

Bush, George. "State of the Union." Address. Washington, DC: 21 Jan. 1991.

Cheney, Dick. Testimony. "The Cost of the War in the Persian Gulf." House Armed Services Appropriations Subcommittee. CSPANII. 19 Feb. 1991.

---. Statement. Senate Armed Services Committee. Washington, DC: 21 Feb. 1991.

Clausewitz, Carl Von. On War. Eds. Michael Howard and Peter Paret Princeton: Princeton University Press, 1984.

Cohen, Eliot A. "After the Battle." New Republic 1 April 1991: 19-26.

---. and John Gooch. Military Misfortunes: The Anatomy of Failure in War. New York: The Free Press, 1990.

Crist, General George B. Testimony. "Status of US Central Command." Defense Subcommittee. House Appropriations Committee. Washington, DC: GPO, 22 Feb. 1988.

Cushman, John H. Command and Control of Theater Forces: Issues in Mideast Coalition Command. Program on Information Resources Policy, Harvard University. Cambridge, MA: Harvard University Press, Dec. 1990.

Drozdiak, William and R. Jeffery Smith. "French Decision Makes Coalition Complete." Washington Post 17 Jan. 1991: 27.

Dugan, Michael. "Sorting Out the Mixed Signals." Time 18 Feb. 1991: 26.

Fehrenbach, T. R. This Kind of War. New York: Macmillan, 1963.

Frankel, Ernst. "The Future of the Surface Navy." Lecture. Massachusetts Institute of Technology. Cambridge, 17 Oct. 1990.

Gaddis, John Lewis. "The Evolution of Containment." Eds. John Lewis

Gaddis and Terry L. Diebel. Containing the Soviet Union. New York: Pergamon-Brassey, 1987.

Garner, David. "Desert Shield/Desert Storm." Briefing for Logistics Management Institute. Bethesda, MD, 26 Feb. 1991.

Garrett, Thomas W. Letter. Parameters vol. 21 no. 2 (Summer 1991) 103-104.

Gelb, Leslie H. "Arms Sales Heaven." New York Times 24 Mar. 1991: E-17.

George, Alexander L. and Richard Smoke. Deterrence in American Foreign Policy: Theory and Practice. New York: Columbia University Press, 1974.

Gold, Dave. America, The Gulf, and Israel: CENTCOM and Emerging US Regional Security Policies in the Middle East. Boulder: Westview Press, 1988.

Gordon, Michael R. "Saudis Provide Wherewithal for a Growing US Force." New York Times 27 Aug. 1990: A8.

Gould, James L. "Toward Fuller Realization of the Total Force Potential." Office of the Assistant Secretary of Defense for Reserve Affairs. US Army War College Selected Readings AY 1991 Carlisle, PA: 1990.

Gray, Colin S. War, Peace and Victory. New York: Simon and Schuster, 1990.

Greir, Peter. "Clocks Tick Away on Standoff." Christian Science Monitor 13 Nov. 1990: 1-2.

Hadley, Arthur T. The Straw Giant. New York: Random House, 1986.

Hart, Gary. "The Military's New Myths." New York Times 30 Jan. 1991: 23.

Hudson, Michael C. Arab Politics: The Search for Legitimacy. New Haven: Yale University Press, 1977.

Huntington, Samuel P. "Conventional Deterrence and Conventional Retaliation in Europe." International Security Vol. 8. No. 3 (Winter 1983/84): 251-275.

---. "The US -- Decline or Renewal." Foreign Affairs Vol. 67, No. 2 (Winter 1988-1989): 76-96.

---. Presentation to the National Security Seminar of the Center for International Affairs. Harvard University. Cambridge, MA: 17 Sep. 1990.

Johnson, Maxwell. The Military as an Instrument of US Policy in Southwest Asia: The Rapid Deployment Joint Task Force, 1979-1982. Boulder, CO: Westview Press, 1983.

Katzenbach, Edward L. Jr. "The Horse Cavalry in the Twentieth Century." The Use of Force. Eds. Robert J. Art and Kenneth N. Waltz. Lanham: University Press of America, 1988: 125-151.

Kaufmann, William W. A Thoroughly Efficient Navy. Washington, DC: Brookings Institution, 1987.

Kennan, George F. "The Sources of Soviet Conduct." Foreign Affairs Jul. 1947.

Kennedy, Paul. The Rise and Fall of the Great Powers: Economic Change and Military Conflict from 1500 to 2000. New York: Random House, 1987.

---. "Fin de Siecle America." New York Review of Books 28 Jun. 1990: 31-40.

Kiernan, Vincent. "War Tests Satellites' Prowess." Space News 3 Feb 1991: 1.

Kissinger, Henry A. Ed. Problems of National Security. New York: Frederick A. Praeger, 1965.

---. Years of Upheaval. Boston: Little, Brown and Co., 1982.

Kitfield, James. "Dash to the Desert." Government Executive Nov. 1990: 14-26.

Korb, Lawrence J. "The Reserves -- Should They Be in the Front Lines?" Christian Science Monitor 1 Oct. 1990: 1.

Luttwak, Edward N. Strategy: The Logic of War and Peace. Cambridge, MA: Harvard University Press, 1987.

Machalaba, Daniel. "Does This Old Fleet Ever Go to Sea, Hardly Ever." Wall Street Journal 19 Sep. 1990: 1.

Mahan, Alfred Thayer. Naval Strategy Compared and Contrasted With the Principles and Practice of Military Operations on Land. Boston: Little, Brown and Company, 1911: 384.

Martin, Lenore G. "Patterns of Regional Conflict and US Gulf Policy." US Strategic Interests in the Gulf Region. Ed. William T. Olson. Boulder: Westview Press, 1987.

May, A.L. "He Says Guard Troops Admit They Need Additional Training." Atlanta Journal & Constitution 10 Feb. 1991: 14.

McCrea, Michael M., Karen N. Domabyl and Alexander F. Parker. The Offensive Navy Since World War II: How Big and Why. Center for Naval Analysis (CNA) Research Memorandum 89-201, Jul. 1989.

McNaugher, Thomas L. Arms and Oil: US Military Strategy and the Persian Gulf. Washington, DC: Brookings Institution, 1985.

Mearsheimer, John J. "Back to the Future: Instability in Europe After the Cold War." International Security Vol. 15. No. 1 (Summer 1990): 5-56.

Moore, Molly. "Pentagon Strains to Move Forces." Washington Post 14 Aug. 1990: 1- A17.

---. "Buildup in the Gulf Reported Behind." Washington Post 13 Sep. 1990: 1.

Mydans, Seth. "Limbo of Mojave Tests Mettle for Hell of War." New York Times 17 Feb. 1991: 20.

Nau, Henry R. The Myth of America's Decline: Leading the World Economy into the 1990s. Oxford: Oxford University Press, 1990.

---. "The Persian Gulf Defeatists Misread the Changing Times." Boston Sunday Globe 28 Oct. 1990: A31.

Naylor, Sean D. "Strategic Lift Strains with the Saudi Load." Army Times 27 Aug. 1990: 16.

---. "Moving 1 Billion Pounds Takes a Herculean Effort." Army Times 3 Sep. 1990: 14.

Neustadt, Richard and Ernest May. Thinking in Time: The Uses of History for Decision Makers. New York: The Free Press, 1986.

Nye, Joseph S. Bound to Lead. New York: Basic Books, 1990.

Oberdorfer, Don. "Missed Signals in the Middle East." Washington Post Magazine 17 Mar. 1991: 38.

---. "Strategy for a Solo Superpower: The US Plans to Keep Its Powder Dry." Washington Post National Weekly Edition. 27 May - 2 June 1991: 8.

Posen, Barry R. The Sources of Military Doctrine: France, Britain and Germany Between the World Wars. Ithaca: Cornell University Press, 1984.

---. Discussion. Massachusetts Institute of Technology. Cambridge, MA, 19 Nov. 1990.

Powell, Colin. "Enduring Defense Needs." Retired Officer Oct. 1990: 23.

Prina, L. Edgar. "Two If by Sea ... Are Ready?" Army Dec. 1990: 12-21.

Quandt, William B. Decade of Decisions: American Policy Toward the Arab-Israeli Conflict, 1967-1976. Berkeley: University of California Press, 1977.

---. Address. National Security Fellows Seminar. Cambridge, MA, 27 Nov. 1990.

Record, Jeffrey. The Rapid Deployment Force and US Military Intervention in the Persian Gulf. Cambridge, MA: Institute for Foreign Policy Analysis, 1983.

Roos, John G. "MAC, Reserve Air Fleet Pull Off 162-Day 'Surge' for DESERT STORM." Armed Forces Journal International Feb. 1991: 28.

Schlesinger, James R. "Rapid (?) Deployment (?) Force (?)." Washington Post 24 Sep.1980: A-18.

Schmitt, Eric. "US Cargo Fleet Is Found Wanting." New York Times 27 Sep. 1990: A-10.

Schwartz, Paul R. Luncheon Address. National Security Fellows. Cambridge, MA, 1 June 1991.

Schwarzkopf, General H. Norman. Testimony. Senate Armed Services Committee. Washington, DC: GPO, 8 Feb. 1990.

"Scud Killer." Newsweek 11 Feb. 1991: 6.

Seib, Gerald. "Military Reform Has Given Field Commanders Decisive Roles and Reduced Interservice Rivalry." Wall Street Journal 24 Jan. 1991: A12.

Shy, John and Thomas W. Collier. "Revolutionary War." Makers of Modern Strategy Ed. Peter Paret. Princeton: Princeton University Press, 1986. 815-862.

Sick, Gary. "The Evolution of US Strategy." The Great Game Ed. Alvin Z. Rubenstein. New York: Praeger, 1983.

Simpkin, Richard. Race to the Swift. London: Pergamon-Brassey, 1985.

Snyder, Glenn H. "Deterrence and Defense." The Use of Force. Eds. Robert J. Art and Kenneth N. Waltz. Lanham: University Press of America, 1988.

Summers, Harry. On Strategy: The Viet-Nam War in Context. Carlisle Barracks, Pa: Strategic Studies Institute, 1981.

"Threat Assessment: Military Strategy and Operational Requirements." Senate Committee on Armed Services. 101st Congress, 2nd Session (Washington, DC: GPO, 1990) 818.

"Two Joint-STARS Aircraft to Support Allied Operations in Persian Gulf Region." Aviation Week and Space Technology 14 Jan. 1991: 24.

Tyler, Patrick E. "Bush Intervened Between General, Saudis." Washington Post 4 Sep. 1990: A-1.

US Air Force. The Air Force and US National Security: Global Reach -- Global Power. Washington, DC: GPO, Jun. 1990.

US Army. Forscom Commander's Mobilization Command Readiness Program. Atlanta: FORSCOM, 1987: Fig. 1.

US Department of the Army. Field Maunal 100-5: Operations. Washington, DC: GPO, 5 May 1986.

US Department of Defense. Annual Report to the President and the Congress. Washington, DC: GPO, 1990.

US Department of State. "NSC-68, United States Objectives and Programs for National Security." 14 Apr. 1950, Foreign Relations of the United States: 1950. Washington, DC: GPO, 1950.

---.---. Special Report No. 166, Jul. 1987. "US Policy in the Persian Gulf." Appendix C. Washington, DC: GPO, 1987.

US White House. National Security Strategy of the United States. Washington, DC: GPO, 1990.

Van Crevald, Martin. Technology and War: From 2000 B.C. to the Present. New York: Free Press, 1989.

---. The Transformation of War. New York: Free Press, 1991.

Van Evera, Stephen. "The Cult of the Offensive and World War I." International Security Vol. 9. No. 1 (Summer 1984): 58-107.

Vuono, Carl E. A Strategic Force for the 1990s and Beyond. Army "White Paper." Washington, DC: GPO, 1990.

Waltz, Kenneth N. "The Spread of Nuclear Weapons: More May Be Better." Adelphi Papers No. 171. London: IISS, 1981.

Warden, John A. The Air Campaign. Washington, DC: Pergamon-Brassey, 1989.

Watkins, James D. "The Maritime Strategy." Proceedings Jan. 1986: 8.

Weinberger, Caspar W. Department of Defense Annual Report to the Congress -- Fiscal Year 1987. Washington, DC: GPO, 5 Feb. 1986.

Willis, Grant. "Refresher Training Calls Reliability Into Question." Army Times 3 Sep. 1990: 6.

Wilson, James Q. Bureaucracy: What Government Agencies Do and Why They Do It. New York: Basic Books, 1990.

Woodward, Bob. The Commanders. New York: Simon and Schuster, 1991.

Woodward, Bob and Rick Atkinson. "Mideast Decision: Uncertainty Over Daunting Move." Washington Post 28 Aug. 1990: 1-A22.