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Adaptiveness in National Defense: The Basis of a New Framework

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INTRODUCTION

After the November 1996 election, regardless of who is elected, there will be a review of national defense strategy. Much of the current debate revolves around “How many and which major regional contingencies (MRCs) should the United States be prepared to fight and how many forces are needed to get the job done?” This is the wrong question. The right one is larger: “How can DoD best build a defense posture for pursuing U.S. strategic objectives in this era of flux and opportunity?”

The answer, we believe, involves planning and building a U.S. force posture to meet three tests. The “posture,” which involves not just the forces but also patterns of deployment, readiness, and operations, should be able to (1) *prevail* in highly diverse war-fighting contingencies, large and small, sudden and not so sudden (slowly developing); (2) *shape* the future international security environment; and (3) *adapt* to changes in strategic conditions. This paper describes a framework for defense planning that emphasizes and unifies these tests. It provides a new prism through which to view and assess alternative defense postures. We intend our proposals to be practical to senior leadership; yet, they are radical in urging basic changes in the way the Department of Defense (DoD) does business.

The central precepts of our approach are as follows:

- DoD’s toughest challenge is to confront geopolitical, technological, and budgetary uncertainty that is unprecedented in the post-World War II era. The challenge requires setting enduring strategic goals,

which include but go beyond war-fighting goals, and assuring that the evolving defense posture always points toward those goals.

- A key element here is that the very nature of warfare is changing, in ways not yet fully understood. This means that DoD has the difficult task of deciding how and at what pace to *transform and recapitalize* U.S. forces to provide contingency capabilities for a new era of warfare and adversaries who learned from Desert Storm.
- Although preparing for possible contingencies is DoD’s core concern, the United States—because of its international and technological strength—can also *shape* the future environment to some degree, not just react to it. To do so means integrating DoD force planning with U.S. foreign policy more broadly than comes naturally within the threat-based planning framework. As part of this, we see the need to strengthen our overseas presence and coalitions because the perimeter of U.S. interests is growing, not shrinking.
- Finally, the defense posture must be not only superior but strategically adaptive because the international and military environment will continue to change, as may national priorities.

Taken together, these precepts of *planning for adaptiveness* suggest a *portfolio management* approach to defense planning, a practical and realistic approach that would facilitate regularly reviewing and adjusting emphasis within the program to support the multiple goals related

to contingency capability, environment-shaping, and strategic adaptiveness.

In the following pages we review traditional “threat-based planning” and its shortcomings. We then describe our alternative framework and identify broad force-posture options that should be assessed within it. Finally, we summarize preliminary analytical results.

THREAT-BASED PLANNING AND ITS SHORTCOMINGS

Background

Since the early 1960s the Department of Defense has assessed the defense program in terms of how many wars could be fought concurrently with the envisioned forces. It has had defense programs geared to 2-1/2 wars (1960s), 1-1/2 wars (1970s), multifront global war with the Soviet Union (1980s), and, lately, two major regional contingencies.

Under each of these, the DoD has used “point threat scenarios” as test cases for Service programs. Figure 1 illustrates what such a scenario might look like today, using notional numbers.¹ It assumes that Iraq invades Kuwait, after which North Korea invades South Korea (the reverse might be assumed instead). Not only are the adversaries specified, but so also are many scenario details—even the chronology. This scenario may be *one* good test case, but it is clearly inadequate unless it is a bounding case or truly representative of all likely contingencies. Today’s MRC scenarios are neither. They suppress uncertainty rather than force us to face up to it, and they do not satisfactorily measure the adequacy of our force posture.

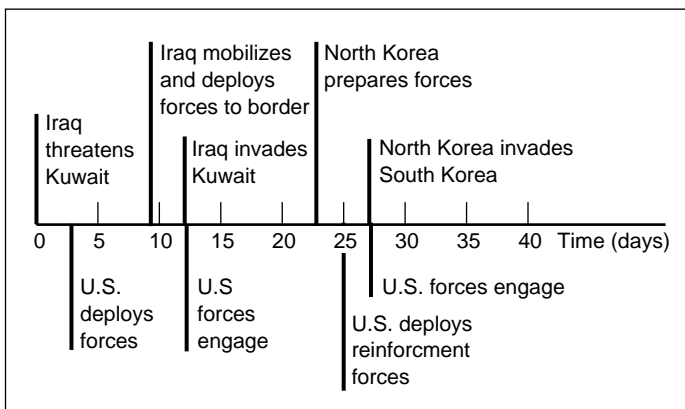


Figure 1—Schematic of a Threat-Based Planning Scenario

¹The Department has sometimes provided additional scenarios reflecting, e.g., lesser regional contingencies. It has always exhorted the Services to consider a range of cases in developing programs. In practice, however, attention has centered on a “big scenario” analogous to Figure 1. This is of concern to the DoD, which is considering changes.

To be sure, Secretaries of Defense have always recognized that U.S. forces will be used in unanticipated ways. They have seen the scenarios as mere *illustrative* test cases, and as valuable elements of declaratory policy and deterrence. During the Cold War, they could be confident that building forces for any reasonable point scenario involving the massive and multifaceted Soviet threat would generate forces with considerable inherent flexibility—with nuclear weapons to provide insurance.

In 1993, Secretary of Defense Les Aspin considered alternatives, including suggestions from General Colin Powell to focus more on generic war-fighting needs. But Aspin chose to stick with the threat-based approach because he still judged it necessary in convincing Congress to support an adequate defense program—and because Iraq and North Korea were convenient and credible villains, whom we have no hesitation to label as such. Aspin expected inside-the-Pentagon planning to go well beyond the point scenarios. His *Bottom-Up Review* made clear the limited purposes intended for the test cases.

In practice, however, DoD remains “hooked” on the simple formula of optimizing for the official scenarios (e.g., in building forces that get to the region just in time to prevail in those scenarios). The threat-based approach is seductive. It provides a single, simple yardstick against which to measure the adequacy of U.S. forces. It is therefore easy to explain and thus to gain public support for defense, especially when the threats are real and vivid. It also allows the Department to coordinate planning across Services, demanding that all of them build forces to satisfy needs of the planning cases.² In sum, the threat-based approach makes it easier to get everyone, from the Services to the Congress, to march to the same drummer—even if the drumbeat is rather arbitrary or too limiting.

Problems of Framework

Whatever its attractions, the point-scenario threat-based approach is wrong for our era. This is not a mere defect in the esoterica of defense planning. The problems are real and serious:

- *Inappropriate Peacetime Posture.* U.S. forces are being run ragged in operations having essentially nothing to do with the planning scenarios that have determined the “posture” (i.e., not only the active and reserve force structures, but also deployments, readiness levels, and priorities). As a result, we have witnessed serious operational stresses, confusion in the ranks about mission, hasty improvisation, and occasional sub-par performance—despite having the best

²This said, the Navy and Marines have always sized forces for presence and crisis-response, not just MRCs.

military technology and personnel \$260 billion per year can buy.

- *Achilles' Heels.* Even if war actually occurred in the Persian Gulf, Korea, or both, our adversaries would likely try to exploit Achilles' heels that do not even show up in the standard planning scenarios. Potential adversaries already know better than to confront our forces as in Desert Storm. We are more vulnerable to military failure than is generally realized.
- *Failure to Assess Adaptivity.* Too often, DoD studies of force and weapon options focus on optimizing for the point planning scenarios and a baseline of numerous detailed assumptions. This is quite pernicious, since the results are then strongly biased by the semi-arbitrary assumptions, which are often the result of compromise in committee.
- *Political Fragility.* The defense budget would be quite vulnerable politically if the Iraqi or, more likely, the North Korean threat were suddenly to vanish. In such a case, would we immediately cash in half our force posture as many would surely suggest? Certainly not, for good reasons. But then why not make those reasons the basis for our defense program in the first place?
- *Questionable Suitability for the Future Strategic Environment.* Will the forces we are developing, measured against today's two threat scenarios, be able to deal effectively with new adversaries, allies, regional alignments, technologies, and missions? Quite possibly not, and changing the posture quickly will be impossible without years of preparation.

The danger is just as great that we will fail to exploit U.S. advantages. Designing forces on the basis of fixed current threats and current ways of fighting is exactly the wrong bias as we stand on the doorstep of a revolution in military technology.

PLANNING UNDER UNCERTAINTY

How One Plans Under Great Uncertainty

Whether in business, sports, or war, the school solution for dealing with uncertainty is to embrace *planning for adaptiveness*. This is intuitive to modern American CEOs, football coaches, and field lieutenants; it is DoD that is peculiar in having focused on point cases. This said, we still have to know what our military forces might need to do. A call for unbounded adaptiveness would amount to calling for a blank check. This drives us back to where all good planning should begin, with objectives.

National Objectives for Planning Future Forces

Drawing on recent statements by Secretary William Perry and General John Shalikashvili, we can encapsulate

key ideas in the useful mantra “promote, prevent, defeat,” which suggests three national security objectives: creating conditions to avoid conflict, deterring and otherwise preventing aggression when it is threatened, and defeating it when it occurs. For thinking more specifically about defense programs and postures, we suggest three related and supportive *investment goals* to ensure that, despite current uncertainties, future postures will permit us to promote, prevent, and defeat: The goals are

- *a force posture robustly sufficient at all times for a wide range of contingencies (“operational adaptiveness”)*
- *a force posture that can influence favorably how the world evolves—to help “shape the environment,” as an element of U.S. foreign policy*
- *the capacity to change our military posture over time as trends and events dictate (“strategic adaptiveness”).*

It follows that we should be testing alternative force-posture plans against these separate investment objectives, as depicted in Figure 2 and discussed below.

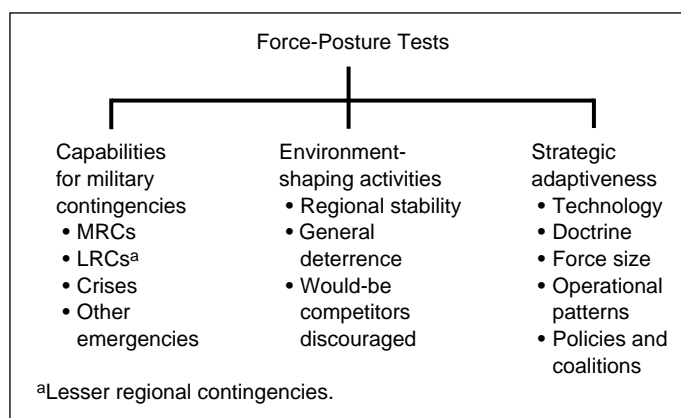


Figure 2—Testing Force Postures

Operational Adaptiveness: Capabilities for Diverse Contingencies

In evaluating the sufficiency of forces for military contingencies, the key is to move beyond one or two point scenarios toward a much broader exploration. Focusing here on the war-fighting aspect, this involves two distinct steps (Figure 3). The first is to consider a much longer list of plausible political-military scenarios (e.g., those in Figure 4), including some that are politically sensitive—both because they include nations such as Russia or China, which are not and we hope will not become adversaries, and because they consider U.S. intervention in hypothetical conflicts where our interests are controversial or our capabilities would be limited.³

³From time to time over the years there have been efforts by DoD to include sensitive scenarios or to include purely generic scenarios raising similar challenges. Unfortunately, these laudable efforts have sometimes been criticized with accusations that DoD was trying to create threats.

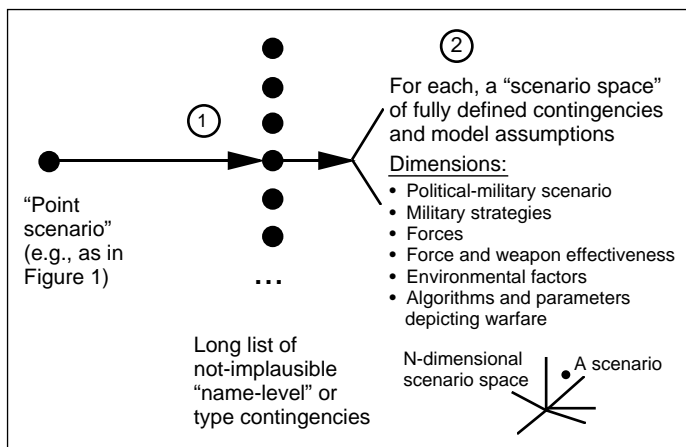


Figure 3—Moving from Point Assumptions to Scenario-Space Testing

- Iraq vs. Kuwait and Saudi Arabia
- Iran closes Strait of Hormuz
- Iran and Iraq vs. Kuwait and Saudi Arabia
- Russia vs. Ukraine
- Russia vs. Poland
- Russia vs. the Baltic states
- North Korea vs. South Korea
- North Korea and China vs. South Korea
- China vs. unified Korea
- China vs. Taiwan
- China vs. Vietnam
- A “next Bosnia” in the Balkans
- China seeks to control East Asian ocean regions
- Civil war in Cuba
- Civil wars in Algeria, Mexico, . . .
- . . .

Figure 4—Plausible Scenarios for 2005–2020

The second step is to recognize that *each* political-military scenario (e.g., Iraq invades Kuwait and Saudi Arabia) has innumerable variations, differing in warning time, allies, military strategy, force levels, force effectiveness, weather, terrain, and even the algorithms assumed in war games used to assess capabilities. Thus, for each political-military contingency, there is an entire *scenario space* of operational circumstances. Exploring this scenario space would be of interest only to “modeling wonks” except that uncertainties about operational circumstances (e.g., warning time or the fighting effectiveness of defending allies) are very large and have profound effects on the military capabilities needed to prevail. Indeed, it is, if anything, more fruitful to examine a large scenario space for one or two threats than to examine a long list of threats with fixed assumptions about the operational circumstances of each.

Fortunately, with modern processing power, thoughtful design, and appropriate models, we can now conduct such scenario-space exploration quickly. Figure 5 illustrates some findings from such analysis. It shows one slice through the data base of simulated outcomes, one that shows effects of varying the time of deployment relative to D-Day (x axis), the nominal effectiveness of

tactical-aircraft sorties (y axis), and the suppression of tactical aircraft sorties (e.g., by chemical attack or dense air defenses) (z axis, into the paper), while holding many other variables constant. Figure 5, then, shows only 240 of some 100,000 outcomes of a simulated war with Iraq over Kuwait and Saudi Arabia, where green is a good outcome and red a bad one. It is assumed in these cases that Saudi ports and airfields are initially threatened (e.g., by irregular infantry with shoulder-fired missiles) and the Strait of Hormuz has been mined. In these cases, unless the United States deploys roughly a week or so before the war begins, it has to defer deployment of main forces and instead concentrate early activities on seizing and securing ports and clearing mines. This would give the advancing Iraqi forces nearly a week of additional time before the United States could fully engage them; the results turn out “red” (i.e., bad). We have, of course, identified elsewhere a number of force-improvement

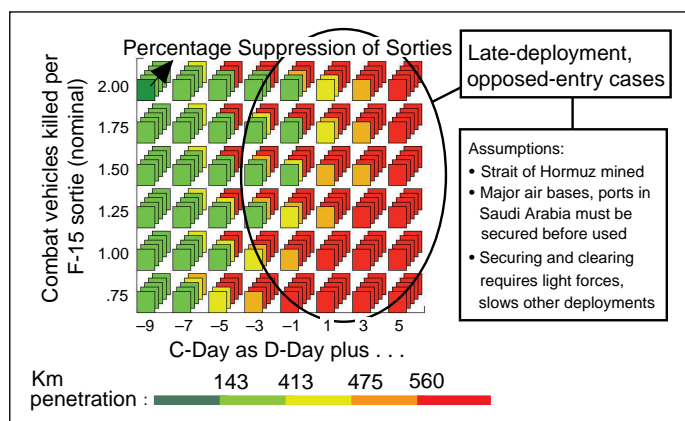


Figure 5—An Illustrative Contingency Analysis for the Persian Gulf

measures to mitigate these problems, but our point here is methodological.

Contrast Figure 5, which confronts forthrightly the huge uncertainties, with traditional analyses built around fixed assumptions. Again, Figure 5 is only one slice of the analysis of a single contingency. We consider the combined effects of many combinations of many parameters’ values. And we combine those, in turn, with multiple simulations of many other scenarios. We can view different slices of the outcome data base interactively by “turning knobs” on the computer display. Some of these knobs relate to measures of effectiveness.⁴ We believe this powerful new type of exploratory analysis—qualitatively different from traditional sensitivity analysis—is

⁴The measure of effectiveness used can have a strong impact on conclusions. For example, ability to conduct counteroffensives would highlight the value of Army units, while stopping an attack might be most easily accomplished with more air forces or allied ground-combat capability.

the appropriate way to test forces and postures for operational adaptiveness in war-fighting contingencies. Note the following:

- The objective becomes increasing the fraction of the scenario space in which U.S. forces would be able to prevail (with priority on the most important parts of the space), not increasing effectiveness for a few point scenarios.

Environment-Shaping

Environment-shaping entails using U.S. military forces to help create international security conditions such that it will be unnecessary to fight to protect our interests. Here we are making more explicit and methodical the familiar notion—reflected in Secretary Perry’s recent statements—that U.S. force posture is, or at least ought to be, related to U.S. foreign-policy goals.

One important goal is promoting stability (e.g., by strengthening and enlarging alliances, and by building new cooperative relationships). Another goal is to prevent instability by reducing incentives for interstate competition and by deterring potential rogue countries from contemplating aggression. A related goal is discouraging regional states from attempting to compete militarily with the United States (e.g., by convincing them that the United States could trump any such effort).

Analyzing systematically a given defense program’s contributions to environment-shaping begins by being reasonably precise in identifying environment-shaping objectives and the capabilities and activities that might contribute to them. To test alternative programs we use a version of multiattribute utility analysis, akin to methods used in business planning.

Our analysis so far has centered on future U.S. overseas military presence and the contributions of our closest allies. The result has been to demonstrate the potential leverage of low-cost increases in overseas military infrastructure, prepositioning, and especially foreign-military interactions (FMI)/security assistance such as training, exercises, and education. Such activities are regularly underfunded in all three of our key theaters (East Central Europe, the Greater Middle East, and East Asia). Yet funding these measures requires diversion of budget dollars, and the tradeoffs are sometimes painful or politically unpopular.

Admittedly, these methods involve subjective judgments. But any effort to bring analytical rigor to consideration of the international environment must necessarily do so, and in-depth research and analysis can increase the quality of such judgments. Such partially subjective methods are far better than excluding crucial “soft” issues from force planning, or treating them but relying on

impressions and loose conjectures about cause and effect. At a minimum, our approach allows decisionmakers and their staffs to question and change assumptions readily, observing—during the course of a meeting—how this affects conclusions about cost and effectiveness. As illustrated notionally in Figure 6, which reflects qualitatively the results of a recent study, decisionmakers may reach some of the same conclusions about priorities even when they approach the subjective-judgment problem from different perspectives. People with different perspectives make judgments about the value of various increments of capability or activity for improving the environment-shaping objective. The model then combines many such inputs and computes the relative cost-effectiveness. Figure 6 reflects notionally the conclusion mentioned above, that FMI/security assistance has the highest leverage, even if one can argue about how much value it has. Actual results vary with theater, the baseline assumed (e.g., how many forces are already forward-deployed), and the individuals consulted. Consensus is not always possible, of course, even on rank-ordering.

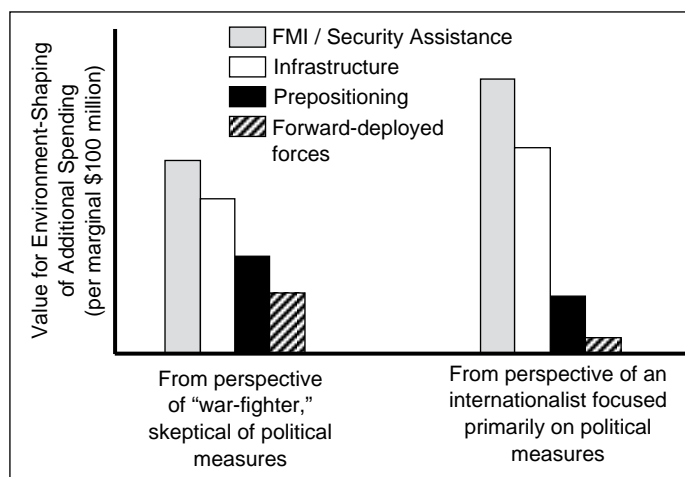


Figure 6—Notional Cost Effectiveness Conclusions About Contributions to Environment-Shaping

U.S. military superiority is one of the reasons we have an unrivaled opportunity to influence the direction and pace of international change. Examining carefully how alternative force postures might contribute to this goal should therefore be an integral part of the new defense planning framework. This will change the perceived importance of various research and development (R&D) and acquisition options. As we shall elaborate elsewhere, it will also highlight the need to strengthen and expand—not disengage from—overseas presence and coalitions worldwide, especially in Europe, East Asia, and the greater Middle East.

Strategic Adaptiveness

Even with skillful U.S. efforts to shape the environment, there is sufficient flux and uncertainty in interna-

tional politics and in technology that we cannot count on today's favorable strategic conditions to endure. DoD has seldom treated strategic adaptiveness as an explicit issue in assessing the defense program. It now seems critical to do so, because we are entering an era in which perceived military needs and military operations could shift drastically—perhaps repeatedly and in different directions—over the course of the next 20 to 25 years.

To evaluate strategic adaptiveness, we use the same basic methodology as for environment-shaping. We can identify many of the developments that might require adaptations. The list in Figure 7 distinguishes between some predictable discontinuities or branches, and some shocks. Following a simple logic of planning in the face of strategic uncertainty (Figure 8), we can also identify possible force-posture adaptations. Some can be well defined in advance as contingent substrategies for branch points; others—in response to shocks—will be more ad hoc, and more dependent on flexible hedge capabilities. Some of the hedge programs are in process (e.g., R&D on ballistic missile defense); others are arguably underfunded (e.g., technology and systems for swift mine clearance from sea lanes).⁵

<p><u>Branches</u></p> <ul style="list-style-type: none"> • Korean unification • Chinese military buildup and threatening behavior • NATO expansion • Defense budget • Proliferation of missiles, weapons of mass destruction, inexpensive air defenses, advanced mines, . . . <p><u>Shocks</u></p> <ul style="list-style-type: none"> • Japan “goes independent” • New Arab-Israeli war • Hong Kong situation explodes, spreads • Russia moves against Baltic states, Ukraine, or Poland • “Surprise” cuts in defense budget, disrupting program • Revolution in Saudi Arabia • Actual use of WMD against the U.S., its forces, or allies
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Figure 7—Illustrative Plausible Branches and Shocks

One benefit of introducing a strategic-adaptiveness test would be to help protect innovative experiments by the military departments that might otherwise be endangered by current exigencies in a budget crunch. These include arsenal ships, the Marines' Sea Dragon concepts, light and lethal Army units, and joint mastery of long-range precision strike. In this regard, it is troubling to note recent congressional actions cutting funding for

⁵The American industrial base is, of course, an enormously valuable hedge. In only a very few instances, however, does the DoD need to take special protective measures.

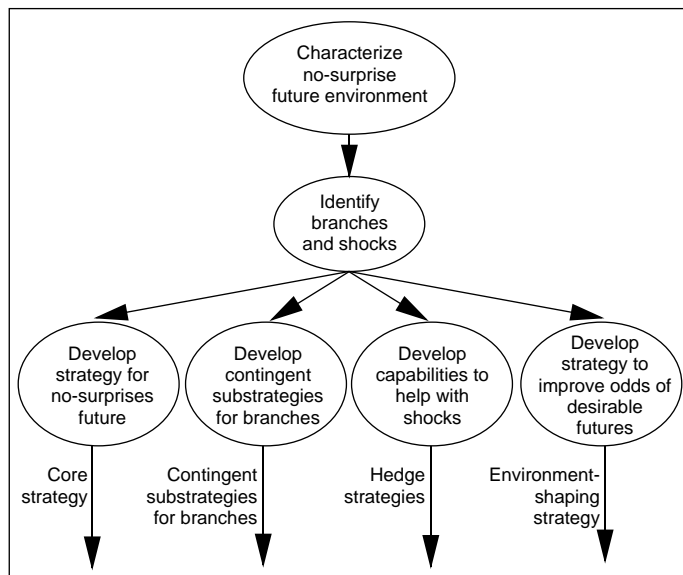


Figure 8—A Logic for Strategic Planning Under Uncertainty

advanced concept technology developments (ACTDs), the very kind of activities that an emphasis on strategic adaptiveness would promote.

Integration Using Portfolio Methods

Our methods create a more complete set of tests for assessing alternative force postures: war-fighting capabilities, environment-shaping, and strategic adaptiveness. But there remains the challenge of integrating, or *balancing*, these three considerations. Integration is what our top civilian and military leaders attempt earnestly to do. But it is not easy, and the leadership needs a new concept and method for unifying the strands.

We believe that an *investment portfolio* is the right metaphor. Like individuals and firms, national defense must balance multiple goals, stretching from the present day to the distant future, with numerous risk-benefit considerations in mind (Figure 9). As well, national defense, like the financial world, has a variety of instruments for achieving these objectives (Figure 10). The challenge is to assemble a portfolio of defense assets that best achieve our national goals, both today and tomorrow. Just as a financial investor normally wants many different types of stocks, bonds, and other investments as a function of its financial purposes, so also DoD will want a diverse portfolio of military assets and activities, as a function of its strategic purposes. The question is how to determine the composition of the portfolio.

A business manager must revisit the portfolio continually to assess what shifts among investment instruments are indicated in light of changes in goals or the external environment. Similarly, if near-term threats seem worrisome, then the Secretary of Defense may want to heavily emphasize contingency capability, with environment-

<u>Financial-World Concerns</u>	<u>Defense-Planning Concerns</u>
Long-term capital gains	Restructured and recapitalized forces for the mid to long term
Uncertainty about when to plan to cash in gains (end of expansion cycle, retirement age, . . .)	Uncertainty about when new forces will be needed
Short-term liquidity	Near-term readiness for contingencies and other military operations
Risk management on all time scales given uncertainties about market, economy, and government regulations	Risk management on all time scales given uncertainties about future threats, budgets, national strategies, and political constraints by Congress or foreign states

Figure 9—Parallels Between Financial- and Defense-Planning Concerns

<u>Financial-World Instruments</u>	<u>Defense-Planning Instruments</u>
Diversification	Broadening missions
Mergers and acquisition	Forming coalitions
Divestitures	“Letting go” of industrial base for obsolete capabilities
Special-opportunity investments	Addressing Achilles’ heel problems
Hedging (R&D, stock options)	Hedging (e.g., R&D, prototype units)
Regular rebalancing of portfolio	Regular rebalancing of emphasis across contingency capabilities, environment-shaping, and strategic adaptiveness

Figure 10—Parallels Between Financial- and Defense-Planning Instruments

shaping secondary, and strategic adaptiveness little more than a reminder not to be caught off guard if strategic conditions change. By contrast, if the greater dangers seem to be in the mid or long term, then the Secretary would give relatively more weight to environment-shaping and strategic adaptiveness.

The strategic portfolio framework encourages decisionmakers to assemble options differently than in the past. Although Secretaries of Defense have long been concerned about adaptiveness and about tradeoffs between the short and long term, their planning framework and the measures of effectiveness used in the Planning, Programming, and Budgeting System (PPBS) are inadequate. In our construct, the Secretary would insist that every program review treat all three of the investment objectives—explicitly, in parallel, and with short-term versus long-term tradeoffs treated analytically. In many ways, this intuitively obvious proposal is radical. It would change the terms of debate and give

the defense program and its description a more long-term and strategic character.

Arguably, the portfolio approach would be suitable even in a seemingly stable and predictable world. In an era of uncertainty, even with our best efforts to manage the environment, it is the key to ensuring that our plans and our forces can be changed gracefully if need be.

CONCEIVING ALTERNATIVE FORCE POSTURES

This three-part adaptive framework, integrated by portfolio management, will not by itself generate alternative force postures. It will only test the options the policymaker or planner wishes to test. What should those alternatives be? Most of the current debate revolves around the two-MRC assumption, readiness, and force size as measured by numbers of divisions, carrier battle groups, and wings. But we believe the most important question facing the department involves modernization strategy, in the broadest sense. We see at least three philosophically different force-posture alternatives (or investment strategies) worthy of evaluation.

- *Conservatism, Near-Term Emphasis, and Expected Evolution.* This alternative would combine caution about technology’s promises with emphasis on continuity in U.S. international engagement. By and large, it would feature a posture with only marginal changes in force structure, end-strength, “capital-to-labor” ratio, and overseas presence, and with little modernization beyond that needed to replace aged weapons systems and platforms. It would preserve the present balance among ground, air, and naval contributions to joint operations. It would reflect a belief that today’s international security environment is relatively risky, with the longer-term future to be heavily discounted. This alternative, then, would stress near-term readiness and deemphasize long-term investment. Such investment would occur and be sustained only if budget levels were high, probably higher than today’s. In that case, the posture would evolve over time.
- *Embracing the Revolution in Military Affairs (RMA).* Opposite this might be an alternative unreservedly embracing what some call the RMA. It would transcend current force configurations and increase reliance on long-range precision weapons and information dominance for waging war without deploying large traditional forces into war zones where they would be highly vulnerable to missile attack by both conventional and mass-destruction weapons. It would feature smaller, leaner, and dispersed maneuver forces and fires, rather than large armored formations. The approach would stem from the belief that the future of warfare is relatively clear and the need to prepare for it great. It would treat the current security environment as a respite from serious

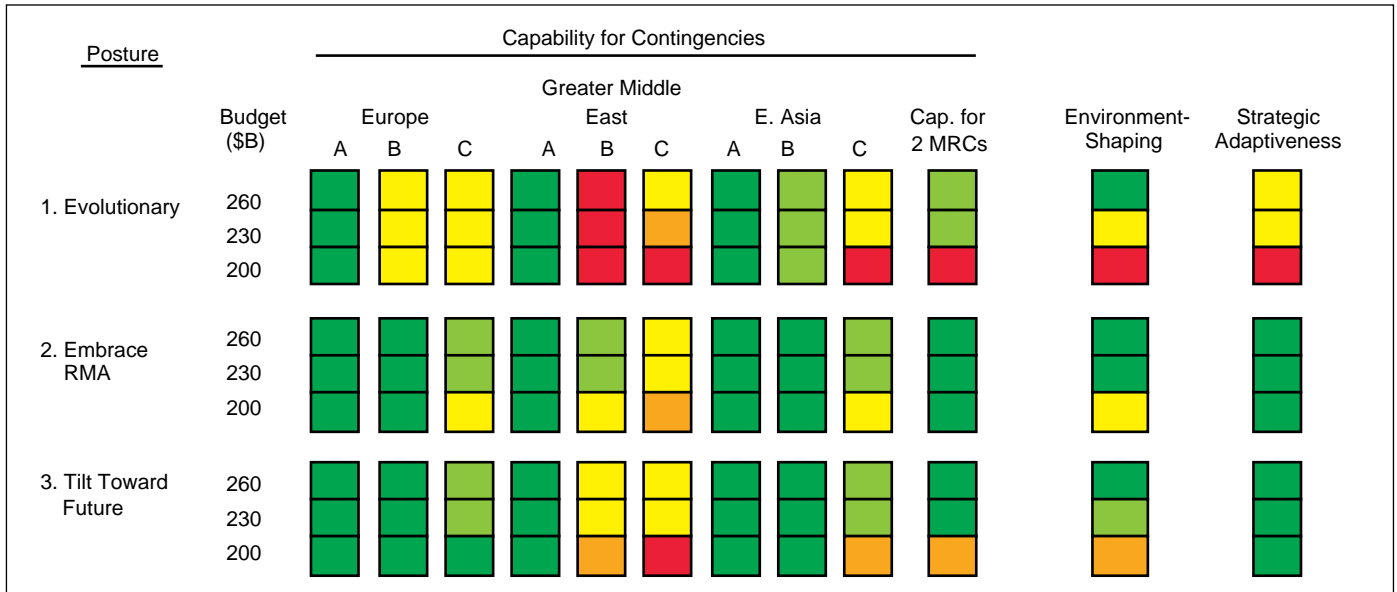


Figure 11—Notional Scorecard Assessment of Force-Posture Alternatives

threats and a window in which to invest toward what could be a more dangerous future. It would subordinate structure, readiness, and overseas presence to R&D and modernization.

- *Tilting to the Future, Cautiously.* A third alternative would be a compromise—a “tilt toward the future.” The United States would set a high priority on beginning the transition to a force structure with some of the same elements as envisioned under the RMA option—in particular, more emphasis on light units capable of rapid deployment, dispersed operations, and exploitation of long-range fires from both air forces and ground or sea platforms. The priority would be on using them to address the Achilles’ heel related to short-warning attacks and opposed entry. The pace of transition would be “deliberate.” Individual system choices would be adjusted over time depending on threat development and the success of newly fielded units. This alternative would maintain high levels of overseas presence for the sake of environment-shaping, although it would use somewhat different forces and reduce the number of people per unit. It would trade end-strength for R&D, innovation, and recapitalization, although less radically than option two.

The choices highlighted by these options should be central to the upcoming strategy review. Therefore, the options are good ones, though not necessarily the only ones, to test in the three-part framework we have constructed.⁶

⁶There are many possible “strategies” being discussed currently. These include reducing forward presence and relying upon power projection from the United States, relying more heavily on allies, trimming forces to meet a reduced, 1-1/2-war criterion, and various types of deliberate disengagement. National missile defense plays a prominent role in some of the strategies.

ASSESSING THE OPTIONS

Depicting a framework is one thing; employing it with analytical underpinnings is another. We have begun but not completed that. But we can describe broadly what we envisage, starting with a notional summary assessment of alternative force postures that would be shown after a full-scale strategy review. Figure 11 shows this as a familiar “stoplight scorecard” in which the colors red, orange, yellow, chartreuse, and green correspond to very bad, bad, marginal, good, and very good war outcomes, respectively.

This figure may seem complex at first, but it is actually nothing more than a distilled result of applying the strategic portfolio framework notionally (i.e., the colors shown are based on preliminary analysis).

- Each colored cell shows the assessment of a given force posture (row) for a given test (column).
- Along rows we have alternative force postures, which fall into three groups representing the three different portfolio philosophies mentioned above. For each we have versions for budget levels of \$260 billion, \$230 billion, and \$200 billion.
- The columns relate to the objectives discussed earlier (war-fighting capability, environment-shaping, and strategic adaptiveness). There are groups of columns for Europe, the Greater Middle East, and East Asia; within each of these there are three “cases” (A, B, and C), which test the force posture in increasingly demanding ways. The “A cases” are relatively favorable, akin to usual planning scenarios. The “B cases” involve short warning times and just-in-time rapid deployment with opposition, and the “C cases” involve having to fight our way back into a theater

and recover ground. These cases are composites of the many tens of thousands of cases examined in the scenario-space analysis. There is a column summarizing capabilities for various combinations of two simultaneous MRCs. The last two columns show how well the given force posture would score in shaping the environment and in strategic adaptiveness.

The idea, of course, is to test a given force-posture alternative in many ways and to provide a unified visual display of all the major factors policymakers need to integrate. Whether such a depiction is substantive or merely creative art designed to support preconceptions depends on the depth of the analysis that decides the color of each cell, using the methods described above. Providing that depth is the thrust of our current work.

By “adding up the colors,” one can turn the stoplight chart into a graph of overall quality of the posture versus budget level. Figure 12 shows a notional result with one particular portfolio weighting of war-fighting capabilities, environment-shaping, and strategic adaptiveness. By contrast with Figure 11, it shows a band of values (also notional) for each option, the band representing uncertainty about the effectiveness of high-technology systems and their suitability for future wars. The hypothesis suggested by Figure 11’s notional numbers is that option 1 (conservative evolution) may look reasonably strong for high budget levels but quite bad for lower levels. If one is confident about the “RMA options,” then option 2 looks good generally, and dramatically so for lower budget levels. Option 3, the tilt-to-the future case, not surprisingly, is in the middle.

Figure 12 is not entirely notional. After all, a recapitalized force exploiting modern technology (e.g., precision strike, information systems, and mobility) would presum-

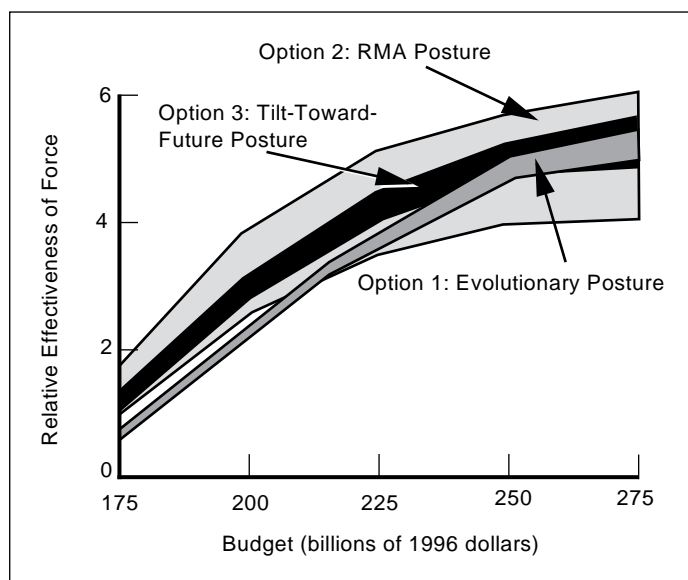


Figure 12—Capabilities Versus Budget Levels (Notional)

ably use fewer people and be more resilient to budget changes than the current force, which evolved during the era of large-scale sustained armored conflict. Also, our analysis indicates that military capabilities will drop rapidly with further decreases in the budget unless there is a substantial reengineering and reduction of infrastructure. In any case, debating the kinds of ideas displayed here would be useful. Our point is not that we know the answer, but rather that decisionmakers should be looking for the kinds of insights we offer notionally here.

SOME PRELIMINARY SUBSTANTIVE OBSERVATIONS

Having described our proposed framework and its methods, let us now share some preliminary results of using such analysis.

Near- and Mid-Term Capabilities Against Rogue Nations

For now, U.S. capabilities are very substantial, and U.S. forces will simply outclass any regional aggressor on the landscape. Indeed, our analysis of programmed future forces suggests the following:

- With sufficient warning time and reasonably effective allies, the United States should be able to defeat a classic armored invasion handily. In many cases, the United States should be able to handle two such invasions concurrently—so long as they are some weeks apart or, in some cases, even if they are more nearly simultaneous.⁷ Thus, classic armored invasions affecting U.S. interests “should be” obsolete. We will need to prepare for them indefinitely, so as to keep them obsolete. But they may not occur again, at least not in pure form as in the past and in our current plans.

Our adversaries, of course, can recognize all this as well. Thus, we must expect them to avoid classic armored invasions and instead adopt strategies involving fast, no-warning invasions with armored forces and/or various “asymmetric” tactics exploiting U.S. weaknesses:

- Current U.S. Achilles’ heels primarily concern our limited capability to (1) rapidly seize and secure ports and bases that are not adequately protected by allied forces, (2) quickly clear sea lanes of mines, (3) employ air-to-ground munitions and other long-range fires against invading armies in difficult terrain (including urban sprawl) or bad weather, (4) conduct counter-offensives in such terrain, and (5) halt large dispersed threats (e.g., a broad-front infantry invasion).

⁷Some caveats: this statement assumes no ongoing LRCs or peacekeeping operations that materially interfere, wise allocation of military resources rather than a “piling on” against the first adversary, and a series of important adjustments in support forces and stocks.

Fortunately, our analysis suggests that there are ways to remedy many of these problems:

- Many Achilles' heel problems (but not those demanding large-scale infantry-intensive efforts) can be cured by increasing allied capabilities and by exploiting the potential lethality of long-range bombers and other rapidly deployable or forward-deployed long-range precision fires involving ship-based missiles or advanced guns, tactical air forces, or mobile missile battalions. These steps would not require significant additional forces but would require mastering joint precision-strike operations and achieving high levels of situational awareness and information dominance. Other important measures would include forward-deployed countermine capabilities, counterinfantry munitions for high-altitude aircraft to use, and ensuring that allies' ground forces have modern anti-infantry artillery.

Weapons of Mass Destruction

There are other challenges, the most important being to neutralize enemy weapons of mass destruction (WMD). The WMD problem is critical because the threat of WMD could deter our intervention, deter threatened states from asking for assistance, or deter allies from cooperating. And, of course, WMD could cause major casualties. This would probably precipitate an extraordinarily destructive U.S. retaliation, but we cannot rely upon deterrence alone to evade the WMD issue—especially if adversaries are desperate, as the North Koreans might be in invading the South, or as any adversary might be once the United States and its ally had begun a counteroffensive. Thus, theater missile defenses and counterforce capabilities loom large on the priority list. But even with improved defenses, the WMD challenge tends to weigh in favor of a force posture and war plans that do not depend on dispatching large, densely packed U.S. forces into range of enemy WMD.

Sizing the Force and the Two-MRC Issue

The force-sizing debate currently revolves around the controversial “two-MRC criterion.” This focus is misdirected. As noted above, our analysis shows that the U.S. has more than ample capability for two MRCs in favorable or only moderately degraded situations. But it would find itself severely stressed in even *one* MRC in worst-case situations (e.g., a multi-month counteroffensive after a North Korean surprise attack with chemical weapons had shattered South Korea's defenses).

Results of fighting two MRCs would also depend on military strategy at the time. In favorable cases, we might be able to win both conflicts quickly and decisively. In

others, we might hold and punish the aggressor in the second theater until, having defeated the first aggressor, we could turn our full attention to the second. Or we might be able to depend more on allies for one of the MRCs. In still other cases, we might find that fighting even one war would require months or years. It all depends. Thus, a two-MRC criterion, in and of itself, is quite ill-defined; it is not a sound basis for planning.

Nonetheless, if we must have a number, then DoD has it right: “Two” is the right one. It would be folly for the United States to announce a one-MRC (or even a 1-1/2 MRC) criterion, because such a strategy would give us pause before acting in crisis and would encourage aggressors to exploit the opportunity of our being engaged elsewhere.

Some believe that sizing the force for two MRCs is too expensive and unnecessary in the current era of moderate risk. The issue is not, in fact, affordability, because the U.S. defense burden is now quite low by historical standards, and dropping. The issue is need, because there certainly are many claimants for the marginal federal dollar. On this point, however, we offer the following insight from our framework:

- The most stressful criterion in sizing the U.S. force is probably environment-shaping, not war-fighting capability. The United States has interests in not two but three vital, unstable regions, and those interests are inexorably expanding (e.g., into East Central Europe and Southeast Asia). Thus, in sizing the force we must think about the need to fight an MRC in one region while deterring conflict and continuing to manage regional security in the other two. When one accounts for rotation bases, likely coalitional arrangements, and other practical features of force planning, this requirement may be even more demanding than fighting two MRCs against inferior adversaries.

The Role of Coalitions

Our framework highlights the role and importance of coalitions, since the analysis shows that the role of allies is a major variable in terms of war-fighting, environment-shaping, and responding to strategic shifts. The contributions of our most dependable allies should be explicitly recognized in our strategy, plans, and posture. Steps should be taken to strengthen our confidence that those allies will have the right forces and be prepared to use them. There is great leverage available in doing so.

Readiness Versus Investment, Good and Bad

DoD has been criticized because of alleged readiness problems despite the high priority that all recent

Secretaries have placed on readiness. They have been intent on not allowing a repeat of the 1970s, during which U.S. forces became “hollow.” This concern is laudable, and, as a result, today’s forces are in fine shape except for the severe stress due to high operational tempos caused by such demands as Somalia, Rwanda, Haiti, Bosnia, Liberia, the Persian Gulf, and Korea.

In our view, however—in part because our framework constantly forces the issue of short term versus long term—the priority placed on readiness has become excessive. Clearly, the United States needs active forces to be in a high state of readiness. But how much is enough? In the absence of more severe regional threats than one can currently foresee, we might well be able to trade some active high-readiness force structure for moderate-readiness reserve structure (and less low-readiness ground-force reserve structure) and use the savings for investment. This would especially be so if we succeed at strengthening and leveraging the capabilities of allies. The premium for readiness is on rapid-deployment forces and naval forces, but not the entire current active force structure. Yes, a worst-case war requiring a larger active force might arise, but such a war would probably play out over months or years. Must we maintain active forces against such a contingency, or can we make better use of reserves and plan for a force buildup when and if the need arises?

The Gordian Knot: Thinning, Not Cutting, Force Structure

A core problem facing the Department is the apparent resistance to reducing active force structure. The current structure is already underfunded, the notorious acquisition holiday has already been too long, and there is arguably a need to begin a fundamental, perhaps revolutionary, recapitalization. The real questions are how much and how fast. This said, we must expect that DoD’s funds will remain severely limited and that even heroic efforts to reduce infrastructure and acquisition overhead will have less payoff than optimists expect, except perhaps over the long term. This implies to us that force structure must be a significant bill-payer for what is needed. Our analysis indicates, however, that this need not be nearly so troubling as it often is. Given the enormous improvements in command, control, communications, computers, intelligence, surveillance, and reconnaissance (C⁴ISR); mobility; and lethality of systems, and given the modest nature of current regional threats, it should be possible to reengineer forces so that smaller units take on the functions that previously were accomplished by larger units (e.g., brigades taking on division functions). Further, some functions (e.g., running ships) should be possible with fewer people. All of this would be normal reengineering in an industrial setting.

It follows that the terms of debate should be focused not on reducing major formations (e.g., reducing from 10 to 6 active army divisions, or from 11 to 6 carrier battle groups), but rather on reducing end-strength, changing what constitutes our major formations, and altering the active/reserve mix. It may well be that we should have 10 army divisions, but with 1/3 fewer people and more emphasis on light forces and long-range fire; that the “capital ships” of the future should include Aegis cruisers and arsenal ships rather than only carriers; or that active Air Force wings should be fewer or smaller than in the recent past.⁸ None of these measures would constitute disengagement or disarmament, which would have harmful effects on the security environment. If the United States truly improves its posture by reengineering, we should have enough influence to convince our adversaries and allies of that, even though they might at first equate reduced numbers with disengagement.

ON THE NEED FOR UNUSUALLY STRONG LEADERSHIP

As we have indicated, we believe that the biggest challenges are three: (1) breaking with the point-scenario, threat-based planning of the past, (2) shifting the focus of the program so as to contribute more to the “strategic” objectives of environment-shaping and strategic adaptiveness, and (3) beginning to transform and recapitalize the force posture for the next—and likely very different—era of warfare, which should be distinguished from merely modernizing by replacing old equipment. Such changes are unlikely to happen easily.

It is possible, of course, that the DoD is a unique organization immune to the maladies that affect other nations’ armies, corporations, and government agencies. Perhaps the military Services will push ahead with all deliberate speed in making the fundamental planning and doctrinal changes that are needed. These changes are plausible if the defense budget is raised enough so that there are “new” funds. Or perhaps the Services will even sacrifice current force structure to free the funds necessary for recapitalization. However, in our view, such a rosy scenario is at best a theoretical possibility. Far more likely is that, without firm guidance to the contrary, the Services will hold onto force structure tenaciously. When budget crunches occur, one after another, important experiments will be routinely deferred or forgone, and some next-generation weapon systems as well. The future will be lost through “salami slicing.”

To put things a bit differently, we are on the one hand greatly encouraged by the vigor and innovation being shown in all of the Services. All the building blocks

⁸The Air Force has already reduced the size of its fighter squadrons.

for transformation and recapitalization are visible, as the result of enlightened R&D and the most talented armed forces that the world has ever seen. However, sweeping change is painful and disruptive; it does not occur without strong top-level leadership insisting upon it. In DoD, it will require exceptional and sustained leadership by the Secretary of Defense and the Chairman of the Joint Chiefs.

The alternative may be to find ourselves in 20 years with a run-down version of a military force structure suit-

ed to the 1980s rather than a first-rate, versatile, and adaptive military force designed for the next century. If we build the latter, we stand a better chance of staying in front of would-be adversaries and wanna-be hegemony, and we can guide international and technological change. In such a case, the world might go decades without the kinds of major wars that so darkened the history of the 20th century.

This paper draws on much past research. See in particular the RAND book *New Challenges for Defense Planning: Rethinking How Much Is Enough*, Paul K. Davis (ed.), MR-400-RC, 1994, 769 pp., \$20.00, ISBN: 0-8330-1527-3. RAND is a nonprofit institution that helps improve public policy through research and analysis. Results of specific studies are documented in other RAND publications and in professional journal articles and books. To obtain information about RAND studies or to order documents, contact Distribution Services (Telephone: 310-451-7002; FAX: 310-451-6915; or Internet: order@rand.org). Abstracts of all RAND documents may be viewed on the World Wide Web (<http://www.rand.org>). Publications are distributed to the trade by National Book Network.

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