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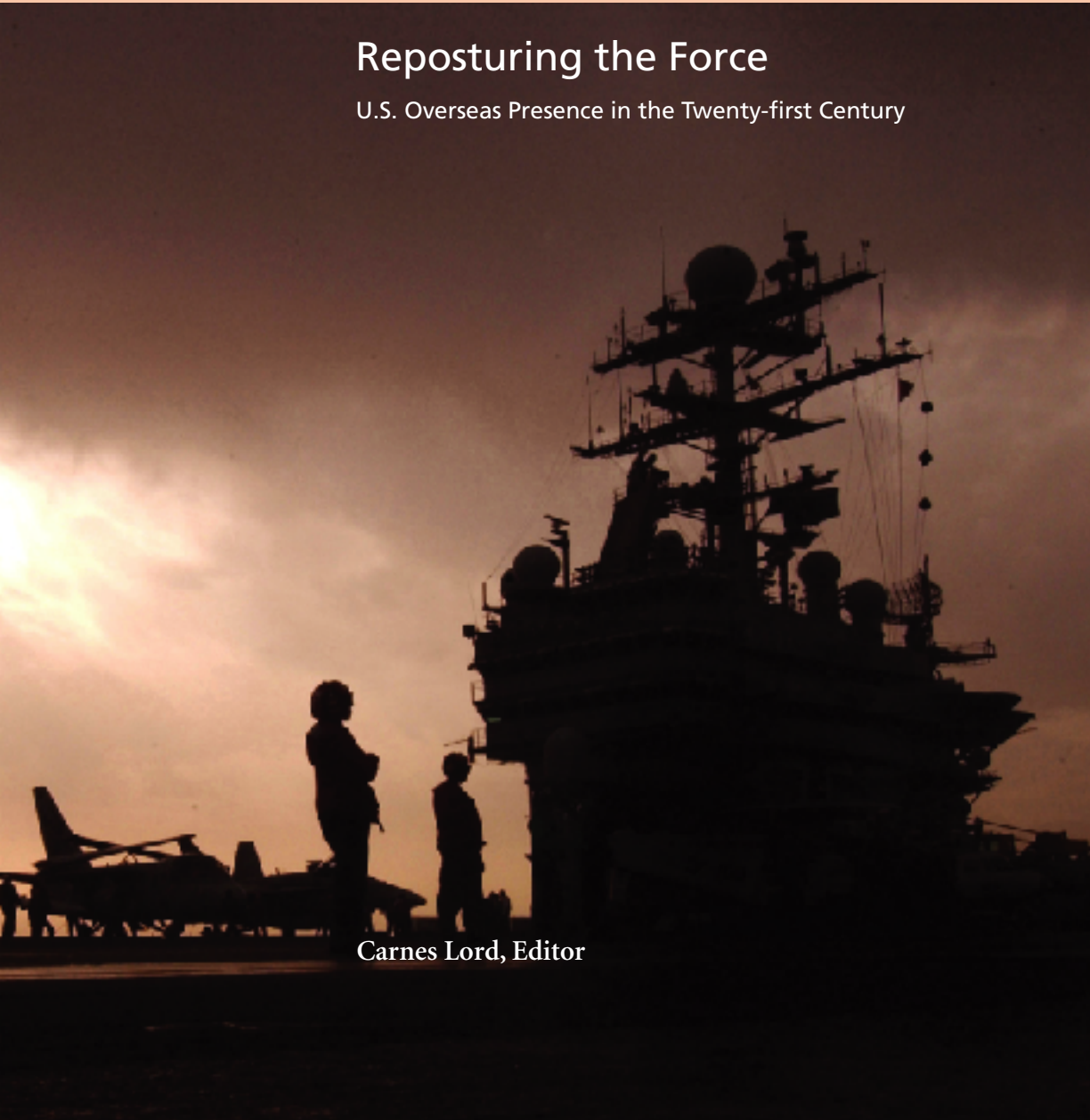
Reposturing the Force

U.S. Overseas Presence in the Twenty-first Century



Carnes Lord, Editor

Cover

Preparations for evening flight operations on board the aircraft carrier USS Harry S. Truman *(CVN 75) in March 2005. U.S. Navy photo by Photographer's Mate Airman Ryan O'Connor.*

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Carnes Lord, Editor

NAVAL WAR COLLEGE PRESS
Newport, Rhode Island

Naval War College

Newport, Rhode Island
Center for Naval Warfare Studies
Newport Paper Twenty-six
February 2006

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Web: www.nwc.navy.mil/press

Printed in the United States of America

The Newport Papers are extended research projects that the Editor, the Dean of Naval Warfare Studies, and the President of the Naval War College consider of particular interest to policy makers, scholars, and analysts.

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ISSN 1544-6824

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Foreword

The present volume, *Reposturing the Force: U.S. Overseas Presence in the Twenty-first Century,* is the twenty-sixth in the Newport Papers monograph series, published since 1991 by the Naval War College Press. Its primary aim is to provide a snapshot of a process—the ongoing reconfiguration of America's foreign military "footprint" abroad—that is likely to prove of the most fundamental importance for the long-term security of the United States, yet has so far received little if any systematic attention from national security specialists and still less from the wider public. As such, it serves well the broad mission of the Newport Papers series—to provide rigorous and authoritative analysis, of a sort not readily available in the world of academic or commercial publishing, of issues of strategic salience to the U.S. Navy and the national security community generally.

Reposturing the Force is, however, unusual in the manner in which it combines rigor and authoritativeness, for several of its authors are or recently were senior U.S. government officials. Ryan Henry and Lincoln Bloomfield, Jr., have been central figures in the Global Defense Posture Review (initiated by Secretary of Defense Donald Rumsfeld in 2002 as the key mechanism for forcing transformation of the U.S. overseas presence) while serving as, respectively, Principal Deputy Under Secretary of Defense for Policy and Assistant Secretary of State for Political-Military Affairs. As such, they are uniquely positioned to comment on the unfolding of this vast, complex, and extremely sensitive undertaking, many of the details of which are still in flux or are (and likely will remain) classified. For additional perspective on the subject, however, we have felt it important to include also papers by several independent scholars and policy analysts. Robert Harkavy's opening essay helps to place current developments in the American global posture in a larger historical and strategic framework. Andrew Erickson and Justin Mikolay provide an in-depth analysis of the role of Guam in recent thinking and decisions about the posture of the U.S. military in the western Pacific. Finally, Robert Work examines the emerging concept of "sea basing" in Navy and Marine Corps doctrine and force planning, an integral yet so far largely neglected dimension of the American military presence abroad.

The papers by Henry and Bloomfield were specially commissioned for this volume, and the editor would like to thank both authors for their eager and responsive participation in this project. Also instrumental in supporting this effort within the Office of the Secretary of Defense were Barry Pavel; Captain Randall Hendrickson, USN; Lesley Young;

and Brian Arakelian; thanks are due to each of them. Finally, I would like to express appreciation to Robert Work for making available portions of a larger manuscript on Navy/Marine Corps force structure, as well as to Henry Kamradt of the Center for Naval Warfare Studies for his editorial work on this material.

Ryan Henry's paper has been formally reviewed and cleared for publication by the Department of Defense. The remaining papers reflect the opinions of the authors and should not be assumed to coincide with the official views of the Department of the Navy, the Department of Defense, or the U.S. government generally.

CARNES LORD
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Introduction

CARNES LORD

Perhaps because American theorizing about war and strategy has in recent times been heavily influenced by the land-power orientation of our chief adversaries, the subject of overseas bases and the necessity of reliance on them for the projection of power across maritime theaters of operations has remained very much at the margins of strategic analysis in the United States. The revival of the thought of the nineteenth-century Prussian theorist of war Carl von Clausewitz within the American armed forces beginning in the late 1970s has not been matched by a rediscovery of our own Alfred Thayer Mahan, the late-Victorian apostle of a navy with global reach as the chief enabler of national power. Mahan's classic work *The Influence of Seapower upon History 1600–1783* (1890) made a convincing case that the rise of Britain in modern times was decisively aided by its ability to dominate the world's sea lines of communication by its formidable navy, supported, on the one hand, by a robust foreign commerce and, on the other, by a network of strategically positioned overseas bases. In the contemporary world, the immense technological advantages enjoyed by American ground and air forces too often lead us to take for granted the continuing importance for the United States of command of the sea—and its corollary, ready access to the territory of distant friends and adversaries throughout the world.[1]

The long series of conflicts between Britain and France and their various respective allies that culminated in the defeat of Napoleon in 1815 were the first truly global wars. The strategic competition they engendered gave a powerful impetus to the development of the great European overseas empires and helps explain the shape those empires took. Now-forgotten battles over remote places such as Mauritius, Réunion, and Trincomalee helped decide which power would control India and the China trade. World War I is commonly remembered only as a land war in Europe. Yet the weakness of the Central Powers beyond their own shores (German colonies in Africa and the Pacific were occupied in short order, while the main German fleet remained bottled up in its home port throughout most of the war) made it difficult for them to use effectively

even the limited naval resources available to them, seriously constraining their strategic options.[2] When the United States defeated Spain in a brief war in 1898, it acquired a minor overseas empire of its own, most notably the Philippines, Cuba, and Puerto Rico; the earlier acquisition of Hawaii, however, had already established it as a Pacific power. Following World War I and Japan's occupation of the former German territories in the western Pacific, the U.S. Navy became increasingly preoccupied with the prospect of a trans-Pacific war with the Japanese. However, during the 1930s Washington was reluctant to provoke Japan by strengthening U.S. Pacific outposts, and it turned a blind eye to Japanese efforts to fortify militarily the former German territories Japan held under a League of Nations mandate. As a result, the United States was initially ill prepared to meet the Japanese onslaught in 1941. Only by a prodigious and unprecedented effort to mobilize and project military power essentially "from the sea" against the garrisoned Japanese island chains was the United States able to overcome these disadvantages and bring the war eventually to Japan itself and victory.

Following World War II, the United States made it clear that it would not repeat the mistakes of its isolationist policy of the interwar years. It remained firmly ensconced in the Pacific islands for which it had paid so much in blood, and it installed large permanent garrisons in both Germany and Japan. Moreover, it soon gained access as well to a vast array of bases and facilities of all kinds in the territories (and colonial possessions) of its NATO allies as it remobilized to contain the global threat posed by the Soviet Union and communism. American troops remain in Germany and Japan today, in spite of the disappearance of the Soviet threat some fifteen years ago.

Over the last several decades, to be sure, the United States has made substantial adjustments in its overseas presence. Even before the fall of the Soviet Union, it abandoned major bases in Panama and the Philippines in response to political pressure from host governments or regional opinion. It greatly reduced American ground and air forces in western Germany in recognition of the radically improved security situation in the heart of Europe following the departure of Soviet troops and the reunification of Germany. At the same time, after the Gulf war of 1990–91, it expanded its presence in the Persian Gulf region, especially in Saudi Arabia and Kuwait but also in the territory of such new allies as Qatar, in order to enforce the postwar "no fly" regime over Iraq and deter further adventurism by Saddam Hussein, still firmly in power there. Apart from this case, the American basing infrastructure abroad—and for that matter, within the continental United States—may be said to have contracted incrementally and opportunistically after the end of the Cold War. The events of 11 September 2001, however, changed all that. In the new security environment that has since developed, it soon became clear that nothing short of a fundamental rethinking of America's global posture was needed.

This rethinking has been undertaken at an official level in the form of the Global Defense Posture Review (GDPR). Initiated in 2001 at the direction of Secretary of Defense Donald Rumsfeld, this unprecedented review has involved the uniformed military, senior civilians in the Office of the Secretary of Defense, and not least, the Department of State in an extraordinary exercise in strategic planning and interagency cooperation. Though many details remain classified or are not yet fully worked out, the general direction of American policy is now relatively clear.[3] It is time to begin to assess the strategic meaning of these changes. To do so is the purpose of the present volume.

It needs to be stated at the outset that the scope of this subject extends well beyond "bases" in the traditional sense in which we have been using the term. In the first place, because of the political sensitivity attaching to the presence of foreign military forces within a state's sovereign territory, the word "base" itself is today often avoided in favor of the more ambiguous "facility" (suggesting a more temporary and controlled status). However, what is at issue here is a much more complex set of interactions between the United States and its overseas partners. It includes the overall political and military relationship between the United States and the host government, activities conducted on foreign soil by U.S. forces, legal arrangements governing military access (overflight rights, for example), the prepositioning of equipment overseas, and the global management of U.S. forces in deployments within or across theaters of operations. "Global presence" perhaps best encompasses these dimensions of American military activity abroad.

This volume does not attempt to provide a detailed survey of the current state of play in the American global posture in different regions of the world; its purpose is rather to stimulate critical and strategic thinking on a neglected subject and contribute to informed debate and analysis throughout the national security policy community. Robert Harkavy's essay "Thinking about Bases" is thus an appropriate prelude. Harkavy, the author of two comprehensive scholarly studies of basing during the Cold War, explores the long prehistory of basing during the creation of the European empires of the early modern era and its enduring geopolitical dimensions.[4] He provides a useful reminder that basing today is not only about the stationing of forces but about a global network of technologies for intelligence, warning, and communications. Further, he calls special attention to what might be called the embeddedness of bases or presence in America's political and economic relationships with foreign countries, focusing particularly on the relationship between basing and security assistance. He concludes with some speculation concerning future trends in basing and access for other countries as well as the United States.

The Global Defense Posture Review is presented and analyzed in two papers. Ryan Henry, currently Principal Deputy Under Secretary of Defense for Policy, traces the

development of the GDPR since 2002 in light of the agenda of defense "transformation" pursued by the Rumsfeld Pentagon and its analysis of the current global threat environment. He points out, among other things, that basing in the past was conceptualized and conducted primarily with a view to traditional major power warfare, whereas the current security environment poses novel challenges in the areas of what are now commonly called "irregular," "disruptive," and "catastrophic" threats as well. Formerly, U.S. forces abroad were essentially expected to fight where they were based (for example, on the North German Plain). By contrast, today the requirement is for flexibility and mobility to deploy quickly to sudden flashpoints virtually anywhere in the world. In this context, Henry develops five key themes that make up the strategy offered by the GDPR: to improve flexibility to deal with uncertainty; to strengthen allied roles and build new partnerships for cooperative security; to create the capacity to act both within and across regions; to develop rapidly deployable capabilities; and to focus on effective military capabilities, not simply numbers. After a discussion of the important new typology of bases now envisioned by the United States, Henry concludes with a brief overview of the posture changes already achieved or under way in key regions of the world.

Lincoln Bloomfield, Jr., who served as Assistant Secretary of State for Political-Military Affairs and was the lead State Department official for the GDPR through 2004, focuses on the very significant diplomatic and political aspects of the GDPR. Bloomfield begins by sketching the history of the GDPR, with particular reference to coordinating the effort with (and selling it to) the traditional allies of the United States. He then addresses some of the deeper issues and concerns that emerged during this process. Principal among these were concerns that reduced U.S. troop deployments would translate into reduced commitments to partners; that such reductions were indicators of a larger shift in American policy away from its traditional alliances and toward unilateralism; that the movement of American bases and forces in Europe eastward suggested a calculated anti-Russian agenda; and that the new emphasis on the global management of U.S. forces stationed abroad would complicate bilateral relationships with host countries. Ultimately, however, the overriding issue for America's allies, according to Bloomfield, was simply how they "fit in" to the new picture created by the GDPR. He concludes by urging the United States and its allies to pursue a dialogue on legal and doctrinal issues relating to the use of force in the context of the changed security environment we face today.

If allies and partners are critical to maintaining a robust American overseas military presence, however, they are not the whole story. Very recent experience—notably, the Turkish denial of access to U.S. ground forces in the run-up to the invasion of Iraq in 2003, and the closing of the American air base at Karshi-Khanabad in Uzbekistan in

2005 after the United States criticized its government's repressive behavior—shows clearly enough that there will always be uncertainties in the conditions attaching to the use of American forces stationed or operating on allied or friendly territory. It is therefore essential to consider other alternatives. There are three such alternatives: basing in the continental United States (CONUS), in sovereign U.S. territories overseas, and at sea.

As regards the first, the United States has been engaged since the end of the Cold War in a major effort to review, reduce, realign, and otherwise rationalize the large and complex military basing infrastructure within the continental United States. Though motivated largely by the Pentagon's desire to achieve efficiencies and cut costs, this effort (the Base Closure and Realignment process—known as BRAC) has also taken account of new strategic realities and capabilities. Improvements in sea- and airlift, notably, make it possible to relocate some ground forces from overseas to CONUS bases without great sacrifice in terms of our ability to deploy them rapidly and flexibly to likely theaters of operations. Long-range strike aircraft will continue to operate from CONUS bases against targets throughout the world. Still, the tyranny of distance will continue to impose severe constraints on what CONUS-based forces can accomplish.

An alternative that has not been discussed as much as it deserves is the use for military purposes of sovereign U.S. territory overseas. There are two prime candidates here, Hawaii and Guam. (In essentially the same category is the small British-owned island of Diego Garcia in the Indian Ocean, a key logistics hub and strategic bomber base used by the United States since the 1960s under a long-term agreement with the United Kingdom.) Since the late 1990s, there has been growing interest in Guam within the U.S. military, given the island's unique strategic position in the western Pacific; a major redeployment of American air and naval assets there is in fact currently under way. Andrew Erickson and Justin Mikolay offer a comprehensive survey and analysis of these developments in the context of the overall American military presence in East Asia. They conclude that the case for more extensive exploitation of Guam as a base compared with other alternatives in the region is very strong, and they make specific recommendations for additional capabilities the United States might consider locating there in the future, as well as for improvements in Guam's military infrastructure.

Finally, there is the alternative—if indeed it is one—of "sea basing." Sea basing as a doctrinal term of art has gained currency over the last several years as one of the three "pillars" of the U.S. Navy's vision document "Seapower 21."[5] As suggested earlier, the idea of sea basing is not altogether new; it has its roots in the amphibious warfare doctrine of the Marine Corps and in the Navy's feats of power projection and sea-based logistics support across the Pacific in World War II. Much remains unclear about the current sea-basing concept, particularly its overall scope and its implications for the

design and procurement of future naval platforms. What is clearly new about it, however, is the (implicit or explicit) claim that it will radically increase the ability of U.S. naval and joint forces to operate, and to project power to considerable distances ashore, independently of land bases in friendly countries.

Robert Work provides a detailed analysis of sea basing as currently understood, both in a broad strategic context and with reference to the evolution of recent thinking within the Navy and Marine Corps on this subject. While supportive in general of the rediscovery of the sea-basing concept, Work is critical of some of the arguments that have been used in its behalf—for example, the virtually axiomatic claim that a sea base would be less vulnerable than land bases to a competently armed adversary. He is also critical of many of the features of the emerging sea-basing construct, with its emphasis on rapidity of deployment and support of major combat operations, and he cautions about potential costs. According to Work, the utility of sea basing in smaller-scale, irregular conflict scenarios, especially those associated with counterterrorist missions, has been unduly neglected. Work provides a vision for a "sea-based power projection fleet" designed to contribute to both major combat operations and global irregular war, and he sketches a comprehensive, fiscally constrained architecture for such a fleet. In doing so, he breaks much new ground and opens a wide-ranging, long-overdue debate on these issues.

Several additional remarks may be appropriate in concluding this introduction. Whatever the exact configuration of future "sea based" American military capabilities, there can be little question that there are several fundamental dimensions to the sea-basing question that its advocates have scarcely begun to address. The first has to do with the relationship between sea basing and jointness. Although some efforts have been made to develop a joint doctrine for sea basing, the fact remains that sea basing continues to be seen by the other services as something that primarily serves the interests of the Navy and the Marine Corps. A second has to do with the interrelationships between sea basing and land basing, in particular the ways in which land bases can facilitate sea basing and potentially affect how it is configured and scaled. In the Pacific theater, for example, any discussion of the composition and employment of sea bases in particular conflict scenarios should certainly begin with a discussion of the contributions actually or potentially provided by Hawaii and Guam, and then by major bases/facilities on the territory of regional partners such as Japan, Singapore, or Australia. A further level of analysis might consider possible cost trade-offs between sea basing and investments in new land-based facilities in friendly countries (for example, the Philippines, should its government rethink its policy banning a permanent U.S. naval presence at Subic Bay).

Finally, the point must be made that most discussions of sea basing within the American defense establishment have proceeded in sublime disregard of their implications for traditional U.S. alliance relationships or security cooperation activities more broadly.[6] On the face of it, the sea-basing concept implies a devaluation of the U.S. land-based overseas presence and raises uncomfortable questions about the extent and character of American alliance commitments and tendencies toward unilateralism in political and military decision making. Recently, the Navy has shown signs of recognizing this problem by popularizing the notion of a "Thousand-Ship Navy" leveraging allied maritime capabilities to meet the transnational security challenges of the current environment.[7] What this means in practical terms, however, remains quite unclear.

More generally, it is plain that a major disconnect persists between what might for convenience be called the "global posture" perspective on U.S. overseas presence on the one hand and the "sea basing" perspective on the other, reflecting the dominant role in the former of the Army and Air Force, and in the latter of the Navy and Marine Corps. The United States needs a vision and strategy for overseas presence that is both fully "joint" and genuinely "combined." While impressive progress has indeed been made, it is clear that we are not yet at the end of that road.

Notes

1. For seminal thinking on the role of bases in American naval strategy, see Alfred Thayer Mahan, "Considerations Governing the Disposition of Navies," *National Review* 39 (July 1902), pp. 701–19, reprinted in John B. Hattendorf, ed., *Mahan on Naval Strategy* (Annapolis, Md.: Naval Institute Press, 1991), pp. 281–318; and Stephen B. Luce, "The Navy and Its Needs," *North American Review* 193 (April 1911), pp. 494–507, reprinted in John D. Hayes and John B. Hattendorf, eds., *The Writings of Stephen B. Luce* (Newport, R.I.: Naval War College Press, 1975), pp. 147–62.
2. Consider Wolfgang Wegener, *Naval Strategy of the World War* (1929), trans. and ed. Holger Herwig (Annapolis, Md.: Naval Institute Press, 1989).
3. The principal official document is U.S. Defense Dept., *Strengthening U.S. Global Defense Posture,* Report to Congress (Washington, D.C.: September 2004). For further details as well as some criticisms and caveats, see Commission on Review of the Overseas Military Facility Structure of the United States, *Report to the President and Congress* (Arlington, Va.: August 2005).
4. See Robert E. Harkavy, *Great Power Competition for Overseas Bases: The Geopolitics of Access Diplomacy* (New York: Pergamon, 1982), and *Bases Abroad: The Global Foreign Military Presence* (Oxford, U.K.: Oxford Univ. Press, 1989).
5. For an authoritative statement, see Charles W. Moore, Jr. [VAdm., USN], and Edward Hanlon, Jr. [Lt. Gen., USMC], "Sea-Basing: Operational Independence for a New Century," U.S. Naval Institute *Proceedings* (January 2003).
6. An exception is John J. Klein [Lt. Cdr., USN], and Rich Morales [Maj., USA], "Sea-basing Isn't Just about the Sea," U.S. Naval Institute *Proceedings* (January 2004).
7. John G. Morgan, Jr. [VAdm., USN], and Charles W. Martoglio [RAdm., USN], "The 1,000 Ship Navy Global Maritime Network," U.S. Naval Institute *Proceedings* (November 2005).

CHAPTER ONE

Thinking about Basing

ROBERT E. HARKAVY

Recent U.S. military engagements—1990–91 against Iraq, in Bosnia, Kosovo, and then in Afghanistan (2001) and Iraq again (2003)—have highlighted the complexities and uncertainties of basing access in the post–Cold War period. They have involved questions of access to (including overhead transit rights for) a variety of nations: Egypt, Turkey, Saudi Arabia, Qatar, Tadzhikistan, Kyrgyzstan, Djibouti, many European countries, and others. They have also highlighted the crucial importance of the future of American basing access at a time of shifting alliances, friendships, and enmities amid wholesale changes in the structure of the international system, and of the movement to the forefront of the issues of terrorism, radical Islam, proliferation of weapons of mass destruction, and a looming hegemonic challenge by China.

In relation to these events and trends, there has been almost nothing published in a general vein in the scholarly literature about bases, perhaps in part because the subject does not easily lend itself to quantitative analysis or theorizing. However, over the last several years the Department of Defense has undertaken a major review of the American global basing structure—the first such comprehensive policy review since the period of NSC-68 in the early 1950s. That review has run in tandem with a review of the military base structure in the continental United States (CONUS) by the presidentially appointed Base Closure and Realignment Commission (BRAC), as excess capacity at home opens up possibilities for bringing some forces and installations back to the United States from overseas. These reviews, moreover, have taken place in the context of the ongoing trend toward "transformation" of the military in the direction of a posture characterized by smaller, more mobile forces suited to the newer threat environment. Finally, the Navy and the Marine Corps have undertaken extensive studies of the possible advantages for joint warfare of what has come to be known as "sea basing." Thus far, however, there seems to have been little effort to think through the implications of the sea-basing concept for the ongoing realignment of the American global posture.

Clearly, the time has come to take a new look at an important yet neglected subject.

The United States is not the only major power involved in external basing access, though it is by far the most prominent. China, on the move militarily and seeking ever more necessary sources of oil, has taken the first steps toward establishing basing access en route to the Persian Gulf area in the Indian Ocean—specifically, in Pakistan, Bangladesh, and Myanmar. And Russia, perhaps loath to abandon entirely the basing structure of the former USSR, has maintained facilities and forces in Kyrgyzstan, Tadzhikistan, Georgia, and Armenia; likewise, it has shown considerable sensitivity to the growing U.S. presence in the former Soviet space and in Afghanistan.

There are some initial points to be made regarding definitions. One may speak variously of bases, facilities, host-nation support, installations, strategic access, forward presence, global posture, and FMP (foreign military presence). During the latter part of the Cold War, common usage dictated the use of "facilities" rather than "bases" because of the negative political overtones of the latter term. The U.S. Defense Department compilation of domestic and foreign bases is organized according to discrete installations. The Stockholm International Peace Research Institute uses the basic concept of "FMP" in a way roughly synonymous with others' use of "base."[1] The concept of "basing access" or "strategic access" is a broader construction, subsuming overflight rights and perhaps access for intelligence operations. During the 1980s and 1990s, the concept of "power projection" came to be seen as an overarching one.[2] More recently, "global posture" (or "footprint") has become the dominant definitional concept within the U.S. defense establishment; more theoretically oriented academic studies have used the terms "global reach" or, earlier, "subglobal reach."[3]

Recent Defense Department publications—notably, a key September 2004 report to Congress—have taken to defining the American global posture according to five criteria: relationships (interaction with allies and partners at all levels), activities (training, exercises, and operations), facilities (where forces live, train, and operate, and where they preposition materiel), legal arrangements (the framework of presence, including status-of-forces agreements, both bilateral and multilateral), and global sourcing and surge (a global-force management system for power projection).[4] Thus, although the main focus of this paper will be on bases/facilities, "global posture" does involve a broader frame of reference that will be kept in view.

Basing in Historical Context

In the centuries-long history of the basing systems of the "great powers," several major areas of generalization and trend stand out, each of which is relevant to current problems. These are complex matters, and we can merely summarize them here:

- The role of international system structure (bipolarity, multipolarity, and so forth) and the presence or absence of ideological roots of rivalry between contending major powers
- The basis for basing access: conquest or colonization versus formal alliances or alignments versus tangible quid pro quos—that is, security and economic assistance, arms transfers, and the like
- The impact on basing of ever-evolving technological change—especially for ship propulsion, from sail to oared galleys to sail to coal to oil to nuclear power, but also the reach and lethality of armaments
- The nexus of the security and economic functions of basing and how that has shifted over time
- "Heartland" versus "rimland" as a basic pattern of rival basing structures through time.

The relationship of system structure and the ideological basis for conflict over many centuries is a complicated story. The empire of the Mongols, who were predominantly a land power, stretched across most of Eurasia but also exercised maritime and basing dominance in the Far East in the thirteenth century. Subsequently, the Chinese Ming dynasty, a regional hegemon, had uncontested access to bases throughout Southeast Asia and around the Indian Ocean. In the Mediterranean, from the thirteenth to sixteenth centuries first Venice and Genoa, then Venice (latterly Spain) and the Ottoman Empire were locked in regional competition for maritime dominance and basing locales. Their respective bases, especially those of Venice and Genoa, were often cheek by jowl, constituting interpenetrating systems. (The Venice-Ottoman rivalry and that of Spain and the Ottomans were somewhat more demarcated between east and west.)

Portugal and Spain had rival but formally demarcated basing structures, with Portugal acquiring bases all around Africa and the Indian Ocean and in the Far East and Brazil, Spain mostly in Latin America but also in the Philippines and the western Mediterranean. Some scholars do not rate Portugal a great power during the early modern era, as it was a maritime power only, standing on the margins of a Europe then dominated by the Hapsburg Empire. If so, we have somewhat of a divorce between great-power status and the facts of basing structure. In the seventeenth century, the Netherlands was a commercial and maritime hegemon, with the most elaborate basing structure of its day, but it existed within a multipolar power structure in Europe, and its bases interpenetrated the systems of England and France, particularly in India. The British Empire had maritime predominance and an unmatched global basing system, also in the overall context of European multipolarity, wherein other powers—France, Prussia/Germany, Russia, and Austria-Hungary—were major land powers in the eighteenth and nineteenth centuries and on up to World War I.

During the Cold War, the bipolar rivalry between the United States and the Soviet Union saw a global competition for basing access, but an asymmetric one with respect to maritime power, in which one side, the United States, was predominant throughout. Only since the early 1990s, however, has the United States had complete maritime predominance and the only global basing presence, with no rival whatsoever. Generally speaking, basing structures have correlated with the facts of relative national power (with the exception, as noted, of Portugal).

Over time, bases and access in general have resulted from conquest and colonization, alliances, or quid pro quos such as security assistance, though these have not been mutually exclusive. The Mongols' few bases were acquired entirely by conquest. Those of Ming China seem to have been a mix of "forced entry," also known as intimidation, and agreements with local potentates interested in trade. The bases of the Venetian, Genoese, Ottoman, and Spanish fleets of oared galleys in the Mediterranean were mostly the results of conquest, but in some cases came of more consensual arrangements. Spain's basing structure accrued entirely by ruthless conquest and colonization. Portugal's involved some military conquest, but also a good deal of alliance building among more advanced (relative to those of Spain's domain) societies in India, East Africa, and Southeast Asia. The Dutch took over most of the Portuguese basing structure by conquest; the British built their empire and its attendant basing structure almost entirely on the basis of conquest "beyond the line," in what now is called the Third World. But many British bases in Europe were acquired, often ad hoc, on the basis of ever-shifting alliances in a multipolar European system sans ideology.

In the early part of the Cold War, the United States availed itself of a large number of bases via alliances with the United Kingdom and France, before the possessions and bases of the latter gradually dwindled as a result of decolonialization. After that, starting in the 1960s, the United States (and also the Soviet Union) built global basing structures on the basis of alliances with ideologically friendly client states, underpinned by protection and provision of security but also by extensive security assistance, mostly in the form of arms transfers.

Throughout the past half-millennium or more, technological change has been a major driver of basing requirements. Up to World War I and somewhat beyond, that pattern pertained almost entirely to naval technology. The Mongols and Ming Chinese built large sailing vessels that gave them long-range power-projection capability. In the Mediterranean from the thirteenth to sixteenth centuries, the contending powers used oared galleys; their limited ranges and extensive logistical requirements translated into the need by the Venetians, Genoese, Ottomans, and Spaniards for elaborate basing networks even in that relatively small theater.[5] Portugal, on the basis of technological

developments in shipbuilding, navigational equipment, and naval gunnery, was able to move to the forefront of naval power and establish bases in a quasi-global system centered on the Indian Ocean.[6] But travel was slow and dependent on prevailing winds and currents; warships going from Lisbon to Goa around the Cape of Good Hope had to travel west almost to Brazil to pick up winds favorable for the trip around Africa. The Netherlands, France, and Britain improved the capabilities of sailing ships over several centuries. In the nineteenth century the advent of coal-fired steam propulsion resulted in faster and more direct travel for naval ships, but also in a requirement for numerous coaling stations—a development of which Britain was able to take particular advantage because of its global empire. The appearance of oil-fired ships (also of fleet oilers and colliers) reduced these requirements; later, nuclear propulsion would reduce them further.

But after World War I, developments in aviation produced entirely new requirements for external air bases; as aircraft ranges were short, the number of bases required for ferrying combat aircraft or troops and materiel was huge. Japan in 1941, for instance, had numerous air bases on Taiwan and Hainan Island; Italy had them in Libya and Somaliland.[7] The submarine produced yet further requirements (for example, Franco's Spain gave German U-boats access to the Canary Islands for refueling). Beginning with undersea communications cables before 1914, after World War I with radio relay and intercept stations, a basing requirement arose for technical intelligence, surveillance, and reconnaissance (ISR) purposes. After World War II, that became an important matter. The United States constructed elaborate global networks of AUTOVON/AUTODIN communications; DSP and other satellite downlinks; the DEW Line and BMEWS; SOSUS; SIGINT (signals intelligence) ground installations; NUDETS; and much more. Oiler refueling (for transfer to operating forces at sea) and constant ocean surveillance produced still other basing requirements. But, paradoxically, oiler refueling and increasing aircraft ranges greatly reduced the need for elaborate external networks of air bases.

There had once existed a close nexus between the security and economic functions of overseas bases. The Ming Chinese navy under Admiral Zheng Ho, which roamed the Indian Ocean littoral, did so mostly with the purpose of advancing trade. Venetian and Genoese bases in the eastern Mediterranean–Black Sea area likewise were colocated with a variety of economic enterprises, and many of the Venetian and Genoese war galleys were actually armed merchant vessels. Portuguese bases in East Africa, India, and elsewhere were also entrepôts—hubs of commercial activity. A number of the British and Dutch bases in Asia were established by semiprivate trading companies closely tied to and protected by their nations' fleets and armies. By the heyday of the British Empire, however, this colocation of military bases and entrepôts had

largely been broken, and naval bases were obtained and operated more or less entirely for military reasons.

During the Cold War, however, the critical issue of Persian Gulf oil became inextricably linked to basing access. American bases along oil-tanker sea-lanes to Asia and North America came to be viewed in the context of a possible Soviet effort (from bases in Angola, Guinea, Somalia, South Yemen, and elsewhere) to interdict them in case of war. In the late 1980s, with the "reflagging" operation on behalf of Kuwait, the United States established new points of access in the Persian Gulf. Today, the expansion of the U.S. overseas presence must be viewed in the context of potential struggles over oil resources, not only in and around the Persian Gulf but in places like Azerbaijan, Libya, Algeria, Gabon, Angola, and Equatorial Guinea.[8] Economics, then, in the form of access to oil, has crept back into basing access and global presence.

Over the past five hundred years, the basing networks of the contending great powers have corresponded closely with the geopolitical imagery of "heartland" and "rimland." As noted originally by Alfred Thayer Mahan, the successive maritime hegemons—Portugal, the Netherlands, Great Britain, and the United States—all established a degree of blue-water sea control based on superior main fleets and a ring of naval bases all around the Eurasian supercontinent.[9] Periodically, they were challenged by land powers attempting to develop equivalent seapower: France under Louis XIV, Germany before World War I, the Soviet Union during the Cold War.

The successive maritime hegemons typically inherited their predecessors' basing structures, though with modifications.[10] The Dutch took the Portuguese bases by force, but Britain in its turn mostly acquired the Dutch bases peacefully, as did the United States when it took over the role of rimland naval hegemon from Britain after World War II. Certain bases or strongpoints astride key "choke points" or adjacent to strategically important locales, and islands in strategic locations, have risen to importance with noteworthy frequency over five hundred years: Hormuz, Gibraltar, Cyprus, Malta, Mauritius, Aden, Trincomalee (in Sri Lanka), the Malabar and Coromandel coasts of India, Singapore, Hong Kong, Taiwan—these places appear again and again in the history of naval warfare.

During the Cold War, the United States, sometimes relying upon the remnants of the British Empire, established bases or facilities in Iceland, Norway, the United Kingdom, West Germany, the Azores, Morocco, Libya, Spain, Italy, Greece/Crete, Turkey, Iran, Diego Garcia, Thailand, Singapore, Australia, Taiwan, Japan, South Korea, and elsewhere—in a pattern perfectly reflective of a rimland configuration around the periphery of the Sino-Soviet bloc. Now, of course, analysts refer to a newer geopolitical configuration focused on intersecting "arcs of crisis" from North Africa to South Asia,

and from the Horn of Africa to Central Asia, reflective of a present emphasis on oil politics and on combating Islamist terror and nuclear proliferation. The rimland basing structure has been retained at least in part, but the newer geopolitics spotlights the importance of access to Eastern Europe, the Caucasus, Central Asia, the Horn of Africa, and the Sahel (a narrow band of semiarid land south of the Sahara Desert), all around the arcs of crisis. Also, of course, in view of U.S. naval dominance and the absence of a maritime peer competitor, there is an emphasis on littoral warfare and control, in lieu of Mahanian sea control.

Conflict Typologies, Scenarios, Contingencies: The Context of U.S. Global Presence

Recent Defense Department and other studies have focused on outright intervention scenarios (Iraq, Iran, Korea, Taiwan, plus numerous smaller situations involving various types of low-intensity conflict) as the core of the problem of forward presence, and accordingly have emphasized the more ad hoc forms of access. That is appropriate, but it may be worthwhile to present a more complex framework, with historical examples and possible future scenarios. Hence, the following analysis refers to both bases and other forms of access, with a (not always clear-cut) distinction between nuclear deterrence and the various levels of conventional power projection.

Nuclear Deterrence and Defense

During the Cold War, many bases served dual purposes with regard to prospective nuclear and conventional power projection—for instance, forward-based attack aircraft in Germany, the United Kingdom, Japan, and South Korea; access for carriers in the Mediterranean and East Asia; attack submarine bases at La Maddalena, Faslane, and Sasebo; aerial tanker bases in places like Thule, Gander, and Keflavik; land-based SIGINT stations all around the Soviet periphery; U-2 and SR-71 surveillance aircraft bases; and others.

But some overseas access had functions that were primarily if not solely nuclear. Early on there were Strategic Air Command B-47 bases in Spain and Morocco; medium-range ballistic-missile bases in the United Kingdom, Italy, and Turkey, as well as on Okinawa and Taiwan; DSP downlinks in Australia and Germany; SOSUS terminals in a variety of places near choke points and Soviet submarine transit routes and "bastions"; ground-launched cruise-missile and Pershing II emplacements in Europe (before the Intermediate Nuclear Force Treaty); BMEWS sites in the United Kingdom and Greenland; nuclear detection facilities (seismic arrays) in numerous countries, including Norway and Turkey; signals-intelligence stations collecting missile telemetry data in Iran, and later in China; bases for ballistic-missile submarines (SSBNs) at Rota (Spain) and Holy Loch (Scotland); and the DEW, PINETREE, and North Warning System early-warning radars in Canada and Greenland. Much of this structure was

dismantled as the USSR disappeared as a rival, but some of it (such as SIGINT and DSP downlink facilities) remains.

Today the future of nuclear deterrence basing is somewhat indeterminate. The SSBNs are now all based in the continental United States (in Georgia and Washington State). Nuclear-armed forward-based aircraft, such as the F-111s in the United Kingdom, have been stood down. But some technical facilities remain—again, for instance, the DSP downlinks. American nuclear deterrence today has Russia in mind only in part; basing in the context of nuclear deterrence today has mostly to do with ballistic missile defense vis-à-vis China, North Korea, and Iran.

The main basing issues today have to do with the upgrading of the BMEWS radars in the United Kingdom at Fylingdale Moor and at Thule, Greenland, under Danish sovereignty. For many years enhanced access to those sites was threatened by political forces in Europe unhappy in general with U.S. ballistic missile defense schemes. But the external basing of missile defense should be seen also in the context of the defense of allies. In that connection, I have developed elsewhere the concept of "triangular" or "indirect" deterrence, whereby nations targeted by a U.S. strategic or preemptive campaign that are unable to respond against the American homeland or installations overseas may instead threaten U.S. allies.[11] The value of the deterrent depends importantly on American concern for the well-being of allies.

The 1991 Iraqi Scud attacks on Israel and Saudi Arabia (Iraq having no capacity to attack the continental United States) constituted an early example. North Korean missile tests over Japan imply a threat to strike Japan in response to American preemption against Pyongyang's nuclear facilities. Iran and perhaps Pakistan could do likewise; both will be acquiring missiles that can reach throughout their respective regions—to Israel, to the Central Asian states, etc. As nations acquire still-longer-range missiles, the threatened area will expand—in the case of Iran, all over Europe. Hence the United States must think in terms of comprehensive regional ballistic-missile-defense capabilities. But some potentially threatened nations, such as Japan, may be wary of acquiring such defenses as "provocative" (this is a widely held view among the Japanese left) and may indeed decouple from the United States and withdraw access for U.S. forces.[12] States intimidated by Iran or Pakistan could also decline offers of missile defense.

Europe may be less likely to block installation of theater defense systems under intimidation or for fear of provocation, but some similarities may exist. An "old" European nation might now conceive of its grand strategy as one of building a counterweight to the United States, taking advantage of U.S. support for Israel to ingratiate itself with the Islamic world so as to attain preferential access to oil and the greater use of euros to pay for it. That could lead such a nation to decouple

itself from American defense policy, including theater missile defenses intended to protect it from "triangular" retaliation.

Poland, in contrast, appears to be negotiating the possibility of basing American theater antimissile systems within its borders, missiles that could cover much of Europe. Britain has agreed to allow the United States to upgrade the Fylingdale Moor site and install missiles. Of course, U.S. warships capable of antimissile defense could be stationed in the Mediterranean or Baltic seas, or off Europe's Atlantic coast.

American antiballistic missiles could conceivably be used to "shut down" nuclear exchanges in progress in the Greater Middle East. That could be done by shipboard missiles, but the possibility of doing so with land-based missiles somewhere in the region (Persian Gulf, Central Asia, the Caucasus) cannot be ruled out.

Conventional Conflict

Before World War II, a more or less isolationist America had little in the way of overseas bases, mostly in colonial possessions or protectorates—the Philippines, Guam, Wake Island, the Panama Canal Zone, Puerto Rico, and Cuba. The Lend-Lease Act of 1940 provided the United States use of a string of British bases reaching from Newfoundland to British Guyana. During the war, many other bases or facilities—in Greenland, Iceland, the Azores, Acapulco, the Galapagos Islands, and Recife and Fortaleza in Brazil, for example—were provided by a number of countries. After World War II, the new NATO alliance system afforded the United States access to the colonial possessions of Britain, France, Portugal, and the Netherlands, as well as a large number of bases in Europe itself. The use of numerous allied bases all around the Eurasian rimland was a virtual given. This made it easy for the United States to operate in conflicts large and small.

In the Korean War, bases in Japan were about all that were needed. In the Vietnam War, the United States relied extensively on air and naval bases in Japan, Taiwan, the Philippines (the major naval base at Subic Bay as well as Clark Air Force Base), and Thailand. Before and during DESERT STORM, access was available just about everywhere in Europe and the Middle East. For a variety of contingencies large and small, the United States operated in a permissive environment for access because of numerous stable alliance and other client relationships, all underpinned by security assistance.

Contemporary Conflict Scenarios

At present, and for the future, the security environment is much more ambiguous, as are alliance relationships themselves. In place of a set and more or less stable twilight struggle against the Soviet Union and its allies, there is now a multilayered and fluid

threat environment featuring terrorism, weapons of mass destruction (WMD) proliferation, nation building, and peacekeeping in a variety of places, as well as a looming hegemonic rivalry with China, maybe the European Union (EU), and maybe Russia (again), in combinations and sequences not easily foreseen.

In fact, even with the best analytical work, conflicts—and hence basing or presence requirements—are not always easily envisaged or predicted. Few people in the summer of 2001 could have predicted the need within months for U.S. access in Central Asian ex-Soviet republics to enable large-scale military operations in Afghanistan. Earlier, few British analysts can have foreseen the need for a large-scale invasion of the Falkland Islands, and a critical associated requirement for use of the (British-owned) air base on Ascension Island. The critical role of the Lajes air base in the (Portuguese-owned) Azores for arms resupply to Israel in 1973 (which arguably averted resort by the latter to nuclear weapons) had probably also been only dimly perceived by American defense planners. However elaborate or far-fetched the scenarios considered by planners, then, surprises may be expected, including some that overwhelm "capabilities-based analysis."

That said, scenarios for the future can be broken down into two basic categories, generic and specific. Most current open-source Department of Defense analyses rely on the former, if only to organize the subject. The generic scenario types now commonly utilized are *traditional, irregular, catastrophic,* and *disruptive.* "Traditional" refers to familiar force-on-force, large-scale engagements, such as the two world wars, the Korean War, DESERT STORM, the Iran-Iraq War, and the 1967 and 1973 Middle Eastern wars. In the academic literature—for instance, in the research emerging from the "Correlates of War" project—the relative scale of such conflicts is gauged by the variables of magnitude (number of combatants involved), severity (number of combat deaths), and duration.[13] Additionally, one can point to "moving fronts"—that is, an identifiable shifting demarcation of large-unit forces, analogous to a football line of scrimmage. Some analysts speak of a spectrum running from all-out conventional war to various forms of "limited" conventional war, Korea being an example of warfare characterized by tacit geographical limits. Most traditional conflicts are interstate.

"Irregular" conflicts refer to a range of conflict types roughly similar to the spectrum of low-intensity warfare, a term in vogue in the 1980s and 1990s. It comprises guerrilla and insurgency warfare, civil wars (ethnic wars over territory and ideological wars over control of governments), coups, terrorism, border friction, and the like.[14] Most of these wars (the latter example excepted) are of an intrastate nature. Over time, the dominant frequency of Marxist insurgencies gave way to "Reagan Doctrine" anticommunist insurgencies and then, in the 1990s, to a heyday of ethnic warfare.

"Catastrophic" conflicts comprise those in which large-scale casualties are caused by weapons of mass destruction—nuclear, biological, chemical, and radiological warfare. Hypothetically, some forms of environmental warfare might also be envisaged under this heading. Catastrophic conflict can involve interstate warfare or terrorism. In the former case, it could come in the form of "bolts from the blue" (premeditated attacks) or could come through escalation of a conventional war to the use of tactical, theater, or strategic WMDs.

"Disruptive" scenarios are more difficult to categorize than the others. Presumably they could include such things as electromagnetic-pulse attacks that disrupt communications or "cyber warfare," with or without an identifiable perpetrator. They might also involve major political changes in nations via elections or significant shifts in foreign-policy orientation that could heavily impact on U.S. global presence.

In the Cold War, U.S. government studies openly acknowledged expected, possible, or actual scenarios, mostly related to the two "base cases": war in Central Europe and in the Persian Gulf, both expected to involve the USSR. War started in one of these theaters was thought likely to spread to the other ("horizontal escalation"). Korea was, in addition, long an additional "mini–base case." Specific scenarios, however, are politically sensitive in an ambiguous political environment in which the identities of friends and foes are not always as clear as in the (in this respect) halcyon Cold War years. Now the scenarios considered are far more varied, with respect both to type and location. Political sensitivities put some within the classified realm, and again, there is a high likelihood of the unforeseen, though most can be fitted into the aforementioned four-way typology. Underlined in all of this is the global, diverse, almost open-ended nature of potential problems and the uncertainty of access in the context of shifting, indeterminate, and contingent or ad hoc political relationships.

The Future of Global Presence

The United States has been reshaping its global presence to deal with new threats, emanating often from new sources, in a very fluid and complex global environment. It is positioning itself according to new geopolitical emphases (arcs of crisis, African oil fields) and also in line with its own "transformation"—an emphasis on smaller, lighter, more mobile forces. There is a clear shift away from the residual Cold War global presence, marked by heavy forces stationed where they would be expected to fight—in Central Europe and Korea. In the light of plausible scenarios of future conflict, the comparative costs involved, the necessity to retain military personnel and attend to their families' needs, and a desire to lower the intrusiveness of the American presence and infringement on other nations' sense of sovereignty, the U.S. global presence is increasingly being seen in terms of trade-offs. The traditional option is forward presence/basing; a new option is

"sea basing"; at the same time, both political and technological realities are making increasingly attractive the option of basing military forces in CONUS itself. The latter two broad options are, of course, linked.

As indicated in recent Defense Department publications, basing access is now officially viewed along a spectrum embracing three distinct types of facilities: the "main operating base," "forward operating site," and "cooperative security location." Main operating bases involve "permanently stationed combat forces and robust infrastructure" and "will be characterized by command and control structures, family support facilities, and strengthened force protection measures."[15] Long-standing examples in the first category are Ramstein Air Force Base (Germany), Kadena Air Base (Japan), and Camp Humphreys (Korea). Newer examples that seem to fit the category are the air bases at al-Dhafra in the United Arab Emirates and al-Udeid in Qatar. Guam and Diego Garcia are in a category of their own as sovereign territories (British in the case of Diego Garcia) and hence immune to future political threats.

A forward operating site is defined as "an expandable warm [i.e., kept in ready condition] facility maintained with a limited U.S. military support presence and possibly prepositioned equipment."[16] Further, these sites "will support rotational rather than permanently stationed forces and be a focus for bilateral and regional training." Examples include the Sembawang port facility in Singapore and Soto Cano Air Base in Honduras. Other air bases around the world that might qualify are Keflavik in Iceland, Royal Air Force Stations Lakenheath and Mildenhall in the United Kingdom, Spangdahlem in Germany, Aviano in Italy, Incirlik in Turkey, Utapao in Thailand, and Naval Air Station Atsugi in Japan. The newer facilities being expanded and utilized in Bulgaria and Romania also fit this model, as do some in the smaller Persian Gulf countries. The U.S. facility at Sigonella in Sicily (during the Cold War mostly a U.S. Navy P-3 antisubmarine patrol aircraft base) would presumably also quality as a forward operating site.

Cooperative security locations are facilities with little or no permanent American presence. Instead, they are maintained with periodic service, contractor, or host-nation support. Cooperative security locations would provide contingency access and serve as focal points for "security cooperation activities."[17] Dakar (Senegal) is one example; there the U.S. Air Force has negotiated contingency landing, logistics, and final contracting arrangements, and the facility in fact served as a staging area for the peace support operation in Liberia in 2003.[18] Similar security arrangements of this sort are being worked out with a substantial number of other African countries.[19]

The evolving trends are clear. Obviously, the main thrust is in the direction of a very limited number of main operating bases, so as to lessen the American overseas footprint, and an increase in forward operating sites and cooperative security locations to

accommodate lighter and more mobile forces for a variety of contingencies. There is, first of all, a major drawdown of Cold War–era bases in "old Europe" (mostly in Germany) in favor of forward sites in Hungary, Romania, Bulgaria, and Poland, either with limited permanent personnel or forces rotated from Germany or the United States.[20] The second trend comprises the maintenance of forward sites, cooperative locations, and prepositioned materiel in the Middle East—in Kuwait, Bahrain, Qatar, the United Arab Emirates, and Oman (concurrent, however, with a dramatic reduction of force deployments in Saudi Arabia). A third is the maintenance of bases in and relating to Afghanistan—and this apparently in the face of mounting pressure from Russia and China, which fear a permanent U.S. presence in the region. Washington has kept major bases in Afghanistan at Bagram, Kandahar, and Mazar e Sharif, and has solidified access to an air base in Kyrgyzstan (Manas); but the government of Uzbekistan has recently refused to allow the United States continued access to its air field at Khanabad. Fourth, Diego Garcia remains (with British permission) a critical U.S. base for prepositioning, refueling, and crew rest for B-2 and B-1 missions. Finally, in East Asia, Australia continues to host important American intelligence and surveillance facilities (Exmouth, Pine Gap) as well as offering American planes and ships access. Singapore, as noted, hosts a major U.S. naval facility, and the Philippines now is resuming at least limited military access for the United States after a long hiatus, prodded by the necessities of cooperation on antiterrorism.

Japan (importantly including Okinawa) has, of course, long been a vital American basing hub. It was the primary springboard for the conduct of the Korean War. For decades, the United States maintained there important air bases (Misawa, Yokota, Kadena, Atsugi), naval bases (Yokosuka, Sasebo), and a variety of ISR facilities. In recent years, however, with the Cold War over and with increasing Japanese sensitivities about sovereignty and the conduct of some U.S. forces, there had appeared increasing pressure for the reduction of the American presence, particularly on densely populated Okinawa.

Now that Japan faces a seemingly stronger and more hostile China, however, while North Korea appears on the verge of testing and deploying nuclear weapons, Japan increasingly appears ever more reliant on its U.S. security tie; but it has also made clear that closer security cooperation with the United States will require some accommodation by the United States to Japanese political sensitivities, particularly concerning the U.S. Marine garrison on Okinawa; protracted negotiations between the two parties are now in their final phase, with a major restructuring of the U.S. presence in Japan to follow over the next several years.

Both Australia and Singapore are vital components of the American posture in the Pacific. The latter provides important naval facilities and air staging at a crucial point

astride the strategic Straits of Malacca. The former has traditionally provided critical ISR support and will now be providing additional access for training in northern Australia in the face of possibly increasing Chinese naval activity in Southeast Asia and the Indian Ocean. Finally, mention should be made of Guam. This sovereign U.S. territory is currently getting another look as a way both to strengthen the U.S. air and naval presence in the western Pacific in the face of a continuing Chinese military buildup, and to lessen the political burdens of the American footprint, particularly in Japan.[21]

The retention of strong ties to Britain is a cornerstone of U.S. basing policy, not only with respect to the large U.S. basing structure in the United Kingdom itself (major air and submarine bases and an elaborate ISR structure) but also to the British-owned islands of Diego Garcia and, to a lesser degree, Ascension and Bermuda. Diego Garcia has been critical to U.S. military operations in Kuwait/Iraq and Afghanistan, involving maritime prepositioning ships, refueling for B-1 and B-2 bombers, transporting of cargo aircraft, etc. Presumably, that is a solid, enduring asset, but the possibility of a leftward shift in British politics combined with EU pressures on Britain to modify its security tie with the United States could conceivably change all that. Ascension too could become critical to possible future military operations in southwest Africa, home to increasingly important oil fields.

The Basis of Basing

As we have seen, historically speaking nations have acquired basing access in one of three basic ways: by conquest or colonization, by providing security or protection for the host via formal alliances or less formal arrangements that still imply protection, or by tangible quid pro quos—security assistance, arms transfers, subsidies, or what amount to "rents." In the current context for the United States, conquest is more or less irrelevant, precluded by emerging international norms or "laws"—though it seems unlikely that the U.S. military will be abandoning the bases it has seized or created in Afghanistan and Iraq any time soon.

As for bases acquired through the provision of security, during the Cold War a number of nations provided the United States access at least in part because it provided assurance against Soviet or Chinese aggression. The term "extended deterrence" was often used to describe such a relationship. It may still be applicable in a number of cases—for example, Japan, South Korea, perhaps again the Philippines, even Vietnam. Access in Georgia and some of the ex-Soviet states in Central Asia might be included, in relation to a possibly resurgent and revisionist Russia. Around the Persian Gulf, the security of friendly states is being enhanced by a U.S. presence against both possible Iranian aggression and an internal Islamist threat. In addition, a growing number of nations—again, the Philippines, and some in Africa—may see an American presence as deterring

terrorists; and it is not inconceivable that the Philippines will at some point in the future, in response to a rising Chinese threat in its waters, rethink its expulsion of the United States from its bases there.

All of this represents extrapolation from current problems and scenarios. Perhaps absent here is the broader picture of a changing but indeterminate international systems structure that may heavily impact future scenarios, formal and informal alliances, and hence basing access. Cold War bipolarity based largely on an ideological divide has now given way to a degree of unipolarity heavily influencing the facts of basing dominance, mixed with an incipient though asymmetric multipolarity, the poles of which are the United States, the EU, Russia, China, Japan, India, and perhaps a nascent radical "Islamic world." Save the remnants of communism and the growing ideological-religious aspects of Islamic radicalism, the new system is largely devoid of an ideological basis for enmity and friendship, a state of affairs that allows, as was the case in the Europe of the eighteenth and nineteenth centuries, rapidly shifting alliances based on short-term or medium-term expedience and balance-of-power considerations. Russia's recent oscillation between China (arms transfers, coalescence vis-à-vis the United States), the EU (ganging up on the United States), and the United States (common front against Islamic terrorism) may be a harbinger of things to come as well as a reminder of the past. At another level, nuclear proliferation, juxtaposed to big-power multipolarity, will be critical, and numerous new entrants to the "nuclear club" are likely. North Korea (maybe later a nuclear-armed united Korea), Iran, Egypt, Turkey, Saudi Arabia, Taiwan, Japan, Australia, and Indonesia are all technically qualified candidates.

What will be the impact of all of this on basing and, specifically, on the American basing posture? In the past, multipolar systems devoid of long-term stable alliances usually have obviated or limited large-scale basing systems; in such a world today's "friend" is tomorrow's rival and someone else's "friend." Nuclear proliferation seems to portend the decoupling of alliances because of the intimidation factor—unless the protection/security factor drives cooperative missile defense systems. Will Japan, China, Russia, India, and the EU develop effective ballistic-missile-defense systems? Will some of these powers provide security assistance as quid pro quo for their own bases or to deny access to the United States? On the whole, decoupling and a very constrained environment for American basing—and hence further reliance on sea-basing or CONUS-basing schemes—might be predicted, but all of this is uncertain. The effective use of security assistance might alter the equation.

The third category, in the current context, relates primarily to the use of security assistance as a quid pro quo for basing access. During the Cold War, some of the largest

recipients of American security assistance—Turkey, Greece, Spain, Portugal, the Philippines—were providers of critically needed access for the United States.

There are several categories of security assistance: the Foreign Military Financing Program, the International Military Education and Training (IMET) program, and the Economic Support Fund.[22] Some seventy-four countries receive foreign military financing, some 130 receive IMET money, and some twenty-six accept money from the Economic Support Fund, which is also used to support multilateral programs concerning regional democracy, regional women's issues, administration of justice funds, and other such initiatives.

Several points stand out regarding the current structure of U.S. security assistance. The first point is the dominance of the numbers by Egypt and Israel. Another is the truly remarkable number of countries receiving U.S. funds from one or more of these sources, more than two-thirds of some 190 sovereign nations in the world. Many that now receive such assistance are former Soviet allies and arms clients (or even former Soviet republics), many of which once provided Moscow basing access and overflight rights.

Regarding the Foreign Military Financing Program, Egypt and Israel are the largest recipients, primarily as a result of supporting the Camp David peace process, though Egypt has also provided the United States military access in recent times. In 2003–2004, aside from Egypt and Israel, only Jordan, Oman, Morocco, Bulgaria, the Czech Republic, Hungary, Macedonia, Poland, Georgia, Turkey, Colombia, the Philippines, and Pakistan received over $20 million, modest sums. The United States once provided large amounts of security assistance, as much as $500 million annually, to a small number of key basing hosts: Portugal (the Azores), Spain, Greece, Turkey, Thailand, the Philippines. Now, again aside from the billions for Egypt and Israel, as well as nearly $500 million for Jordan, this money is spread out to a much larger number of recipients in smaller amounts.

Djibouti and the Philippines have the largest accounts in the Economic Support Fund, each around $25 million, in each case reflecting American military access for the war on terror. The IMET goes to a number of states, but the amounts are small, only a handful above a million dollars per year: these include the Philippines, Senegal, Turkey, Oman, Yemen, Kyrgyzstan, Bulgaria, Poland, and Romania. The relation to basing access is clear in many of these cases. Hence, it would appear that in many cases all over the world, relatively small increases in absolute levels of assistance would represent large proportional jumps. Such increases could be used judiciously in exchange for enhanced access.

What potentially is involved has been illustrated in recent cooperative security and training exercises in various African states, particularly in and around the Sahara Desert and the Sahel, where the focus is on counterterrorist training. The amounts of

IMET funds targeted for these countries range from around one or two hundred thousand dollars per year on up to about a million for Senegal.

Access Permissiveness and Scenarios, Past and Present

As previously discussed, basing access has become more ad hoc and situational since the end of the Cold War and, with it, the weakening of the formal alliance structure constructed by the United States during that protracted struggle. During the Cold War, the United States was almost always able to utilize its overseas facilities and the airspace of friendly nations. For instance, air bases in Japan, the Philippines, and Thailand were used to prosecute the war in Vietnam. U-2 aircraft were flown over the USSR from bases in Turkey, Germany, the United Kingdom, Pakistan, and Japan. Germany was a jumping-off point for American intervention in Lebanon in 1958. Various nations allowed access for satellite downlinks in connection with nuclear early warning and satellite control: Germany, Australia, the United Kingdom, the Seychelles, even Madagascar for a period. The United Kingdom, Turkey, Italy, and Taiwan allowed forward basing of land-based missiles aimed at the Soviet Union and China. There were a few exceptions—denial of airspace by France and Spain for the raid on Libya in 1986 is one example. Also, numerous nations tied in one way or another to the USSR allowed Moscow access and denied it to Washington.

The keys in this prior period were systems structure (a bipolar struggle with ideological cement on both sides), shared threats, protection of basing hosts, and perhaps a lower level of the anti-Americanism that is now so common throughout much of the world. After the end of the Cold War, permissiveness persisted at least through the first Gulf War of 1990–91. There the United States led an effective coalition that was underpinned by the collective security mandate of the UN and that enjoyed strong support from Saudi Arabia, hence also from most of the Middle East. Only Jordan seems to have denied the United States relevant access, which was provided fully by the Saudis and other Gulf states, Egypt, Turkey, all of the other NATO allies, and even the newly "independent" Eastern bloc countries.[23] (Some political problems arose, however, in India and Thailand, as a result of the granting of permission to stage U.S. Air Force transport planes.)

In Operation ENDURING FREEDOM in Afghanistan, the United States also was provided access almost everywhere necessary. The ex-Soviet states in Central Asia gave the United States vital air bases and jumping-off points to the north of Afghanistan. Britain provided Diego Garcia. Saudi Arabia, Oman, Qatar, and others allowed the United States to fly missions from their territory into Afghanistan. Nations in Eastern Europe and in the Caucasus granted overhead-transit access. Perhaps the only problem (other than Iraq and Iran, for obvious reasons) was Pakistan, and even that nation, under pressure

from the United States (and fearing American encouragement of an invasion from India), allowed overflights and some access for heliborne ground operations. Intimidation was a factor in that case. But overall, sympathy in the wake of 9/11 and perhaps fear of an aroused and dangerous United States made for a permissive basing access environment. Enhanced security assistance and the promise of more were important.

In the invasion of Iraq in 2003, however, there was an overall less permissive environment for American access, for reasons of political disagreements with states in "old Europe" and pressure from the "Arab street" in the Middle East. Access to European bases and overhead airspace was mostly maintained (Switzerland, irrelevantly, denied the latter). But reluctance by Saudi Arabia prompted the moving of air command and control operations to Qatar (which, with Kuwait and Oman, was solidly favorable to American access). Egypt quietly allowed overflights, refueling, Suez Canal transit, and use of a major military hospital. But permission for the movement of the 4th Infantry Division across Turkish territory was denied.

For the future, access may be even more situational and ad hoc. The keys are likely to be alliance and security assistance relationships, the overall global level of support for American policies on antiterrorism and WMD proliferation, the political specifics of given situations, and the balance between reliance on U.S. provision of protection and security and the counterleverage of foes of the United States or states pressured or intimidated by them. Europe's growing divorce from the United States, and perhaps a growing competition with the United States over access to Middle Eastern oil, may become a larger factor. Pakistani and Iranian nuclear arsenals may increasingly be intimidating factors. The Muslim "street," in Africa and Southeast Asia as well as the core Middle East, may be another. Japan's fear of nuclear-armed North Korea, not to mention China, may be a strong factor in the Far East. In general, and short of actual crisis, U.S. access all over Africa, in the Persian Gulf area, and in Eastern Europe and Central Asia seems to be growing and reasonably assured—but in specific situations things may be different.

It is difficult to predict the extent to which permissiveness of access may vary by scenario type—traditional, irregular, catastrophic, or disruptive, to cite again the current Department of Defense terminology. This question involves a spectrum that can be measured in terms of magnitude or impact—that is, ranging from a nuclear or biological terrorist event to a peacekeeping operation—but also in technological terms, running from force-on-force military operations to, say, a cyber attack. Again, degrees of access allowed may be scenario-specific, depending upon the identity of the foe (Islamic or not, raising the issue of religious identification), fear and intimidation (in both directions), influence afforded by oil politics or other types of leverage (EU admission,

security assistance, various quid pro quos), and the overall intensity of anti-Americanism (perhaps with regional variations). Relatively small "disruptive" scenarios involving peacekeeping, responses to coups, and the like would appear to be most permissive in terms of access; likewise, catastrophic scenarios would probably result in sympathy for U.S. operations, though perhaps counterbalanced by the fear and intimidation factor. One may note here the extensive granting of access to American military forces engaged in the recent tsunami rescue operation in places like Thailand, but also the skittishness of the Indonesian government about American military activities on Sumatra.

It is worth pointing out that aside from broadly systemic factors and prevailing moods, global or regional, the domestic politics in given nations may be a determining factor, with respect either to electoral change or coups and revolutions. There are any number of historical examples, even from the period of stable alliances during the Cold War. France, under Charles de Gaulle in the 1960s, canceled U.S. access to air and naval bases (Villefranche in the latter case) and to crucial petroleum pipelines running from France's Atlantic coast to Germany. Iran's revolution in 1979 cut off important access to telemetry intercept facilities in northern Iran (the Iraqi revolution in 1958 had ended Western access to air bases there). In the latter part of the Cold War, American access to Greek bases was curtailed when anti-American governments came to power. Later, the United States had to withdraw from Spanish air bases, obtaining additional access to Italian bases to offset the loss. The Turkish situation in 2003 has widely been reported upon; it came in the wake of the accession to power of an Islamic party. In the Philippines, post-Marcos politics expelled the United States from its major air and naval bases. On the other side of the coin, in recent years friendly governments in the United Kingdom, Italy, and Australia have translated into very permissive access. Shifting political winds could later cause problems in these countries, and in Japan and South Korea as well.

CONUS Basing and Sea Basing

Alternatives to contingent basing access, or perhaps supplements to it, are CONUS basing and sea basing. Their utility will depend greatly on the scenario, both in terms of distance and location, and also the sheer scale of operations required.

CONUS Basing. The option of relying more on basing within the continental United States has been illustrated by, among other things, B-1 and B-2 bomber missions in Operations DESERT STORM, ENDURING FREEDOM, and IRAQI FREEDOM, mounted from Barksdale and Whiteman Air Force bases, the latter at least making some use of Diego Garcia. Also, military transformation, translating into lower force levels and logistical requirements for given operations, has resulted in greater optimism about being able to

rely more, if not wholly, on CONUS basing. Operation from the United States might be particularly applicable to preemptive missile strikes on WMD installations or terrorist facilities, as well as to long-range air interdiction operations in a "traditional" conflict. This option might be furthered by technological developments—faster aircraft with longer ranges and more accurate bombing systems, enhanced capabilities for conventional interdiction by SSBNs, and the like. Also, satellite capabilities and reduced requirements for overseas downlinks might in the future allow reduced dependence on foreign bases for intelligence and surveillance. Better and faster sealift and airlift would also help, but obviously only within limits, for traditional and disruptive scenarios at least.

Sea Basing. Over the last several years, the Navy and Marine Corps have promoted the concept of "sea basing" on the argument or assumption that land bases may not so readily be available for future power projection operations as they have in the recent past. Much about this concept remains unclear, so that it is difficult to analyze its relationship to or implications for the American global posture generally. Fundamental questions remain to be answered concerning the scope or scale of sea basing, the technological capabilities required (especially new ship platforms), its relationship to allied forces as well as its larger impact on U.S. alliance relationships, and not least, its cost. At a time when questions are being increasingly raised about the Navy's ability to afford its next-generation destroyer (the DD-X), it is far from clear that money would be available to support an ambitious program to build what in effect would be support ships with limited offensive capability.

Recent studies of sea basing have focused almost entirely on force structures and associated budgets, with little reference to conflict scenarios—the possible locations and sizes of conflicts, impact of coalition alignments, availability of land bases, and so forth. Likewise missing has been any cross-referencing with the now-standard general breakdown of conflict scenarios into traditional, irregular, catastrophic, and disruptive. An agenda for further, broader world analysis involves such issues as these:

- The relationship of projected sea-basing capabilities to generic and more specific scenarios
- Sea-basing capabilities in a variety of regions, littoral scenarios versus inland scenarios, etc.
- The viability of force structure planning with a long (thirty-year) time frame
- The relative costs of sea basing and of enhanced security assistance to land-base hosts, to the extent the latter is politically feasible.

Connecting the Dots

The future of American force-projection capability is, of course, a maddeningly complex subject. There are many unknowns—in contrast to the Cold War period, with its known potential enemies, known and stable system structure and alliances, and a limited set of likely scenarios. Now, the enemy or threat may be large or small, a state or something else, and may or may not have weapons of mass destruction. The identities of allies or "friends" in myriad possible scenarios are contingent and unclear—hence the confused set of possibilities for basing, ranging from land basing on the territories of allies to sea basing to greater reliance on bases at home.

Much has been made of the (perhaps overdrawn or nebulous) distinction, in this context, between threat-based and capabilities-based planning. Threats, of course, are only partly predictable, but capabilities and resources have their limits, so planning for capabilities to deal with all possible threats would be unrealistic even if all could be known. Also, at least in peacetime, capabilities can be acquired only over long stretches of time. But over the next thirty years, just about anything could happen to alter threat perceptions: terrorist WMD attacks on the homeland could occur; China could overtake the United States as the world's premier power; Japan could join China in an all-Asia alliance; the European Union could become a hegemonic rival to the United States; Russia might try to reconstitute the Soviet Union, or orient itself to the EU, China, or parts of the Islamic world; Israel or Pakistan could in desperation use nuclear weapons. Ever-rising oil prices, propelled by massively rising demand in China and India, could cause another worldwide depression, and with it *military* competition over oil resources in the Persian Gulf, the Caspian Sea, North Africa, and the Gulf of Guinea. Then again, a far more benign set of events (which extrapolation from the present would in fact suggest is more likely) might occur.

Out of all these complex and contingent sets of scenarios and possible policies in connection with the future of the U.S. global defense posture, a number of general points deserve emphasis. The first is that the diverse, uncertain, and global nature of the emerging threat environment requires a robust global basing and posture strategy. Threats include terrorism, weapons of mass destruction, traditional warfare possibilities in Iran, Taiwan, and Korea, perhaps hegemonic rivalry with China. But looming quietly behind them may be a struggle for oil, natural gas, and nonfuel minerals, perhaps to be linked to terrorism, WMD, and great-power hegemonic rivalry.

A second, related to the above, is the uncertainty surrounding the future of the international system, specifically whether the current U.S. unipolar dominance and alliance structure will hold up. In terms of basing, the issue is a continuing permissive environment for American basing access and presence versus a far more restrictive one marked

by withering alliances, a systemic shift toward multipolarity, balancing against the United States, and so forth. Historically, multipolarity has meant less stable alliances and hence less durable, more contingent, and ad hoc basing access.

A third concerns the present and prospective state of the three historical routes to basing access: conquest/colonization, alliances and provision of security umbrellas (extended deterrence), and the quid pro quo of security/economic assistance. Conquest is mostly now ruled out by prevailing international legal norms. Alliances and security guarantees may be in jeopardy as sources of access, because of changing international system structure and intimidation related to WMD proliferation. Security and economic assistance, however, may be at present an underutilized instrument of acquisition and maintenance of bases—and a less expensive one than sea basing.

Fourth, while sea basing and CONUS basing are serious alternatives to land basing by virtue of technological improvements in long-range strike systems, there are serious questions of cost and of feasibility in relation to important categories of scenarios, especially for sea basing.

Perhaps the key point, however, is simply that the time has clearly come to move the whole question of basing and presence from the periphery toward the center of the American strategic debate. The Department of Defense has led a quiet revolution in the global posture of American military forces that is still in the process of working itself out and is bound to have profound and perhaps revolutionary effects. American strategic analysis has yet to catch up with this development.

Notes

1. For a review of these various concepts and definitions, see Robert E. Harkavy, *Bases Abroad* (Oxford, U.K.: Oxford Univ. Press for the Stockholm International Peace Research Institute, 1989), chap. 1.
2. See, for example, Jacqueline Davis, *Forward Presence and U.S. Security Policy,* National Security Paper 16 (Cambridge, Mass.: Institute for Foreign Policy Analysis, 1995).
3. See Robert E. Harkavy, "Global and Sub-Global Reach: An Initial Effort at Historical Scope and Definition" (paper presented at annual meeting of the International Studies Association [ISA], Montreal, March 2004).
4. U.S. Defense Dept., *Strengthening U.S. Global Defense Posture,* Report to Congress (Washington, D.C.: September 2004), pp. 7–8.
5. J. F. Guilmartin, *Gunpowder and Galleys: Changing Technology and Mediterranean Warfare at Sea in the Sixteenth Century* (London: Cambridge Univ. Press, 1974).
6. C. R. Boxer, *The Portuguese Seaborne Empire, 1415–1825* (New York: Knopf, 1969), introductory chapters, and Jan Glete, *Warfare at Sea, 1500–1650: Maritime Conflicts and the Transformation of Europe* (London: Routledge, 2000).
7. See Robert E. Harkavy, *Great Power Competition for Overseas Bases: The Geopolitics of Access Diplomacy* (New York: Pergamon, 1982), chap. 3.
8. U.S. Defense Dept., *Strengthening U.S. Global Defense Posture;* and U.S. Congress, *Options for Changing the Army's Overseas Basing*

(Washington, D.C.: Congressional Budget Office, May 2004).

9. A. T. Mahan, *The Influence of Seapower upon History 1600–1783* (Boston: Little, Brown, 1980); and Colin Gray, *The Leverage of Seapower* (New York: Free Press, 1992).
10. William Thompson, "Passing the Torch in a Manner of Speaking: The System Leader Lineage" (paper presented at a meeting of the International Studies Association, Toronto, 1997).
11. See Robert E. Harkavy, "Triangular or Indirect Deterrence/Compellence," *Comparative Strategy* 17, no. 1 (January–March 1998), pp. 63–81.
12. A good discussion of these issues is in Setsuo Takeda, *U.S. Missile Defense and East Asian Security: A Policy Analysis*, forthcoming.
13. J. David Singer and Melvin Small, *The Wages of War, 1816–1965* (New York: Wiley, 1972).
14. For some typologies, see Ernest Evans, *Wars without Splendor: The U.S. Military and Low Level Conflict* (New York: Greenwood, 1987); and Richard Shultz, "The Low Intensity Conflict Environment of the 1990s," *Annals,* AAPSS 517 (September 1991), pp. 127–32.
15. U.S. Defense Dept., *Strengthening U.S. Global Defense Posture,* p. 10. See also "The U.S. Global Posture Review," *Strategic Comments* 10 (September 2004); Andrew Krepinevich, "The New Pax Americana," *Defense News,* 20 September 2004; and "Prepared Testimony of U.S. Secretary of Defense, Donald H. Rumsfeld before the Senate Armed Services Committee," *Global Posture,* 23 September 2004.
16. U.S. Defense Dept., *Strengthening U.S. Global Defense Posture,* p. 10.
17. Ibid.
18. Ibid.
19. "U.S. Engages Africa in Terror Fight," *Christian Science Monitor,* 17 September 2004, p. 6.
20. See, for instannce, "Rumsfeld Eyes Base for Rent in Romania," *New York Times,* 12 October 2004, p. A8.
21. See Andrew Erickson's and Justin Mikolay's chapter in this volume.
22. The data in the following paragraphs is drawn from *DISAM Journal* (Spring 2004), pp. 1–59.
23. See, for information on basing in the 1990–91 Gulf War, U.S. Defense Dept., *Conduct of the Persian Gulf War: Final Report to Congress, Pursuant to Title V of the Persian Gulf Conflict Supplemental Authorization and Personnel Benefits Act of 1991 (Public Law 102-25)* (Washington, D.C.: April 1992).

CHAPTER TWO

Transforming the U.S. Global Defense Posture

RYAN HENRY

At the end of 2004, the world was witness to an event that no one could have foreseen. Even more startling than the shock of the Indian Ocean tsunami itself was the scale of its impact. But the very suddenness and speed with which the tsunami struck gave a glimpse of how valuable it is to posture our forces for uncertainty. Had the tsunami occurred in 1985, at the height of the Cold War, it is difficult to imagine that the United States could have surged the forces and logistical support needed to deliver food and water to the areas of the eastern Indian Ocean that were the hardest hit. It is even more difficult to imagine that the United States could have depended on an extensive network of partner nations to assist us in exercising our global responsibility to act. Only through the transformation of the U.S. military's capabilities and the growing flexibility of our overseas posture was the United States able to respond as quickly and effectively as it did during this crisis.

The security environment at the start of the twenty-first century is perhaps the most uncertain it has been in our nation's history. This chapter focuses on the strategic realities that are driving the transformation of the American global defense posture to contend with that uncertainty, and the resultant changes the Department of Defense is working to bring about in our relationships and partnership capabilities around the world.

New Strategic Landscape

The impetus for the transformation that put us in a position to respond quickly and effectively to the Indian Ocean tsunami was the emergence of a new strategic landscape. Since 2002, the U.S. military has been adapting the posture of its forces to address the key security challenges that our country will face in the twenty-first century. Traditional, state-based military challenges—for which our Cold War posture was optimized—will remain, but as the 11 September 2001 attacks revealed, a broader range of security challenges has emerged. The events of 9/11 showed the destructive potential of terrorists and the vulnerability of the United States and of its allies to unwarned attack.

It showed the effectiveness of asymmetric methods in countering U.S. conventional military superiority and sounded an early warning of the approaching confluence of terrorism, state sponsorship of terrorism, and proliferation of weapons of mass destruction (WMD) enabled by globalization. It focused our attention on a hostile ideology that openly advocates the killing of innocents for political gain, and it proved that globalization has made failed states and ungoverned areas in the most remote corners of the world grave dangers to our security.

The Secretary of Defense's 2005 *National Defense Strategy* provides a conceptual framework for understanding this new strategic landscape, which may be said to span four types of security challenges: *traditional, irregular, catastrophic,* and *disruptive.*

- Traditional: states employing military forces in well-known forms of military competition and conflict (such as major combat operations employing conventional air, sea, and land forces)
- Irregular: nonstate and state actors employing "unconventional" methods to counter stronger state opponents (for instance, terrorism, insurgency, civil war, and other methods aimed to erode influence and political will)
- Catastrophic: terrorists or rogue states employing WMD or WMD-like effects against American interests (for example, massive attacks on the homeland, collapsing global markets, or loss of key allies that would inflict a state of shock upon political and commercial activity)
- Disruptive: competitors employing breakout technologies or methods that counter or cancel our military superiority (e.g., advances in bio-, cyber-, or space war, ultra-miniaturization, directed energy).

As recent experience has shown, these challenges often converge and overlap. Our adversaries in Iraq and Afghanistan have employed both traditional and irregular approaches, and terrorist organizations like al-Qa'ida are posing irregular threats while actively seeking catastrophic capabilities.

The Broad View of "Transformation"

President Bush came to office in 2001 with an aggressive agenda for defense transformation. He charged Secretary of Defense Donald Rumsfeld with transforming the Defense Department for the challenges of the twenty-first century. The administration's sense of the changed strategic landscape led to a new assessment of our needed global defense posture. What is emerging from that assessment is the most profound reordering of U.S. military forces overseas since World War II and the Korean War. The key to understanding this realignment effort is transformation.

When he arrived at the Pentagon, Secretary Rumsfeld recognized the need for change. He understood that the strategic and operational environment today is defined by uncertainty, that the world is changing in relation to that environment, and that we need to view that world as it is and adapt to it as necessary. The threat-based planning system prevalent in the Cold War—through which we could project a seemingly predefined and predetermined Soviet threat and how to posture against it—had become obsolete. Overcoming our preconceptions of that era, Secretary Rumsfeld led the department in taking the first step of transformation by shifting away from threat-based planning and toward a capabilities-based approach that addresses the full spectrum of feasible threats. This approach posits that unlike in the Cold War, we no longer know precisely what threats we will face in the future, who will pose them, and where, much less when. However, we do believe there will be future challengers to American interests and to the interests of our allies and partners, and that we must plan against the kinds of capabilities potential adversaries may employ to exploit our vulnerabilities.

Revisiting the framework of the four security challenges, this approach means first recognizing that the Defense Department's (and the nation's) comfort zone has long been in the realm of "traditional challenges." Through transformation, the department has moved beyond this traditional focus and begun applying its thinking and capabilities to the other three sets of challenges—irregular, catastrophic, and disruptive. Our global defense posture realignment will leave us in much better shape to face the uncertainty that inheres within these nontraditional challenges.

Our sense of the new strategic landscape—and the opportunities opened up by emerging technologies—has led to a new way of measuring military effectiveness. Numbers of troops and weapon platforms are no longer the key metrics. Rather, military effectiveness is now a matter of capabilities—speed, stealth, reach, knowledge, precision, and lethality. Thus, our defense planning should place less emphasis on numbers of forward forces than upon capabilities and desired effects that can be achieved rapidly.

Transformation also calls for increased effectiveness and efficiency. Within the Defense Department, it has strengthened jointness among military services through joint presence policy, as well as smarter business practices for managing the day-to-day workings of the institution. At the interagency level, it has improved transparency and generated new approaches to problem solving. Transformation has also strengthened momentum for changing the relationship between the department and its people, by keeping faith with their expectations of quality of life in a time of increased operational tempo.

If changing relationships is a hallmark of transformation, the greatest impact of all has been on American relationships with allies and partners. The administration understands that the United States cannot "go it alone" in world affairs. Among our country's

key strategic assets is the network of alliances and partnerships that allows us to enjoy the benefits of international cooperation in virtually every endeavor we undertake. This network is the most vital asset we have as a nation in the Global War on Terror. It is instrumental in developing a common understanding of shared threats and in working jointly to contend with them, particularly through partnership capacity building.

We call the relationships dimension of transformation *security cooperation.* It is important to understand that this term is not synonymous with "engagement"—or with showing the U.S. flag overseas as an end in itself. Rather, security cooperation is the means by which the Department of Defense encourages and enables allies and partners to work with us to achieve common strategic objectives, thereby building the capability and capacity of the partnership.

In a sense, security cooperation is capabilities-based planning as applied to relationships with our allies and partners. Whereas during the Cold War we supported our NATO and Pacific Rim allies against threats to their borders, today we work with allies and partners who share our sense that security challenges transcend specific borders and threaten societies on a global scale. Just as capabilities-based planning positions the United States to contend with adversarial capabilities in an uncertain environment, security cooperation enables the United States to confront a spectrum of threats to its own security and that of allies and partners—anywhere, at any time. This invokes an important, symbiotic relationship between security cooperation and our global defense posture. Global posture serves as the platform for implementing security cooperation activities. Conversely, security cooperation activities help develop and maintain the access needed for posturing our forces to contend with future uncertainties.

In sum, transformation is far more dynamic than the common conception of applying high technology in war. For the Defense Department, it is about:

- A command climate that swept away preconceived notions of strategic affairs and of the department's traditional role in those affairs
- The shift from a threat-based to a capabilities-based approach
- The need for increased efficiency and effectiveness
- The shift from engagement to security cooperation.

Transformational thinking respects the facts, rejects fixed ideas, and promotes new and necessary relationships and capabilities that position us to contend with the uncertainty of the new strategic landscape.

The Genesis of the U.S. Global Defense Posture

Before turning to how this transformation has helped drive the strategy for realigning our global defense posture, a bit of history is in order. In 1985, at the height of the Cold War, the United States had 358,000 military personnel deployed in Europe, 125,000 in East Asia, and nine thousand in the Persian Gulf. In Europe, ground, air, and naval forces were stationed in support of NATO from Iceland in the northwest to Turkey in the southeast. In the Pacific region, forces were stationed in Korea, the Philippines, and Japan. Our defense posture at that time was the product of the collective legacy of the wars of the mid-twentieth century, but our basing and operating patterns were relatively well matched to the challenges of the Cold War era. Forces in Europe and Asia were primarily designed to fight in place—potent for defensive operations close to garrison, but difficult to deploy outside of the theater where they were stationed. Essentially, we maintained forward-deployed forces that served as defensive tripwires.

The end of the Cold War dramatically altered the global landscape. As a result, during the first half of the 1990s the United States closed or turned over to host governments about 60 percent of its overseas military installations and returned nearly three hundred thousand military personnel to the United States. During the 1990s the United States also closed large military facilities in the Philippines, Spain, and Panama.

By the mid-1990s, although we had dramatically reduced the overall numbers of forward-stationed military forces, they remained concentrated largely in Western Europe and Northeast Asia. After the end of the Cold War, however, our operating patterns had diverged from our basing posture. Western Europe and Northeast Asia had become springboards for operations in the Balkans, the Persian Gulf, and later, Central Asia. The result was a shift in the rationale for our forward posture—forces were no longer expected to fight in place. Rather, their purpose was to project into theaters that were likely to be some distance away from their garrisons. In other words, while a primary purpose of forward presence was to provide for the direct territorial defense of treaty allies, this could no longer be the sole purpose. Threats to the security of our nation and that of our allies had begun emerging in unexpected and faraway lands.

However, new necessities of geopolitics and operational flexibility overseas were not the only motivations for transforming our global posture. The other major impetus was domestic in nature. Stresses on our military forces and their families also dictated that we review our posture globally. “Accompanied tours” (in which families moved with the service members) designed in an era of static deployments had become more of a hardship for families as service members deployed more frequently from their forward stations. In increasing numbers, accompanying dependents faced “double separation”—separated

both from their loved ones in uniform and from their communities and extended families back in the United States.

In his 2001 review of our defense strategy and capabilities, Secretary Rumsfeld challenged the Department of Defense to change how it conceptualized and projected American presence overseas so as to contend with uncertainty and surprise. Some remained unconvinced of the need for change, but the terrorist attacks of 11 September 2001 abruptly dispelled any doubt. No one foresaw this catastrophic event, but our administration had already made the mental leap—expect uncertainty and surprise—inherently necessary to respond effectively. The attacks coincided in a tragic manner with the defense transformation already under way.

The confluence of these transformational factors—the president's sense of the new strategic landscape, the mandate for change from the 2001 review, and the shock of 9/11—galvanized the forces of change. In the midst of these coalescing events, the secretary of defense initiated the Global Defense Posture Review, a comprehensive, strategy-based reassessment of the size, location, types, and capabilities of our forward military forces. We surveyed the new strategic landscape and developed a global posture strategy that hinged upon achieving geopolitically sound relationships and a disposition of relevant capabilities forward to contend with uncertainty. This strategy was developed through a wide range of consultations—with policy makers and military leaders throughout the department, within the interagency realm, and with defense intellectuals. The secretary then turned to his combatant commanders* to devise specific proposals for posture changes to implement the strategy. This ensured that what seemed strategically sound could be made operationally feasible. The development of these proposals largely revolved around three general areas of realignment:

- Adjusting our presence in Europe by shifting away from legacy Cold War structures
- Reforming our posture in the Pacific, with increased emphasis on key capabilities to assure allies more effectively, dissuade potential competitors, deter aggressors, and defeat adversaries if called upon to do so
- Developing the operational flexibility and diversity in options needed to contend with uncertainty in the "arc of instability"—the vast region from North Africa across the Middle East and South Asia to Southeast Asia.

In 2002, the president confirmed the change of direction in defense planning in the *National Security Strategy of the United States:* "To contend with uncertainty and to meet the many security challenges we face, the United States will require bases and

* The combatant commanders, who report through the chairman of the Joint Chiefs of Staff to the secretary of defense, are currently those of the U.S. Central, European, Joint Forces, Northern, Pacific, Southern, Special Operations, Strategic, and Transportation commands. See www.jcs.mil.

stations within and beyond Western Europe and Northeast Asia, as well as temporary access arrangements for the long-distance deployment of U.S. forces."

The Defense Department's strategy was exported to the U.S. government as a whole, so that the Global Defense Posture Review would not be driven just by military considerations. The Defense Department collaborated closely with its interagency partners—particularly the State Department—from the start. The National Security Council, as the body overseeing posture changes, provided high-level guidance and input. Thus the global defense posture realignment became the strategy of the U.S. government.

The Defense Department also consulted extensively with allies and partners. In November 2003 the president formally announced intensified consultations with allies and partners on the Global Defense Posture Review. Subsequently, senior Defense and State officials held joint consultations in over twenty foreign capitals, many of which are still going on in various forms.

Global Posture Strategy Unveiled

On 16 August 2004, in a culminating point for Defense Department planners, the secretary's new global defense posture strategy, molded by interagency input, was adopted by the president in an announcement of the administration's intention to move forward: "Today I announce a new plan for deploying America's armed forces. . . . The new plan will help us fight and win the wars of the 21st century. It will strengthen our alliances around the world while we build new partnerships to better preserve the peace."

While the global posture strategy does not comprise everything the American defense establishment is doing overseas, its implementation serves as the foundation for changing U.S. defense policy abroad. It is the department's vehicle for translating transformation into relevant and effective defense relationships and capabilities for the emerging security environment. The global defense posture strategy is composed of five key themes, which emerged from the review and the evolving transformational thinking of the department described earlier. These themes now serve as the measures of effectiveness for global posture changes.

Improve Flexibility to Contend with Uncertainty. Much of our existing overseas posture was established during the Cold War, when we thought we knew where we would have to fight. Today, however, we often have to deploy to places that few people, if anyone, would have predicted. Thus, we should plan in ways that mitigate surprise. Our goal is to have forces positioned forward on a continual basis, with access and facilities that enable them to reach any potential crisis spot quickly.

Strengthen Allied Roles and Build New Partnerships. Changes to our global posture aim to help our allies and friends modernize their own forces, strategies, and doctrines. We are exploring ways in which we can enhance our collective defense capabilities, ensuring that our future alliances and partnerships are capable, affordable, sustainable, and relevant. At the same time, we seek to tailor our military's overseas "footprint" to suit local conditions, reduce friction with host nations, and respect local sensitivities. A critical precept in our global posture planning is that the United States will place forces only where those forces are wanted and welcomed by the host government and populace.

Create the Capacity to Act Both within and across Regions. During the Cold War, we focused on threats to specific regions and tailored our military presence to those regions. Now we are dealing with security challenges that are global in nature, relationships that must address those challenges accordingly (e.g., Japan's involvement in Operation IRAQI FREEDOM, or NATO's involvement through the International Security Assistance Force in Afghanistan), and defense capabilities that must be global in reach. We need to improve our ability to project power from one region to another and to manage forces on a global basis.

Develop Rapidly Deployable Capabilities. We no longer expect to have to fight in place. Our forces need to be able to move smoothly into, through, and out of host nations. This puts a premium on establishing flexible legal and support arrangements with our allies and partners. It also strengthens the demand for capabilities that provide increasingly global reach, such as the Army's Stryker brigade combat teams, the worldwide disposition of key prepositioned materials and equipment, and improvements to global en route infrastructure and strategic lift.

Focus on Effective Military Capabilities—Not Numbers of Personnel, Units, or Equipment. Our key purpose is to push relevant capabilities forward—capability being defined as the ability to achieve desired effects under certain standards and conditions. We now can have far greater capabilities forward than in the past, even with smaller permanently stationed forces. The Cold War practice of "bean counting" numbers of personnel in administrative regions is no longer the case. Capabilities matter, not numbers.

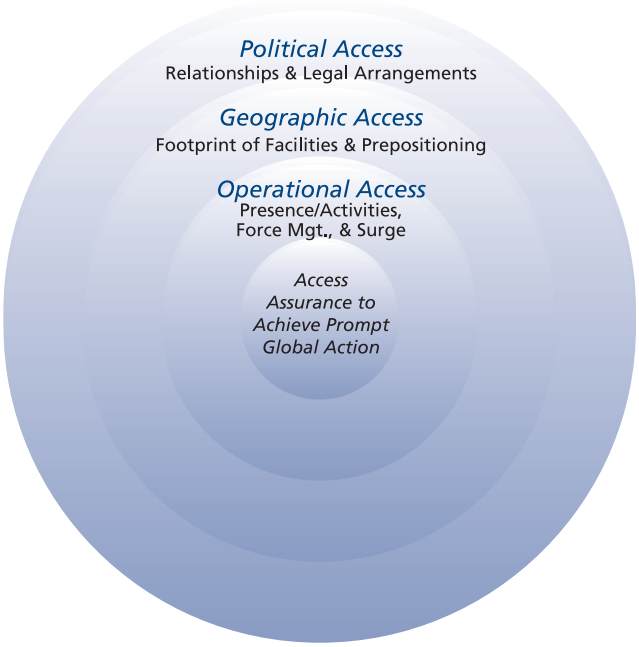
A Complex Undertaking

The implementation process for realigning our global defense posture is an enormously complex undertaking. These changes are not happening in a static environment. Global posture is a dynamic, rolling process that incorporates the transformational mind-set described earlier—continuously assessing the geopolitical environment, incorporating new ideas into the strategy, and making adjustments as necessary.

The key to understanding this dynamic undertaking is the recognition that global posture is not monolithic—not just a matter of the physical military footprint of bases and personnel overseas. It includes:

- Our *relationships* with host nations
- The *presence* of activities overseas
- The *legal arrangements* needed to support that presence
- Our *capacity* to surge forces
- Our *prepositioned equipment*
- The *global sourcing* (or "force management") needed to meet competing demands.

The interrelationship among these posture elements is akin to an ecosystem. This "ecosystem" (see figure) is defined by interdependent layers of political, geographic, and operational access that enable security cooperation and prompt global military action when needed. Changes on one level can have secondary and tertiary effects on others. For example, changes in the legal arrangements (an element of political access) that we have with one host nation can affect our freedom of action (geographic access) throughout a theater and, consequently, our ability to push relevant capabilities forward for operations. Achieving and sustaining good political access through our



relationships with host-nation partners ensures the desired geographic access and, subsequently, the desired operational access to rotate forces in theater for security cooperation activities or to surge forces when needed in support of contingency operations. The challenge for global posture, which is akin to adjusting that ecosystem deliberately, is in striking the right balance between our relationships and capabilities overseas on the one hand and the dynamics of the complex and changing security environment on the other.

Each of these layers of access deserves a closer look.

Political Access

Building and sustaining the political access—that is, the will of host-nation allies and partners to support U.S. military action when needed—requires two posture elements: relationships and legal arrangements. Our ability to act around the world is supported by key security relationships with allies and partners. These relationships involve interactions at all levels—from heads of state to students studying together in the schoolhouses that we and our allies provide. Changes in global posture seek both to strengthen our existing relationships and to help cultivate new relationships founded upon common security interests and common values. These are critical to enhancing allied and partner military capabilities in key areas, such as counterterrorism.

The set of bilateral and multilateral legal arrangements pertaining to our military personnel and activities worldwide constitutes the formal framework for our military presence, access, and activities in other countries. It defines the rights and obligations of the parties, sets the terms for military access and activities, and provides protections for American personnel. Some of our planned posture changes require a foundation of new and more flexible legal arrangements. Our new legal arrangements tend to be more concise than the elaborate arrangements we entered into after World War II, addressing only key things the United States needs for an expeditionary (rather than permanent) presence. These include operational flexibility, training, logistics, financial arrangements, and status coverage for our forces. Critical to our success in this effort has been close collaboration by the State and Defense departments to develop a solid interagency team and a good diplomatic structure for consultations and negotiations.

Geographic Access

Geographic access means having the necessary en route infrastructure to maintain our freedom of action globally; in posture planning it requires considerable versatility in overseas facilities where our forces live, train, and operate. The realignment of our global defense posture combines a network of traditional and new facilities to enhance our capacity for prompt global action. This network consists of three types of facilities—*main operating bases* (MOBs), *forward operating sites* (FOSs), and *cooperative security locations* (CSLs).

Main operating bases, with permanently stationed combat forces, have robust infrastructures such as family support facilities and strengthened arrangements for force protection. Examples include Ramstein Air Base in Germany, Kadena Air Base in Okinawa, and Camp Humphreys in Korea. We are retaining and consolidating many of our MOBs in Germany, Italy, the United Kingdom, Japan, Korea, and elsewhere. We also rely heavily on forward operating sites, expandable "warm facilities" maintained with a limited U.S. military support presence, and, possibly, prepositioned equipment. Greater use of prepositioned equipment, strategically located and globally managed, will support training with our allies and partners and facilitate the rapid deployment of forces where and when they are needed. FOSs largely support rotational rather than permanently stationed forces and are focuses for bilateral and regional training. Examples include the Sembawang port facility in Singapore and Soto Cano Air Base in Honduras.

We also will need access to a broader range of facilities with little or no permanent American presence. Relying instead on periodic service, contractor, or host-nation support, cooperative security locations provide contingency access and serve as focal points for security cooperation activities. A good example is Dakar, Senegal, where the Air Force has negotiated contingency landing, logistics, and fuel contracting arrangements, and which served as a staging area for the 2003 peace operation in Liberia. A June 2005 *Atlantic Monthly* article by Robert Kaplan discusses presence in the Pacific in a way that captures the idea behind CSLs:

> We will want unobtrusive bases that benefit the host country much more obviously than they benefit us. Allowing us the use of such a base would ramp up power from a country rather than humiliating it. . . . Often the key role in managing a CSL is played by a private contractor[,] . . . [u]sually a retired American noncom. . . . He rents his facilities at the base from the host country military, and then charges a fee to the U.S. Air Force pilots transiting the base. Officially he is in business for himself, which the host country likes because it can then claim it is not really working with the American military. . . . [T]he very fact that a relationship with the U.S. armed forces is indirect rather than direct eases tensions.

Operational Access

Finally, operational access comprises the presence, global management, and surging of our forces overseas, all enabled by the political and geographic access we enjoy with host-nation partners. Presence is defined by the permanent and rotational forces that conduct military activities (training, exercises, and operations) worldwide, from security cooperation to crisis response. That presence consists of both small units working together in a wide range of capacities and major formations conducting elaborate exercises to achieve proficiency in multinational operations. Second, our posture supports our new approach to force management, which seeks both to relieve stresses on our military forces and their families and to manage our forces on a global, rather than regional, basis. Combatant commanders no longer "own" forces in their theaters; rather, forces are managed

according to global priorities. Third, managing our military forces globally also allows us to surge a greater percentage of the force wherever and whenever necessary.

Tempo of Global Posture Changes

There is another dimension of global posture that underscores its multidimensional nature: the cycle of interdependent processes at work in the Defense Department—a cycle that sets the pace for posture changes, including institutional transformation within the services, the U.S. government's deliberations with host-nation partners, and the Base Closure and Realignment (known as BRAC) process. Global posture's flexible, rolling decision-making process must ebb and flow with these three processes.

Specifically, the process of consultations and negotiations with allies and partners establishes a tempo for bringing American forces home. Over the next ten years, from sixty to seventy thousand military personnel (along with approximately a hundred thousand family members and civilian employees) are to return to the United States from overseas installations. This realignment will also entail a net reduction of approximately 35 percent in our overseas facilities.

The pace for these changes is set through a deliberative diplomatic process with current and potential host-nation partners in which we achieve common understandings of the security environment, develop plans that ensure mutual benefits and reliable defense commitments, and work to reduce any frictions attending upon the U.S. military presence. Multiple variables in negotiations—such as host-nation stability and sensitivity to American presence, security challenges in the region, and existing levels of host-nation infrastructure and cost sharing—are weighed across a diverse range of countries and regions.

U.S. forces that relocate as a result of this diplomatic process will be affected by the absorptive capacity of service transformation efforts and by BRAC. The planned posture changes directly support service initiatives—such as the Army's modularity and unit rotation concepts, the Navy's Fleet Response Plan, and the Air Force's ongoing force management improvements—designed to facilitate personnel management, provide predictability in scheduling, and offer more stability at home. Returning forces meet the services' need to refit their units for increased modularity. These transformed units then provide the combat power for prosecuting operations in the Global War on Terror, including Operations IRAQI FREEDOM and ENDURING FREEDOM. Of course, the absorptive capacity of returning units is also directly impacted by BRAC, which sets the pace for reconstitution of those forces in the continental United States.

Thus, a symbiotic relationship exists among global posture consultations/negotiations overseas, service transformation, and BRAC, in which each informs and dictates the pace of the others. Imagine a clock running on three wheels, each wheel's gears

interlocked with the others. Slowing one wheel would slow the entire clockwork, thereby impeding the pace of transformation to support the war on terror and enable our long-term realignment effort.

Region-by-Region Synopsis

Europe

Peace in Europe is no longer threatened by an enemy with tens of thousands of armored vehicles poised to invade across the North German plain. We no longer need heavy maneuver forces as the central element of our defense posture in Europe. A transformed posture—one that supports NATO's own transformation goals—requires forward forces that are rapidly deployable for early entry into conflict well beyond Europe. Such forces will continue to train alongside other NATO forces to improve interoperability for twenty-first-century operations.

There are two basic components to posture changes in Europe: increasing rotational presence toward the south and east of Europe, and pushing the most effective and relevant capabilities forward for expeditionary presence and spurring allied transformation. Our future posture in Europe will be characterized by lighter, more deployable ground capabilities (for example, Stryker and airborne forces). Such ground forces will have leaner command and support structures than they have today. They will rely on existing advanced training facilities (such as in Grafenwoehr, Germany) and high-capacity mobility infrastructure (in Ramstein, Germany, for instance). Special Operations forces will play an increasingly important role in our future European posture. They will be repositioned in the theater for training and operational efficiencies and for ease of movement. Our naval and air capabilities in the theater will remain very robust and will enable rapid movement of forces into, through, and from Europe. They too have already undergone transformations to leaner and more deployable command structures.

The Asia-Pacific

In the Asia-Pacific region, we seek to strengthen our ability to execute the National Defense Strategy and to solidify relationships that can help win the Global War on Terror. We want to improve our ability to meet our alliance commitments by strengthening our deterrent against threats such as that posed by North Korea while helping our allies strengthen their own military capabilities. The forward deployment of additional expeditionary maritime capabilities and long-range strike assets in Alaska, Hawaii, and Guam will increase both our deterrent effect and our capacity for rapid response. In this region—in light of the vast distances that military forces must traverse in crises—deterrence also means increasing our ability to project military forces rapidly and at long ranges, both to the region and within it. Where appropriate, we also will

consolidate our facilities and headquarters for more streamlined command and control and increased jointness. This facilitates a more expeditionary posture, as is the case with the transformation of the U.S. Army's Japan headquarters into a deployable joint task force–capable headquarters. Finally, we seek to reduce the number of American military forces in host nations where those forces abut large urban populations. We will strengthen our relationships by reducing the frictions—accidents, incidents, and the like—associated with normal military activities in urban settings.

In a related initiative, over the past two years we have engaged with our Japanese hosts in a series of sustained security consultations. These talks were aimed at evolving the U.S.-Japan security alliance to reflect today's rapidly changing global security environment. The Defense Posture Review Initiative (DPRI) has focused on alliance transformation at the strategic and operational levels, with particular attention to the posture of U.S. and Japanese forces in Japan. In the DPRI, we have negotiated several important force realignment initiatives designed to relieve stresses in our relationship with Japan while strengthening our deterrence and global flexibility. Among the more significant of these initiatives are the consolidation of carrier jet aircraft based on mainland Japan, and a significant reduction and reorganization of the Marine Corps posture on Okinawa.

Our current ground, air, and naval access throughout the Asia-Pacific region serves as a basis for a long-term presence that will be better structured for more effective regional and global action. For example, the Army's modular transformation will streamline headquarters elements and strengthen joint capabilities. The forward-deployed Air Force Strike ISR (intelligence, surveillance, and reconnaissance) task force in the Pacific will also enable greater regional and global reach. We also are establishing a network of forward operating sites and cooperative security locations to support better the war on terror and to provide multiple avenues of access for contingency operations. Such facilities will serve to expand U.S. and host-nation training opportunities, helping our partners build their own capacities in areas such as counterterrorism.

On the Korean Peninsula, our planned enhancements and realignments are intended to strengthen our overall military effectiveness for the combined defense of the Republic of Korea. Stationed forces are relocating away from the increasing congestion and sprawl of the greater Seoul area and consolidating into two major hubs in the central and southern sections of the country. Rotational and rapidly deployable combat capabilities such as Stryker units and air expeditionary forces will complement these permanently stationed units. We seek to retain a robust prepositioned equipment capability in Korea to support rapid reinforcement.

The Middle East

In the Middle East, we seek to maintain a posture of "presence without permanence"—prosecuting the Global War on Terror and assuring our allies and partners, but without unduly heavy military footprints. Cooperation and access provided by host nations during ENDURING FREEDOM and IRAQI FREEDOM provide us with a solid basis for long-term, cooperative relationships in this region. We seek to maintain or upgrade—and in isolated cases establish—forward operating sites and cooperative security locations for rotational and contingency purposes, along with strategically placed prepositioned equipment and forward command-and-control elements. Our posture also aims to strengthen our capabilities on the peripheries of this region, including in the Horn of Africa and in Central and South Asia. In addition, we continue to identify advanced training opportunities with our regional partners for capacity building in such areas as counterterrorism and for broader military interoperability.

Africa and the Western Hemisphere

Our aims in Africa and the Western Hemisphere are to broaden relationships, build partnership capacity, obtain contingency access, and facilitate practical security cooperation activities, without creation of new bases or permanent military presence.

Ungoverned and undergoverned areas in vast swaths of sub-Saharan Africa and South America can serve as breeding grounds not just for domestic insurgents but for international terrorists and other transnational threats that increasingly find their "home bases" disappearing in other regions. We therefore seek an array of CSLs in these regions for contingency access into remote areas. Often this access will take the form of "gas and go" operations, as has been recent practice as formalized in the Air Force's Africa Fuels Initiative. Such CSLs will not require a permanent combat presence. They will be focal points for combined training with host nations and other allies and partners, and they will have the capacity to expand and contract on the basis of operational needs.

Though much work remains, the realignment of the U.S. global defense posture is well under way, particularly through the ongoing strengthening of American military capabilities in Europe and the Pacific. The 1st Infantry Division has commenced its redeployment from Germany. A brigade from the 2nd Infantry Division in the Republic of Korea will redeploy to the United States upon completion of its rotation in Iraq. In Japan, the DPRI process has resulted in an agreement on specific force posture realignments that will have far-reaching, beneficial impacts for the U.S.-Japanese alliance. Also, the services are undergoing expansive transformation and consolidation of their headquarters structures, the better to support expeditionary operations.

The new U.S. global posture strategy is set to emerge as one of the most far-reaching of the national defense legacies of this administration. It reflects the American commitment to a global insurance policy for an emerging security landscape. Collectively, proposed posture changes provide a framework for our alliance and defense commitments overseas and for harmonizing our forces' skill sets with the shifting uncertainties of that new landscape. Global, geopolitical circumstances will continue to change, our relationships with allies and partners will evolve, and our capabilities will mature. Well beyond the tenure of this administration, our new global defense posture will provide a foundation upon which the U.S. military and its supporting defense establishment can build adaptively for decades to come.

CHAPTER THREE

Politics and Diplomacy of the Global Defense Posture Review

LINCOLN P. BLOOMFIELD, JR.

When historians look back on the Defense Department's biggest undertakings during its first six decades of existence, they will of course cite the prosecution of wars both hot and cold, the fielding of powerful and complex weapons systems, and the promulgation of defense and security strategies to prepare for and deter threats to the national interest. Rarely to be found among these major tasks will be any large-scale updating, streamlining, or reconfiguration of an organizational empire that includes well over two million soldiers and civilians, approximately five thousand facilities spread all over the country and the world, and an annual budget now surpassing $400 billion. The Global Defense Posture Review (GDPR) is such an undertaking.

At the same time, this massive exercise in managerial housekeeping by the secretary of defense cannot be viewed exclusively as one cabinet executive's effort to make more productive use of the people, assets, and funding allotted to his department. For all the calculations of greater efficiency and utility that commend the idea of reconfiguring America's global military footprint, this initiative is inescapably, indeed overwhelmingly, political in terms of its effect on the rest of the world. To think otherwise would be to overlook the belief, resident in allied populations in more than fifty countries by latest count, that America is committed—via the North Atlantic Treaty, the Rio Treaty, and bilateral security treaties with Japan, Korea, the Philippines, Thailand, and Australia—to come to their defense in extremis.

These are national commitments, solemnly made, and the sight of U.S. armed forces standing the watch in almost every latitude and time zone has calmed regional rivalries and dissuaded armed escalations for sixty years. A global posture realignment that involves moving large numbers of those sentries and their weapons inevitably begs the most urgent of security questions, excites foreign anxieties in many quarters, and therefore runs the risk, depending on how the matter is handled, of perturbing the very stability that America's global military presence is meant to ensure.

An Ambitious Concept

The idea that U.S. military force units, their equipment, their facilities, and their support structure should be physically positioned according to the logic of global geography is very appealing. Conceptually, an efficiently designed, globally managed force posture would optimize the flow of combat power along sea, air, and land routes from one region to the next, directly to the point of engagement, without overly taxing the system. Such a concept would best allow future presidents to position viable military options to employ anywhere in response to a sudden danger on the shortest of notice, even when the nature and location of the crisis had not been foreseen.

Of all of Donald Rumsfeld's actions during his headline-filled second tenure as secretary of defense, his determination to rethink, redesign, and reposition the U.S. military's posture at home and abroad according to a rational design reflecting contemporary security conditions should stand as a positive mark in his legacy. That Mr. Rumsfeld took on this monumental management task, braving the predictable resistance of settled constituencies from one end of the globe to the other, is noteworthy; certainly none of his predecessors seriously attempted it. That he did it during wartime is extraordinary. Over the long term, a well-executed streamlining of the U.S. global defense posture could profit the nation's security, if not in monetary terms certainly in the ability of a finite force structure to deliver the maximum military benefit through the greater efficiencies and capabilities of the new global posture.

Big Change, Big Decision: Getting to "Yes"

What with the profound implications of a posture change for allied countries hosting U.S. forces and the state of America's diplomatic relations with them, the decision to embark on a global realignment was the president's to make, and it embodied major foreign policy equities. The Department of State, and the allied governments themselves, would inevitably make their voices heard before the Department of Defense's new scheme based on geographic convenience and logistical efficiency could supplant longstanding basing patterns in foreign localities.

One could well imagine the Pentagon's potential misgivings about placing this hugely ambitious venture at the mercy of other departments, never mind foreign policy bureaucrats, whose reaction to any disturbance of the diplomatic status quo might be expected to be one of resistance to change, indeed opposition, even to discussing prospective force reductions with allied countries. The concern was not imaginary; there were indeed some in the State Department who wanted nothing more than for the initiative to go away and who feared damage to alliances if it went forward.

On the other hand, concerns in the State Department that some Department of Defense (DoD) officials, by their manner, might aggravate rather than defuse foreign anxieties were also not entirely misplaced. In at least one country DoD doggedly sought to announce and implement a drawdown of military assets against that ally's wishes and with an evident relish that required diplomatic damage control and led the president to withhold to himself the withdrawal decision. Within the U.S. policy bureaucracy as a whole, there were varying perceptions about whether the advertised merits of particular changes under the Global Defense Posture Review would indeed redound to the long-term security benefit of the United States; such concerns were not limited to experienced regional specialists in the State Department.

Since this large, difficult project was not driven by exigencies of current military operations, there was also a temptation, whenever the issue was raised within senior interagency circles, to ask "Why now?" and put it off for another day. What finally forced the issue was the link between prospective overseas withdrawals of military assets and units and the planned round of the Base Closure and Realignment (BRAC) Commission, which developed a final list of recommended domestic base closures during 2005. Many in Congress, understandably fearful of losing home-district bases under BRAC, had told the administration not to start that process until it had first scrubbed the overseas basing system for other ways to streamline the global footprint. By mid-2003, time was running short if GDPR decisions were to be in hand for the BRAC analytical work that was to commence in early 2004.

By the fall of 2003, with the DoD worldwide realignment plan finally ready for top-level interagency consideration, Secretary of State Colin Powell understood DoD's concern that the initiative could be subjected to death by a thousand cuts. When the principals finally engaged at the White House, Secretary Rumsfeld rolled out his map, articulated his concept, and asked his aides to brief the rationale for this transformational initiative, emphasizing the need to move past a World War II–era basing structure. Other agencies offered their comments, and when they had finished, all eyes turned to the secretary of state.

Secretary Powell said he thought the briefing had misstated the facts about European bases being obsolete because of their relevance to World War II. A few hearts stopped, and silence pervaded the room. The secretary continued, deadpan, that in some locations—including German facilities under his command in the 1980s—the bases dated all the way back to the Franco-Prussian War. His point was effectively made—*of course* we needed to update and rationalize our force posture. With that pithy intervention by Secretary Powell, the administration found itself in consensus that the GDPR was timely, worthy, and deserving of priority support subject to the president's approval.

Secretary Powell pledged his and the State Department's support and assistance to the Global Defense Posture Review under one condition, one that won quick endorsement from DoD and the interagency realm—that this initiative had to be conducted in full consultation with affected governments around the world. It must not be a fait accompli imposed on allies from Washington. From there the issue went to the president, who approved it to proceed to public rollout and consultation with other governments. Specific force posture changes would require presidential approval at a later stage.

Rolling Out the Initiative

On 25 November 2003, the White House released President George Bush's statement announcing the new initiative, which said in part: "Beginning today, the United States will intensify our consultations with the Congress and our friends, allies, and partners overseas on our ongoing review of our overseas force posture." The words were carefully chosen; none of the recommended changes in overseas American presence was yet decided. From the president's perspective, this review was "ongoing," and consultations were to be integral to his decision process.

Secretaries Powell and Rumsfeld launched diplomatic consultations on the GDPR at the December 2003 NATO ministerial meetings. This was followed within days by a joint appearance at the North Atlantic Council by Under Secretary of State for Political Affairs Marc Grossman and Under Secretary of Defense for Policy Douglas Feith, following which these two officials, backed by respective interagency delegations, split up and barnstormed a total of twelve European capitals. In March 2004 Under Secretary Feith led a delegation (including the author) that briefed this initiative in Beijing, Canberra, and Singapore, while the author made a side trip to Manila for the same purpose.

Major allies Japan and Korea, already undergoing very careful, comprehensive posture reviews on a bilateral basis, were of course part of the GDPR picture; however, as the host governments in each case were deeply involved in discussions about potential adjustments, there was no requirement for a special briefing to either. High-level administration visitors to Asian capitals, such as Deputy Secretary of State Richard Armitage, who visited Canberra, Beijing, and Tokyo during the winter of 2003–2004, readily responded to public and official queries about GDPR. Deputy Secretary Armitage was able to calm negative foreign press speculation by, for example, assuring the Australian public that the United States did not seek to base combat units in Australia.

This is not to say, however, that all these consultations in Europe and Asia divulged specifics on planned movements and locations of units, closure of facilities, or timetables; in fact, none of this was included in the initial briefings. Instead, the approach was to explain the merits of rationalizing the global U.S. military network so as to reflect

the considerable changes over several decades in the way American soldiers, platforms, and technologies now operated. Persuading allies that military operations had evolved over time was not difficult. The recent examples of relatively lean forces dislodging the Taliban regime from Kabul and then the Saddam Hussein regime from Baghdad spoke volumes about conceptual leaps forward in the military arts by the United States since World War II, indeed since Vietnam.

As this was truly a global initiative, the administration provided briefing points for ambassadors to scores of countries, and the State Department's regional assistant secretaries for Near East, South Asia, Africa, and Latin America, respectively, carried to those regions the message that others had already given to Europe and Asia. Every geographic combatant commander's area of responsibility was slated to experience change.

Overall, allies and non-allies alike responded positively to the notion of a comprehensive review and streamlining of the U.S. global defense posture. Countries hosting U.S. forces were intensely interested in whether Washington planned to withdraw significant units or assets. The answer, while not discussed initially, could be deduced from American rhetorical references to the undesirability of maintaining "static, legacy forces" in Europe whose only purpose was to defend against an invading Soviet and Warsaw Pact army from the east—an army that now, mercifully, was no longer coming. Allies understood that the United States would be investing in agile, mobile forces, particular units of which could be deployed in modular form as part of a force tailored to specific missions or tasks.

In a number of capitals, including Berlin, the main concern was whether U.S. posture changes would be managed in full coordination with planned facility closures. As it happened, many allied governments were looking at their own military requirements and facilities and were contemplating streamlining initiatives of their own. The fact that several defense ministries were doing much the same thing as the Pentagon provided further validation of the overall American approach.

As the mid-May deadline for DoD's initial recommendations to the BRAC panel approached in the spring of 2004, the administration sent State-DoD delegations (led by the author) back to the United Kingdom, Italy, Germany, Spain, Turkey, Russia, and other European states, as well as to prospective sites of new facilities being arranged in the Caucasus and Central Asia. At these meetings, the more significant specific elements of DoD's proposed posture changes were explicitly addressed. Without question, there were political sensitivities in some places about closures and departures. In other places, where the United States hoped to consolidate larger presences or increase its use of facilities, there were local political sensitivities as well. In all cases, the administration

took pains to emphasize that long-range planning was the driving logic, not short-term pique with some allies over Iraq.

On 16 August 2004, President Bush, in a speech before a VFW convention in Cincinnati, announced plans to bring home "about 60,000 to 70,000 uniformed personnel, and about 100,000 . . . family members and civilian employees" from overseas bases over the following ten years. Interagency officials, including the author, provided background briefings to the Pentagon press corps, the international press corps, and defense experts regularly seen on network and cable television. The president's public endorsement of these goals signaled that he was satisfied that allies had been briefed on the purposes of the initiative and the changes it would bring over time.

Deeper Political Questions Raised by the GDPR

To have consulted allies about the nature and scope of the initiative and the long-term reasons for it certainly blunted the negative reaction that could otherwise have greeted this endeavor. It did not, however, altogether address to the satisfaction of America's many allies and partners deeper questions about what these changes might signify for U.S. security policy. Putting to rest some of these questions will take time, and it will require the example of American actions tested by events.

Will smaller U.S. forces stationed abroad mean a lessened American commitment to defend allies? The concern arose in Europe, where the majority of force reductions were proposed. While European officials and press correspondents did not dispute the strategic reality that the threat of military aggression against them had passed with the collapse of the Soviet Union and Warsaw Pact, some wondered why U.S. forces that were enjoying substantial host-nation support in first-rate facilities and had not been subjected to constraints in deploying for missions elsewhere should be relocated. What was it, they asked, that would cause Washington to spend, in all likelihood, considerable money to relocate units to the United States after decades of welcome in host nations, when such a move would lengthen the distances to trouble spots in the Middle East and beyond?

Some assumed that such a move had to be driven by unhappiness in Washington with what Secretary of Defense Rumsfeld had famously termed "the old Europe." Nor was such speculation dampened by DoD's plans under the GDPR to create new training hubs farther to the east, in the territory of new and strongly pro-U.S. allies such as Bulgaria or Romania, since these latter countries lacked the financial wherewithal to provide host-nation support on any comparable scale. This European perception had to be addressed, but an arguably deeper perceptual challenge lay in Asia. There the Pentagon had for years maintained a declarative security posture defined by a promise to

maintain a hundred thousand American troops as the embodiment of commitment to the stability of the region and the defense of five treaty allies.

Central to the new initiative was the idea that capability and commitment could no longer, and should no longer, be measured in numbers. It was not intuitively obvious to a nonmilitary audience in Asia that, for example, anticipated reductions of forces permanently stationed in the Republic of Korea would coincide with an actual strengthening of the potential combat power the United States could bring to bear against North Korea (or the Democratic People's Republic of Korea, the DPRK). As South Korean newspapers wondered aloud whether Washington was reducing its security commitment to their country, the North certainly grasped that the United States was increasing its precision-strike power around the Korean Peninsula while reducing its own forces' exposure to DPRK firepower amassed just north of the Demilitarized Zone, and it denounced the American reconfiguration. If potential adversaries were quick to recognize the military advantages to the United States of the planned new force posture, the larger Asian audience could not be made to think differently overnight. America's role as the essential stabilizing force in Asia had long encouraged the region to equate numerical presence with commitment and capability.

To overcome lingering doubts in Europe and Asia, the United States will have to demonstrate its commitment to the role of ultimate security guarantor through its actions over several years as the GDPR posture changes are implemented.

Is the United States devaluing alliances in general, and NATO in particular, as the mechanism of choice for addressing security issues, in favor of a unilateral or "coalition of the willing" approach? The logic of the Global Defense Posture Review is consistent with the *National Security Strategy* (NSS) promulgated in September 2002. This document described the changing threats of the new century, underlining the imperative that defenses be raised against the combination of extremist ideology and destructive technology. Terrorists seeking access to weapons of mass destruction were the new priority concern, with their ability to evade detection and strike almost anywhere without warning. The NSS stated that "as a matter of common sense and self-defense, America will act against such emerging threats before they are fully formed."

In Washington, there was little serious resistance to the notion that the transnational terrorism threat required a faster, more agile defense, able to respond to intelligence warnings in minutes or hours rather than weeks or months. But the idea that the United States would reserve the right to act preemptively or preventively in response to such threats, however sensible an idea to many American security experts, created a backlash overseas. The concern was that the United States might be asserting an unbounded prerogative to use force without respecting traditional norms—that is, that

force be a last resort, that it be employed consistently with recognized precedent under international law, and that it be employed preferably with the support of other states, ideally under an explicit alliance or United Nations mandate. International disagreement surrounding the U.S. decision to launch Operation IRAQI FREEDOM in 2003 further stimulated concern in some capitals about the evolving role of U.S. military power.

Even as NATO was undergoing a second round of expansion, the administration understood that questions hung over the future of transatlantic security cooperation. To American policy makers, the need for a capacity to stop a deadly terror attack through preemptive action seemed unarguable; indeed, allies readily acknowledged the wisdom of having the military capability to prevent another 9/11-type attack, if the intelligence warning time permitted such action. With the spotlight so much on the changing U.S. security policy, the question of whether America's allies were rethinking their own policies did not enter the transnational discussion.

The reality for most European members of NATO was and is that they are, by law and policy, bound by twentieth-century norms regarding the authority to commit military forces to hostilities. These norms are centered around the exercise of proper authority, as manifested by a formal mandate from NATO, the European Union (EU), or the UN, or in the absence of multilateral authorization, a parliamentary vote (which may require more than a simple majority). All of these processes, while conferring unquestionable legitimacy on the use of force, do not account for the scenario of a potentially imminent and deadly terrorist act. Were intelligence to indicate that a terror group might be commencing a major attack operation, it is entirely possible that an effective military interdiction could not wait for a NATO, EU, or UN mandate or for parliamentary authorization.

This is a gap that, as of this writing in 2005, continues to separate U.S. and allied European security doctrines.[1] There remains much room for useful introspection within NATO on the alliance's ability to act against the most likely and deadly contemporary security threats on its territory. That said, the question generated within the NATO alliance by the GDPR initiative was not whether European constitutions would need to be revised to make it easier for their militaries to join in preemptive actions against terrorism. Rather, the primary political dynamic was whether Washington was shifting its reliance away from formal alliance structures in favor of ad hoc "coalitions of the willing." In this atmosphere, allies looked for signs of American disaffection with the arrangements that had secured the peace in Europe for half a century.

As the Pentagon readied plans to pull heavy forces from Europe and reposition quick, expeditionary forces close to jump-off points along major Mediterranean transport routes, senior DoD officials emphasized the "usability" of American forces stationed

abroad, referring to political constraints that host countries might place on them in a crisis. The Defense Department's aversion to such constraints was understandable; its rhetoric seemed to equate freedom of action with the degree of "welcome" being extended to forces. "We want to have our forces where people want them. We have no desire to be where we're not wanted," said Secretary Rumsfeld in Singapore on 5 June 2004. There was no misunderstanding the message—host countries that would impose nettlesome constraints on the out-of-country deployability of U.S. forces should not expect to be significant hubs in the new American defense posture.

As the GDPR moves toward the implementation phase, it will serve the United States and its traditional allies best if the sides come to a mutual understanding on how to meet the needs of all. European governments will do well to revisit their ability to act immediately on time-sensitive intelligence, even when there is no formal mandate from NATO, the UN, the EU or their parliaments. The United States will do well to work out with allied governments modalities to satisfy host countries' legitimate needs for information and consent, regardless of the urgency, as American military power is staged from their territories in future crises.

Is the United States moving its military power farther "east" from Western Europe, using its closer relationships with NATO's new members and countries in the Caucasus and Central Asia as a check on Russian influence? Russia's perception of the GDPR was understood from the beginning of policy-level interagency deliberations as deserving special attention. Interest on the U.S. side in promoting military-to-military contact with America's newest NATO allies among the former Warsaw Pact states was natural, especially given an ongoing combat operation in Afghanistan that involved a substantial flow of U.S. forces and supplies through Central Asian bases. Nonetheless, some Russian government officials found it convenient to paint these activities in a sinister light—in their parlance, as an effort to encircle Russia within its own traditional sphere of influence.

The reality was the very opposite—after half a century of posturing military force for a conventional war against the Soviet army, the threat of such a war was gone. The U.S. European Command was enthusiastically turning the page with Russia, holding some thirty military exercise activities per year with its former foes. The only conclusion one could draw from the heavy force reductions, base closures, and consolidations in Western Europe was that the United States no longer perceived a need for such combat power to defend Europe. In fact, Washington had shifted its threat focus away from continental Europe and Russia, toward destinations farther to the south and east.

Washington officials recognized that dark fulminations by some government and Duma figures about the GDPR may have had more to do with Moscow politics than

any objective reading of strategic developments. Nevertheless, the administration in June 2004 sent State and DoD officials, including the author and Deputy Assistant Secretary of Defense for Strategy Andrew Hoehn, to Moscow to brief Russia's deputy foreign minister, national security adviser, and other officials on the initiative.

This briefing was received cordially; it became evident, however, that Russian officials would be quite concerned about the stationing of U.S. forces in certain sensitive areas proximate to Russia's borders, not least because such moves would be taken as validating the view that encirclement and containment of Russia was the American purpose. Andrew Hoehn, as Secretary Rumsfeld's point person on the GDPR project, gave authoritative responses to specific questions, often with straight "yes or no" answers, and thus went far to advance Moscow's understanding that the GDPR was not aimed at Russia.

Further, the administration has publicly and privately made clear its adherence to existing conventional arms control commitments, starting with the NATO-Russia Founding Act of 1997, which contained specific measures to ensure that NATO and Russian militaries would no longer be postured as mutual adversaries and could build relationships of partnership. Additionally, the United States pledged to maintain its commitments under the Agreement on Adaptation of the Treaty on Conventional Armed Forces in Europe (the so-called Amended CFE). This instrument referred to mutual American and Russian numerical restraints in troop and equipment deployments within each state of the NATO alliance and the former Warsaw Pact, and to a requirement for the consent of the host country to any such deployments. The Amended CFE, agreed at the November 1999 Istanbul Summit of the Organization for Security and Co-operation in Europe, requires Russian withdrawals from Georgia (some of which have occurred as of 2005) and Moldova in order for its terms to become binding upon the United States. The American commitment to adhere to the Amended CFE, despite being conditional on Russian compliance that remains incomplete, was and is firm.

These policies further reassured Moscow that while the United States will need the infrastructure to train with its new NATO allies and to transit friendly states farther to the east and southeast en route to the Middle East and Afghanistan, it does not seek to base combat forces on Russia's strategically sensitive periphery. Given the continued American interest in the security of energy supplies from the Caucasus and the Persian Gulf, Iran's nuclear activities, and Afghanistan's emergence as a democracy, Russia will see regular U.S. military presence and engagement in nearby areas. Even so, the new posture is solidly based on the premise that Russia is no longer an adversary of the United States; one hopes this will be Moscow's understanding as well.

How can allies view their host-nation support to U.S. troops and equipment that may have duties outside their territory as integral parts of a "global" force? Early in his tenure, Secretary Rumsfeld promulgated the notion that no geographic commander "owns" any military forces—all American forces belong to the president. This position is consistent with the GDPR's central operating principle that the twenty-first-century U.S. military will be more productive against more threats if it is managed globally. Capabilities brought to bear against any adversary can be, and are today, drawn from whatever location represents the optimal use of the asset at the time.

This concept, reflecting as it does an important new reality about information technology and advances in logistics management, is also a sharp departure from the declaratory policy and supporting logic that has underpinned the American overseas defense posture in Europe and Asia for fifty years. The combatant commands are able to adapt to change when guidance from the civilian chain of command so directs, and the globally managed force can become a functional reality rather quickly. However, the political impact on foreign partners is complex, important, and not to be overlooked.

Very simply, for decades the presence of American "boots on the ground" was the physical manifestation of the defense commitment extended by the United States to NATO, Japan, South Korea, and other countries in Europe and the Pacific Rim. In recent years, the Pentagon has issued an annual East Asia strategy document formalizing security guarantees through the maintenance of a military presence in Asia numbering a hundred thousand troops. After the 1991 Gulf War, "one hundred thousand" also became the benchmark number for fulfilling America's enduring security commitment to its transatlantic allies. Can the "coin of the realm" of the U.S. security commitment be changed? The answer has to be yes, since what allies in Europe and Asia need most from the United States is credible, available combat power to deter and, if necessary, defeat those who threaten them. Were it to freeze in place obsolescent patterns of basing and employing units, the United States would court higher risks.

Still, a major change in defense doctrine and practice requires a significant public diplomacy effort if it is to be accepted abroad. European and Asian foreign-policy experts, journalists, and officials need to be not simply told but persuaded that America's commitments to them, and capabilities to fulfill those commitments, are no longer usefully measured by numbers of troops. The foreign press has focused on troops scheduled to be pulled back to U.S. bases or consolidated in other locales. There remains a need for allies, particularly in Asia, to have a clear and compelling vision of how the new global defense posture—embracing U.S. forces outside as well as within their borders—will ensure their security as before. Precision strike, mobility, and stealth, among other advances, make possible this assurance.

As if persuading allied governments and public opinion of the advantages of the new posture to their own security were not challenging enough, there is a second dimension that will have to be managed, namely the monetary and in-kind contributions to the U.S. presence by host governments. Japan and South Korea, for example, each provides substantial host-nation support in amounts that are painstakingly negotiated on a regular basis, and such arrangements are taken by the U.S. Congress as a critical bellwether of the health and strength of these alliance relationships. A reduction in stationed U.S. forces begs the question of whether host-nation support should be reduced in some like proportion. The Pentagon's (correct) answer will be that the American security commitment and warfighting plans draw more on U.S. assets outside the host's territory than ever before, and hence that there would no diminution of American security support meriting a reduction in host-nation support. Yet under the GDPR, American forces—even those stationed within an ally's territory, enjoying host-nation support—are considered available for duty anywhere. It remains to be seen whether allied governments and legislatures are prepared to continue their funding at previous levels once the size of the American force stationed on their respective territories declines.[2]

What Security Conclusions Should Allies Draw from the GDPR?

The foregoing touches on political issues that have meant a great deal to the fabric of international stability since the middle of the twentieth century. The questions and concerns from allied countries hearing of prospective large changes involving U.S. troops on their territory had common themes: "Will America still defend us?" "Is Washington still committed to our alliance as the primary instrument of security?" "Is the new American posture aimed at hemming in Russia, or perhaps China?" "Should we continue to provide so much financial support in hosting the residual U.S. presence once reductions are carried out?" To list these questions is to appreciate the sensitivity of the changes involved.

One question that was not made explicit is nonetheless perhaps the most consequential issue on the minds of allies as they contemplate the picture of a more nimble, agile, globally managed U.S. military establishment: "Where do we fit in?"

The pronouncements of Secretary Rumsfeld and other top Defense Department officials focus, quite naturally, on getting forces to the fight—wherever that may be—and doing so fast enough to allow them to succeed in their missions. The threat of terrorism potentially involving weapons of mass destruction has placed a premium on speedy response to intelligence information.

Just two years prior to 9/11, the United States engaged in combat operations within the very structured organizational framework of the NATO alliance. For some in the Bush

administration when it first took office, Operation ALLIED FORCE in Kosovo—like the broad international coalition approach President George H. W. Bush had pursued with DESERT STORM in 1991—represented an example of how *not* to respond to the new threat. The new thinking was that seeking to form coalitions would signal that the United States lacked confidence that it had the right to use force on its own, unilaterally. After 9/11 the point was made repeatedly by DoD officials in the interagency arena that the nation, having been attacked, had all the authority it needed to conduct whatever military operations it saw fit to undertake.

The message to the State Department was to resist its allegedly habitual impulse to look for allies to plug into the war effort as American forces began staging toward the Afghanistan theater. Due to interagency paralysis on this point, allied offers of assistance after 9/11 were acknowledged very belatedly. Only after the need arose to stabilize Afghanistan and then Iraq following the takedowns of the Taliban and Saddam Hussein regimes did the Pentagon's senior leadership exhibit an interest in coalitions beyond the core British and Australian allies and very capable units from a few other countries. So it was that as the GDPR was rolled out in 2003, to a backdrop of admonitions from Washington about the "usability" of American forces stationed abroad, allies could be forgiven for wondering what exactly they were expected to do in a future crisis other than sit tight and allow their facilities, territory, airspace, and waters to be plied at will by the United States.

Since U.S. forces remain on foreign bases at the invitation of host governments, their activities governed by agreements covering criminal jurisdiction, exposure to foreign taxation, conditions for permission to import and carry weaponry, and many other sovereign legal issues, a "don't ask, don't tell" foreign basing arrangement, while alluring, was not a realistic basis for a defense posture for the new century. What makes it unrealistic is that governments take an appropriate interest in how their territory is used and accord special political significance to any scenario in which another country's forces launch combat operations directly from their territory. There is an implied complicity on the part of the host nation in the military objectives of the forces' mission. Host governments—democracies above all—can be expected to require prior consent.

Many of these governments operate under constitutional frameworks that limit their latitude to commit their own forces in the case of non-NATO, non-UN, and non-EU military operations. The chances are, then, that a given government will not be comfortable permitting the American use of its territory to launch operations without parliamentary approval. Fast-breaking counterterrorism or WMD operations might be seen as exceptional, and indeed, the United States should urge doctrinal and legislative changes in allied capitals consistent with the practical realities of the war on terrorism.

But the fact is that countries hosting American forces will always be loath to write the equivalent of a political blank check to the United States or anyone else. Particularly cooperative presidents or prime ministers may be able to deliver for Washington, but only so long as they remain in office—as was seen when President Jose Maria Aznar's Spanish government lost at the polls in March 2004.

If the ability to flow American forces globally in the most economical manner, as envisioned in this initiative, depends on making long-term arrangements only with governments that will reliably provide instant consent or are content to be informed after the fact of combat operations originating from their territory, the GDPR may encounter some disappointments before its vision can be fully realized. This is not to suggest that U.S. forces should be encumbered by bureaucratic processes like those that characterized NATO's prosecution of the 1999 Kosovo campaign—not when success may require effective military action within a very few hours of obtaining actionable intelligence. However, it would make no more sense to place the U.S. military on an evolutionary path that separates it farther from longtime allies whose people share America's values and security interests, if not in every instance its foreign policy views.

I conclude that the Defense Department was right to harvest the lessons of recent operations and to seek to optimize a military establishment upon which most of the world's democracies and key economies ultimately rely for their own security. I further conclude that America's European allies, in particular, should seriously revisit the legal frameworks upon which their own latitude to use military force relies. Similarly, NATO would do well to explore new modalities to invoke Article 5 without requiring a unanimous affirmative vote among its expanded membership. Just as the United States took dramatic steps to develop a new national security strategy after 9/11, so should its allies make it possible for their forces to take immediate action—preemptive action—to intercept illicit WMD in transit or otherwise protect allied populations against an imminent terrorist attack.

A dialogue aimed at harmonizing the legal and doctrinal basis for the use of force among the United States and willing allies would go a long way to cementing the political foundations for the new U.S. global posture. Already the United States and its NATO allies have formally embraced the goals of pursuing transformation together and modernizing their forces with interoperable weapons systems. The GDPR can advance these and other military-partnership initiatives in order to give future American presidents the best possible chance of moderating the high price of securing America's worldwide security interests by bringing more than just American combat forces to bear in a crisis.

An administration whose Defense team, in particular, came into office in 2001 believing that American military power should be less fettered by international norms and

influence has had its way for a few years. At the political level, a world in which the United States bears the brunt of the most arduous security duties is one in which allies that have not similarly committed "boots on the ground" increasingly view policy issues differently, as they cannot relate either to the hard responsibilities that come with military intervention or to the expense in blood and treasure that the American people experience on a continuous basis.

It is probably an understatement that most Americans and their elected representatives would now like to see future security burdens borne to a greater degree by other countries along with the United States. Moreover, they would not consider robust information sharing and sensitive security dialogue with other governments too high a price to pay—not if it led, five to ten years hence, to an international security architecture with more, and more highly capable, responders closely tied to U.S. command and control systems.

In all democracies, the decision to take military action against an external threat is nothing if not political, as is the decision by allies to support the United States when the president decides to act. Political solidarity among allied leaders and their peoples is in fact the bedrock of American security, the essential enabler of the success of such programmatic ventures as the GDPR and transformation initiatives generally.

Aspiration to secure itself against future threats, in close partnership with other countries, is a recognition in the United States that influence among nations—even more than superior weaponry and training—is the source of America's true power in the world. A country that sees itself as a leader will do well to bear in mind that the strength of its leadership is ultimately measured by the readiness of others to follow.

By seeking to foster greater solidarity with allies on security issues, and building influence within their publics, as President Bush has been doing in foreign capitals during 2005, the United States will find that over time its allies become less resistant to the use of American military power and more inclined to commit their own forces and resources alongside those of the United States when serious threats arise. This approach—active security engagement at political as well as military levels—holds the best prospect of fulfilling the promise of the Global Defense Posture Review.

Notes

1. Australia, by contrast, embraced the same notion of preemption. As Prime Minister John Howard said on 31 October 2002, nineteen days after a terrorist bomb in Bali, Indonesia, killed 202 people, including many Australians, "Imagine a situation where we in Australia knew that there was a direct threat to us and that Australian lives would be lost if we decided for doctrinal reasons we would not interfere to try and stop that threat. The public would say we were derelict in our duty."

2. The Defense Department provided Congress with broad funding estimates for a fully realized GDPR. While it was possible to make a very rough overall estimate of costs for relocating units and constructing new infrastructure at American facilities to which units may be moved subject to the BRAC process, there are some costs that cannot be estimated: not only potential reductions in existing host-nation support but expenses related to any new activities in the new NATO countries or in strategically situated states in the Caucasus, Central Asia, Africa, and Asia, countries whose ability to pay for new facilities or share operating costs may be low.

CHAPTER FOUR

A Place *and* a Base

Guam and the American Presence in East Asia

ANDREW S. ERICKSON AND JUSTIN D. MIKOLAY

Rising threats to American national security in East Asia coincide with growing uncertainty concerning the future of local support for U.S. basing access there. There is little reason to expect this situation to improve substantially in the foreseeable future. American planners have finally recognized the imperative to build up Guam as a sovereign anchor of America's force posture in East Asia, to protect American interests in that strategically vital region. In what follows, we examine Guam's potential importance as a forward operating base for the U.S. Navy and Air Force.

We first detail American interests in East Asia, with particular emphasis on the new national security strategy and potential sources of regional instability. Second, we critically evaluate the 2004 Global Posture Study and the call of the 2001 Quadrennial Defense Review for "places, not bases." Third, we review the various political constraints on U.S. military activities in the region. Finally, we explain the importance of strengthening port facilities in Guam, to transform it into a hub fully capable of supporting operations throughout East Asia.

America's Emerging Asian Anchor

The U.S. military is developing Guam as the anchor of its future force posture in the strategic East Asian region. China's rising comprehensive national power, coupled with political changes in host countries Japan and South Korea, call into question the long-term utility of local American bases. Meanwhile, the ongoing North Korean nuclear crisis, periodic Taiwan Strait tensions, and potential disruption of strategic sea-lanes by terrorism or conflict in the South China Sea make American interests in East Asia increasingly vital. But, as assessments of the Chinese military emphasize, "dependence on foreign-hosted bases and extended lines of logistical support for sustained combat operations in the West Pacific" represents a major American vulnerability.[1]

To address this weakness, American planners are developing Guam as a sovereign forward base to anchor an increasingly complex constellation of both allied cooperation and access rights and American sea basing and crew rotation. Although Guam is farther from some key regional flash points than previous, current, or possible future bases on foreign territory, it is still close enough to play a critical supporting role. Indeed, it is a strategic hub at the center of the U.S. Pacific Command's enormous area of responsibility: 169,000,000 square kilometers over sixteen time zones, encompassing forty-three nations comprising 60 percent of the world's population, the six largest armed forces, five of the seven American mutual defense treaties, and 35 percent of U.S. trade (over $550 billion).[2] "Guam's geo-strategic importance cannot be overstated," Admiral Thomas B. Fargo, former commander of the Pacific Command, testified before Congress in 2004.[3] Since Secretary of Defense Donald Rumsfeld visited the island on 14 November 2002, the military has considered dramatic increases in force levels on Guam.[4]

As one of only two sovereign American overseas bases as well as America's nearest port to East Asia, South Asia, and the Middle East, Guam combines foreign proximity with domestic flexibility.[5] It is closer to East Asian flash points than any other U.S.-based facility. Guam also gives the U.S. Navy an excellent deep-water port with room for pier expansion and a magazine capable of holding a substantial volume of conventional and nuclear munitions. The 209-square-mile island provides the Air Force with its largest aviation-fuel storage depot (sixty-six million gallons), its largest Pacific weaponry storage site (a hundred thousand bombs), and the region's only live-fire bombing range. Guam's patriotic population produces the most military recruits per capita of any area under American jurisdiction;[6] further, 80 percent of registered voters support the future homeporting of an aircraft carrier battle group. Clearly, the U.S. military can depend on Guam.[7]

Enhancing American naval presence in the Pacific Rim means more time on station without a proportionate rise in operational tempo for an already strained Pacific Fleet. Therefore, Guam will increasingly be utilized to decrease transit times to strategic areas. Routine deployments of U.S. bombers to Guam since 2004 have allowed Pacific Command planners to integrate these strategic assets thoroughly into exercises.[8] As Admiral Fargo emphasizes, Guam is "key to our military operations across the full spectrum of our capability."[9]

Guam: A Place *and* a Base

Guam has long served American strategic interests. After becoming a U.S. territory in 1898 following the Spanish-American War, Guam first served the Navy as a mid-Pacific coaling station. Alfred Thayer Mahan argued that converting Guam into "a kind of

Gibraltar" would secure America's "every interest in the Pacific." He led a "Guam lobby" in Washington in an attempt to further this cause, but Congress proved unwilling to invest heavily in fortifying Guam.[10] Gradually surrounded over the ensuing decades by Japanese economic and military expansion, Guam was easily overrun by Japanese forces in December 1941. Following its recapture by American forces in July 1944, Guam became a critical logistics base, supporting American operations against Japan in the western Pacific. During the Cold War it was also one of the first Polaris missile–support bases and provided a crucial communications and intelligence link.

B-52s flew missions over Southeast Asia from Guam during the Vietnam War, and minesweepers from Guam cleared Haiphong Harbor at the conclusion of that conflict. Following the Vietnam War—the island having, ironically, given its name to President Richard Nixon's 1969 "Guam Doctrine," calling upon Asian allies to see to their own defenses—the island's military presence lessened, and its infrastructure declined.[11]

As promising as Guam is, it has its inherent problems. As the map on the facing page shows, Guam is farther from all strategic areas in Northeast Asia than is Japan, Korea, Vietnam, or the Philippines. Guam is three times farther from the Taiwan Strait than is Okinawa. Ships cruising from Guam at twenty-five knots could reach the Taiwan Strait in two and a half days, whereas they would need only one day from the Philippines. However, Guam's distance from East Asia does offer one benefit—proportionately smaller vulnerability to Chinese and North Korean ballistic missiles. In addition, while the island is often affected by adverse weather, including typhoons, which sometimes disrupt operations and damage infrastructure, Korea and Japan are similarly vulnerable in this regard.[12]

As the result of Guam's general proximity to East Asian hot spots and of persistent lobbying by Vice Admiral Albert H. Konetzni (as Commander Submarine Force, U.S. Pacific Fleet), in September 2002 the Navy transferred two *Los Angeles*–class attack submarines from homeports in the continental United States to Guam.[13] One result of this change has been to increase the total number of available in-theater mission days for these submarines. Navy officials contend that submarines based in Guam will be in-theater from eighty-eight to 123 days per year, three times as long as the thirty-six-day average of submarines based in the continental United States.[14] "Doing more with less" means that operations tempo will stay the same even while added requirements are met. This, in turn, reduces the overall number of ships that the Navy requires; in recent congressional testimony, the former Chief of Naval Operations, Admiral Vernon Clark, cited forward basing of ships in Guam as a key factor for maximizing use of naval assets.[15] Another benefit from basing ships in Guam is improved response time. Submarines operating from Guam take four days at twenty knots to reach the East Asian littoral, in contrast to the fifteen days required from San Diego.[16] Aside from obvious utility during crisis, this fact carries peacetime benefits. The shorter distance to East Asian hot spots reduces fuel consumption, and not inconsiderably, a fact that also helps to prolong the lives of the nuclear cores of submarines.[17]

Basing ships in Guam also reduces their crew's personnel tempo, the rate and duration of military deployments. This feature allows ships' crews to spend more time with their families, which in turn produces better retention and reduces recruiting costs. Offsetting this advantage, however, is Guam's distance from the United States

and the isolation that results. One former naval officer stationed on Guam in the 1970s reflects that fewer than half of his peers chose to have their families accompany them on the island.[18] A larger, better-supported Navy community on Guam would encourage more personnel to bring their dependents along and stay on the island or in the region when on leave. Enhanced infrastructure ashore for families will help here but will bring its own costs. Guam needs a complete infrastructure renaissance, with improvements in the condition of schools, barracks, hangars, dry docks, and maintenance facilities. The expense would be offset by the resulting decreased personnel tempo, reduced deployment time, and more persistent presence. Total infrastructure improvement costs to homeport six to eight additional submarines at the island would probably reach $200 million. At less than 10 percent the cost of one $2.3 billion *Virginia*-class submarine, this figure is far below expected procurement costs for U.S.-based vessels, with their lesser access to this critical operating theater.[19]

Infrastructure and asset improvements could provide a variety of operational and strategic advantages. Although unprecedented, it would be possible to base an aircraft carrier at Guam. Together with Hawaii, Guam has been under consideration as a location for a carrier battle group and its 5,500 personnel.[20] Guam has sufficient territory to accommodate additional U.S. forces. Ongoing American troop reductions in South Korea may facilitate the long-term goal of moving U.S. assets from politically and strategically vulnerable foreign bases to the sovereign territory of Guam.

Military commanders need airlift capabilities and tankers ready and able to deploy in-theater quickly. For these missions, America needs a secure airfield from which it cannot be denied access; political area denial could allow China to push American forces out of the region before or during a crisis. Guam has the advantage of being American territory, reducing the political difficulty of building and operating assets there.[21] Furthermore, Guam, with its pro-military population and 7.7 percent unemployment, is unlikely to offer local opposition to increased military infrastructure. Indeed, support for additional military presence on Guam is increasing among residents.[22] While Guam already boasts a deep-water port, revitalized repair dry dock, and proximity to the region's only live-fire bombing range, Apra Harbor is capable of significant physical expansion to support additional naval ships.

The Air Force also has a potentially important role to play in Guam's future. Andersen Air Force Base features three-thousand-meter runways and can easily accommodate any of the Air Force's planes, making Guam a unique contender to become a main operating base for tactical missions.[23] In a provocative article, Robert Kaplan even claims that "Andersen Air Force Base, on Guam's northern tip, represents the future of U.S. strategy in the Pacific. It is the most potent platform anywhere in the world for the projection of American military power."[24]

In addition to operational assets, however, the twenty-one-thousand-acre air base needs increased support resources. Existing Air Force infrastructure and support personnel will continue to require upgrading to sustain newer-generation bombers or strike aircraft; stealth aircraft, for instance, require special hangars. Repair and maintenance shelters can be augmented to serve carrier strike groups, and training centers would allow personnel to remain on station longer. In spring 2005 twelve F-15E fighters were rotated to Andersen from the continental United States for training.[25] B-1, B-2, and B-52 bombers are also rotating through;[26] further, "Guam-based bombers have carried out missions against targets in Iraq."[27]

Andersen is slated to become a hub for Air Force intelligence, surveillance, reconnaissance (ISR) and strike, with the potential addition of two tactical aviation squadrons, bomber rotations, and a Global Hawk (unmanned aerial vehicle) detachment. According to the Overseas Basing Commission, this will provide "critical capabilities for most operations in the [Pacific Command area of responsibility]," including "a China-Taiwan conflict." Moving assets from the continental United States to Guam "permits more persistent ISR coverage, peacetime intelligence gathering/tracking and prompt strike capability." By contrast, crisis deployment of U.S.-based assets "would not only require scarce airlift sorties to deploy squadron support packages but could also be viewed as provocative and complicate crisis management."

Guam's Impending Infrastructure Renaissance

Guam's new role will clearly require significant infrastructure and equipment upgrades. Already three nuclear-powered attack submarines (SSNs) have been stationed in Guam.[28] Up to six additional submarines may join them;[29] these would include "both SSNs and soon-to-be-converted nuclear-powered cruise missile boats."[30] This would make Guam home to roughly a fifth of the entire U.S. attack submarine fleet and would thus give it the platforms "required to track China's emerging SSBN [ballistic-missile submarine] capability."[31]

Although further asset deployment decisions await consultation with allies on the basis of the base realignment and closure process completed in December 2005, it is clear now that major changes are afoot.[32] The Air Force is considering the construction of a concrete hangar for two B-2 bombers, in addition to two ongoing construction projects: an $85 million air refueling facility and a $12.8 million housing refurbishment at Andersen Air Force Base.[33] In 1999, the Navy selected the Raytheon Corporation to upgrade and maintain support facilities, awarding a $324 million contract over the following seven years.[34] Guam will also receive the III Marine Expeditionary Force from Okinawa, which will necessitate $2.9 billion in infrastructure development.[35] See the sidebars for a list of current assets and additional assets recommended by the authors.

American Interests: Why Should the Navy Invest?

Building up Guam is not only an essential component of a long-term strategy to maintain America's preeminent position in the global security environment; it also responds to East Asian threats that Washington cannot afford to ignore.

In coming years, military bases on American territory, particularly naval bases, will become central to America's force posture.[36] Advances in foreign navies' ability to target U.S. surface vessels will make submarines increasingly important platforms for force

CURRENT AMERICAN NAVAL ASSETS IN GUAM

USS *Frank Cable* (AS 40)

USS *City of Corpus Christi* (SSN 705)

USS *Houston* (SSN 713)

Mobile Security Unit Guam

U.S. Naval Forces Marianas Support Activity

Helo Combat Support Squadron 5 (HC 5)

U.S. Naval Hospital Guam

U.S. Naval Computer/Telecomms Station

EOD Mobile Unit 5 (EODMU 5)

EOD 5 Detachment Marianas

Naval Special Warfare Unit 1

Naval Mobile Construction Battalion

Naval Airborne Weapons Maintenance Unit 1

Military Mine Assembly Unit 1 (MOMAU 8)

Command Military Prepositioning Squadron 3

Military Sealift Command Office Guam

Fleet Imaging Center Pacific

Space and Naval Warfare Systems Facility Pacific

Naval Satellite Operations Center Guam Detachment Charlie

B-1, B-2, and B-52 bomber aircraft rotation to Andersen AFB

projection.[37] Having sufficient numbers of submarines deploy in a timely fashion to critical areas will be essential to maintaining a strong American presence in East Asia. Guam's sovereign status makes it a vital center for such operations.

Operational considerations as well as future politics could increasingly circumscribe American deployment options, making it all the more essential to take full advantage of Guam's ability to support American military assets without delay. In East Asia, three regional developments make forward U.S. bases increasingly significant. America faces economic, political, and potentially military competition from China; political and security challenges associated with the global war on terror; and a clear and present military threat from North Korea.

First, the growing ambitions of the People's Republic of China (PRC) depend on increasingly assertive naval power. As China moves closer to developing blue-water naval capability, the U.S. Navy finds it necessary to be ready not only to respond quickly to a contingency in the Taiwan Strait but also to counterbalance growing Chinese regional military reach. Second, localized Southeast Asian terrorist organizations—Jemaah

Islamiah in Indonesia, among others—have demonstrated their capacity for regional violence. These organizations have to be uncovered and pursued, particularly where they are actively collaborating with al-Qa'ida or other terrorist groups with global reach. Third, despite the 1994 Geneva Agreed Framework by which North Korea rejoined the Nuclear Non-Proliferation Treaty (NPT) in exchange for U.S. delivery of heavy fuel oil, Pyongyang recently revealed its clandestine production of nuclear weapons.[38] This flagrant violation has further destabilized an already fragile political situation in Northeast Asia.

The Navy has a critical role to play in East Asia, given the region's extensive coastlines, islands, land barriers, and consequent susceptibility to maritime force projection. As a great power engaged in offshore "balancing" (like Britain in Europe during the nineteenth century), the United States does not need the capacity to win land wars in East Asia in order to maintain its preponderant position. Instead, its preeminence hinges on control of the sea.

In East Asia, naval forces play a preventive role that is of equal importance to their offensive function. These dual processes can be categorized as "shaping" and "responding."[39] Forward presence enhances American ability not only to respond to regional events but to shape them before they occur. Ships on station are launch pads for the war on terror, platforms for theater missile defense, and barriers to the proliferation of weapons of mass destruction (WMD), and they are stabilizing political forces in themselves. The Navy plays a special role in safeguarding American interests. As one reporter notes, "[Unlike the basing and staging–dependent Air Force or Army,] . . . the Navy can

STRENGTHENING GUAM

Enlarge and deepen Apra Harbor

Widen breakwater entrance to Apra Harbor

Repair and enlarge damaged and unused wharves

Allocate additional resources to dry-dock/repair facilities
(recent efforts have bolstered repair capabilities)

Enlarge Submarine Squadron 15
(two additional attack submarines)

Add Helicopter Anti-Submarine Squadron 4 to Andersen AFB
(currently in NAS North Island, San Diego)

Homeport USS *Sacramento* (AOE 1) for on-station support

Enlarge Agana Harbor for use as secondary naval port

Preposition theater missile defense ships

Enlarge ammunition site at Kilo Wharf
(maximize use of Military Sealift Command
and USN Prepositioning Squadron 3)

establish a long-term presence without infringing on anyone's borders. It can be sent at a pace that allows diplomacy to cool a crisis even as the ships proceed."[40] Naval forces also enjoy the advantage of operating in international waters, as close as twelve miles to another nation's coastline.[41]

To maximize these naval strengths, the Navy needs to arrange assets for highest availability in times of crisis. Such a strategy calls for forward presence of ships operating from bases that are not politically constrained. Washington would thus improve its capacity to stabilize the Taiwan Strait by improving its rapid-response capabilities, thereby deterring Chinese offensive actions in the first place. A strengthened American position in Guam would also increase American political leverage in that region. Guam is, for instance, well suited to host joint military exercises. In fact the island was used in the 1990s as a premier training ground for the 31st Marine Expeditionary Unit exercise TRUE (*TR*aining in an *U*rban *E*nvironment).

American military force planners now work within the framework of a broad new national security strategy calling for proactive responses to unpredictable threats. Because neutralizing WMD is among Washington's highest priorities for national defense, the announcement of an ongoing nuclear weapons program in North Korea has drawn the renewed attention of American policy makers to Northeast Asia. Current American priorities in the Middle East make it unwise to provoke North Korea now, but in the future, building a more credible American deterrent that does not hinge on Japanese or South Korean participation may be essential in pressuring Pyongyang.

North Korean aggression remains a possibility should détente with the South fail. But a war with North Korea would likely be far bloodier than has been the war in Iraq, for several reasons. First, in Iraq a slow diplomatic buildup allowed for massive troop prepositioning; this would not happen in the Koreas. The North, in a time of rising tensions, could preempt major troop deployments by threatening Seoul with artillery or Japan with missiles. Second, the coalition in Iraq had bases in neighboring Kuwait from which to launch an attack, with no restrictions on their use; public opinion in South Korea might not permit similar use of U.S. bases there. Third, North Korea has a far greater potential to inflict a "sea of fire"—unacceptable, even mass casualties among American troops and allied civilians—than Iraq ever did, a possibility that greatly constrains U.S. options for applying pressure. Moreover, South Koreans might well oppose even a defensive American military buildup on the peninsula. Another place or base, such as Guam, could help alleviate these problems, especially if the United States was limited for political reasons in its use of bases on Japanese soil.

A conflict on the Korean Peninsula could rapidly escalate into a terrible war that could well involve the use of chemical, biological, even nuclear weapons. Therefore,

such a conflict must be deterred. For decades the need for America to respond to a full-scale invasion kept a permanent land force near the Demilitarized Zone. But the Pentagon is now moving beyond this "tripwire" approach, under which forces stationed within range of North Korean artillery actually undermine the American threat of preemptive strike. Moreover, the more likely contingency of heightened tensions, as opposed to immediate, full-scale war, suggests the need for a quick-reaction force. A naval quarantine to prevent Pyongyang from exporting missiles (in violation of the Missile Technology Control Regime), nuclear material (in violation of the Non-Proliferation Treaty), or related military technologies could also be important. Naval and air assets stationed in Guam would be well positioned to perform these roles.

Tension in the Taiwan Strait deserves separate consideration, because it will drive American basing strategy in the near and middle terms. At present, U.S. military assistance is geographically far removed from Taiwan; rapidity of response depends on what forces happen to be nearby. The transit time is approximately sixteen days for a carrier strike group stationed on the West Coast, a week from the Indian Ocean, and twelve days from Hawaii.[42] If an additional carrier were forward deployed to Yokosuka, Japan, or if a battle group were on station in the Pacific or in port at Guam, the transit time would be reduced to between three and five days. America's ability to respond to a Taiwan Strait crisis is also constrained by political forces in the region. Although many American analysts believe that Taiwan could still defend itself in a military engagement against China, calamitous economic damage to the island would be a virtual certainty. If the United States failed to respond early and effectively, Taipei might sue for peace.

Any course of Chinese action against Taiwan would produce a series of ambiguous indicators that would have to be compared with previous assessments of Chinese naval operations in peace and during crises. The monitoring of such indicators would be facilitated by a stronger permanent American military presence on Guam.

Implications for U.S. East Asian Presence

Developing Guam as a forward hub is the key to a larger American strategy for maintaining influence in East Asia, which in turn will fundamentally affect China's regional position. For this reason, some planners in each nation envision a zero-sum competition for regional status, particularly through naval development. While Guam will become a vital anchor to America's East Asian force posture, it is hardly a panacea. China closely follows American military deployments on its periphery and is observing with "a high degree of attention"[43] the American buildup of nuclear submarines[44] and other assets[45] on Guam.[46] Guam is frequently described

as an American strategic "chess piece."[47] A scholar affiliated with the Chinese Communist Party Central Committee Party School describes Secretary Rumsfeld as ordering a "massive buildup and extension of Guam" as "an important component of America's strategic military adjustment." Such a buildup is part of a larger plan to "increase strategic pressure against China" and to "increase America's ability to interfere in the Taiwan problem."[48]

Chinese analyses of Guam's strategic role are typically framed in terms of the "island chains" concept notably articulated by Admiral Liu Huaqing, former Chinese navy commander.[49] Chinese analysts view the "island chains" as American fortifications; barriers that China must continue to penetrate to achieve freedom of military maneuver;[50] and demarcations of Chinese progress in naval force projection.[51] Liu and others define the First Island Chain as comprising Japan[52] and its northern and southern archipelagos (the latter disputed by China),[53] South Korea, Taiwan, and the Philippines. In 2004, a National Defense University professor, Zhang Zhaozhong, declared on Chinese national television that the United States is building up troops and military assets on Guam as part of a new focus on strengthening its "forward reserve" on the Second Island Chain (from the Japanese archipelago south to the Bonin and Marshall Islands, including Guam) to contain China.[54]

One Chinese source refers to Guam as the "Second Island Chain's nucleus."[55] Reinforcing this idea, Zhang characterizes Guam as a "springboard" from which America "can immediately send out aircraft or dispatch submarines, in order to put power into the war zone," which he apparently envisions as centering on the Taiwan Strait.[56] Some unofficial Chinese publications refer to a "Third Island Chain" centered on America's Hawaiian bases;[57] this would be in effect a "strategic rear area" for the U.S. military.[58]

Perhaps in response to America's military preponderance in East Asia, Beijing is developing land-attack cruise missiles, which are inherently offensive.[59] China views its antiship-cruise-missile buildup as inherently defensive in nature;[60] nonetheless, rapidly improving capabilities of submarines,[61] satellites[62] and over-the-horizon radar[63] may afford increasing offensive options. Chinese cruise missiles, particularly submarine-launched variants, represent a growing threat to U.S. forces in Guam and elsewhere in the Pacific theater. In support of this effort, China is developing its own rudimentary Beidou satellite navigation system;[64] it is also seeking to maximize its civilian[65] and military applications.[66] Together with increasing access to Europe's developing Galileo system, this may help China avoid overreliance on the American-controlled Global Positioning System (GPS) during crises while increasing its ability to threaten Guam.[67] In November 2004, a Han-class nuclear submarine reportedly transited waters near Guam.[68] As China's maritime and aerospace capabilities

increase, its military may monitor, challenge, and even attack U.S. forces in unprecedented areas.

To prepare for the worst of such contingencies, Guam's facilities should be protected from ballistic missiles as well as from submarine- and air-launched cruise missiles. Avoiding over-concentration of Guam's assets, particularly submarines, during crises will be important. Concentration of assets leaves them vulnerable to a decapitating strike; dispersal based on strategic warning and the threat of nuclear retaliation can to some degree offset that risk. Adequately hardened submarine pens are a possible, if expensive, option. America's best strategy may be at-sea dispersal, drawing on Cold War experience.

Although fortifying Guam highlights the key national interests at stake, that outlook obscures the positive-sum benefits from a strong American presence. The U.S.-Japan alliance helps to prevent destabilizing competition in a region that is even today still recovering from World War II. Further, by guaranteeing the security of East Asian sea-lanes—a public good that China is not yet able to provide—America facilitates the flow of energy and trade in a region that depends on both to maintain its impressive economic growth.

Deploying additional U.S. forces to Guam would also generally support growing American interests in Asia and would most likely be less provocative than selling additional armaments to Taiwan. In the longer term, America and China will have to reach an understanding concerning their respective roles in the world's most dynamic region. "As [China grows], there's going to be an inevitable push as they take advantage of their economic ability to improve their military capabilities," Admiral William J. Fallon states. "We ought to recognize that as a reality. This is not a zero-sum game."[69]

On 22–25 October 2003, the Chinese navy made its first-ever port call to Guam. Rear Admiral Xue Tianpei brought the guided-missile destroyer *Shenzhen* and supply ship *Qinghai Lake,* with 550 sailors aboard, into Apra Harbor.[70] This historic event was part of a reciprocal exchange in which two U.S. warships had visited China's Zhanjiang Port the month before. China's official press stated that "the Chinese naval fleet sailed into Guam on the currents of warming Sino-U.S. relations" and credited the visit with demystifying America's military presence in Guam.[71]

The Quadrennial Defense Review and the Global Posture Study

The 2001 Quadrennial Defense Review (QDR) declared that "places, not bases" are necessary to reduce the political restraints on U.S. military operations. The Global Posture Review is a sweeping effort to realign American overseas operations to best

address emerging post–Cold War security threats.[72] Major components include redistributing 82,500 troops from Germany and South Korea back to the continental United States, deploying new assets to maintain specific capabilities as opposed to arbitrary troop numbers, strengthening existing alliances, and building new partnerships.[73] A key element of this process will involve addressing unanticipated threats, possibly with out-of-region assets.[74]

While affirming the goals behind the Global Posture Review, the Overseas Basing Commission judged that—especially given America's current military commitments and budget deficit—implementation of its recommendations is underfunded and outpacing infrastructure and technological capacity. This may undermine recruiting and lead to vulnerabilities and other unintended consequences, particularly in Europe and Japan.[75]

Although the QDR makes a compelling case that traditional basing options are not a panacea, in the context of evolving American priorities in East Asia a more nuanced view of the utility of full-fledged military bases is possible. Some observers contend that large fixed bases have declining military value and rising disadvantages. Certainly, bases are increasingly at risk from terrorist attacks, which is one of many vulnerabilities that lead potential host nations to view the prospect of new American bases less than enthusiastically. However, this danger already applies to existing land bases, particularly in the Middle East, for which, despite efforts to improve sea basing, there is no substitute.[76] Moreover, permanent land bases are important military tools during a conflict and are perhaps even more important for their political value. "We cannot hope for much influence without presence," emphasizes the Overseas Basing Commission. "The degree of influence often correlates to the level of permanent presence that we maintain forward."[77] Two excellent examples of the political value of bases in general and of Guam in particular are Joint Task Force PACIFIC HAVEN, which received and temporarily housed over 6,500 Kurdish refugees escaping Iraq after government crackdowns in 1997, and the large tent city on Guam that sheltered South Vietnamese refugees in 1973.

A second vulnerability of bases, one more relevant in East Asia, is the growing danger of missile attacks. Indeed, the QDR emphasizes that "saturation attacks with ballistic and cruise missiles could deny or delay U.S. access to overseas bases."[78] Some analysts have cited a growing PRC missile threat as a reason not to establish new bases *anywhere* in East Asia. They argue that China's CSS-3 missiles were designed to destroy facilities on Guam using nuclear warheads. Submarine-launched cruise missiles—with their potential for small radar cross sections, low-altitude flight, continually adjustable trajectories, and potential avoidance of GPS constraints through reliance on terrestrial imaging—could emerge as a particularly lethal threat.

The susceptibility of Chinese leaders—while they are generally regarded as rational decision makers—to deterrence might be situational. Irrespective "of the degree and nature of American military superiority," Beijing might become "impossible to deter" in the event of a Taiwanese declaration of independence.[79] In such a situation, China might view surprise attacks on U.S. forces in Okinawa or Guam as a credible means of disrupting and even restraining American attempts to support Taiwan.

China certainly has "done the math" and has made a concerted effort to acquire offensive capabilities that could be used against U.S. bases. But by this logic, American bases in Japan and Korea are even more vulnerable, given their closer proximity. Yet despite growing missile threats from North Korea and even China, Japan continues to value American bases as a key element of its own defense. South Korean public opinion may be more easily manipulated by North Korean propaganda, but U.S. forces are moving out of range of North Korean artillery. Additionally, aggression by Pyongyang might be counterproductive politically—inaccurate North Korean missiles aimed at American bases in South Korea put civilians at risk. For both operational and political reasons, South Korean bases would not likely play a major role in a Taiwan crisis and hence would not be a target of Chinese missile coercion. U.S. bases in Japan are more relevant to a Taiwan conflict and are hence a more likely target of PRC pressure. It is therefore imperative that the United States not rely on unrestricted access to them in such a scenario.

As for Guam, China will probably not soon be able to trap U.S. forces there with air-to-surface missiles or tactical nuclear weapons. While Guam's target value would rise with infrastructure and asset improvement, Beijing knows that attacking a U.S. base, especially on sovereign territory, would invite a devastating American response. As one analyst points out, "Presidents would not encounter major domestic opposition in reacting to aggression against U.S. forces or civilians at home. The question is not whether, but what form the response would take."[80]

Dispersion and the use of missile defenses are particularly relevant for reducing Guam's vulnerabilities. Dispersion could entail a periodic rotation of assets such as nuclear submarines at sea away from Guam, thereby exploiting the island's potential as a useful hub while preventing a Pearl Harbor–style surprise scenario. At-sea dispersion might be augmented with specific access arrangements with nearby islands such as Palau, to be used in time of crisis. While American ballistic-missile-defense architecture may not be able to neutralize fully a PRC missile attack, it might at least introduce uncertainty and thereby alter Beijing's calculus. There are even cross-cutting factors in Guam's favor, such as the potential for increased defensibility of concentrated assets under a TMD system.[81] Stationing SM-3 ships

in Guam could provide both a localized deterrent and as prepositioned regional protection.

American "base structure is not merely a derivative of strategy," counsels the Overseas Basing Commission, "it is a driver in its own right." As the Global Posture Study acknowledges, while emerging threats are not fully predictable and may be addressed from out of area, they must be roughly anticipated in order to inform properly the architecture of the new American global basing footprint. The need for foresight and flexibility, particularly given the reality of finite resources, places a premium on maximizing U.S. capabilities in locations such as Guam that offer minimum political restraints, maximum utility, and ready access to areas with multiple anticipated threats.

Regional Political Constraints: The Need for Flexibility

Because of the limitations of geography and politics, there are only a few potential American bases in the Asia-Pacific region. Some places, like the southern end of the Japanese Ryukyu island chain near Taiwan, Cam Ranh Bay in Vietnam, Ranai in Indonesia, or Subic Bay in the Philippines, are geographically desirable but as base locations are either domestically unpalatable, too provocative for China, or both.[82] Others, though well situated and politically permissible—like Yokosuka and Sasebo, Japan; Pusan and Chinhae, South Korea; and Sembawang and Changi naval bases in Singapore—might be of only limited use during a crisis because of Chinese pressure or domestic constitutional issues. Still others, like Australia and Diego Garcia, lack political constraints on their use but are too far from regional flash points to allow sufficiently rapid response.

These challenges have prompted analysts to consider creative operational plans. Many analysts now prefer a "portfolio approach" to basing, spreading out supply and repair facilities to maximize flexibility in consonance with "security cooperation," one of the basic objectives of the National Security Strategy of 2002. Sea basing and crew rotation have moved to the fore in order to overcome reliance on uncertain regional partners.

Formalized agreements to guarantee access to a constellation of "places, not bases" reduce the problem of overdependence.[83] Such ad hoc base usage has obvious advantages in the politically constrained East Asia Pacific region, but it is not foolproof, especially in a crisis. Permanent bases act as important political tools before and during conflict; in contrast, guarantees of even limited access to foreign facilities could be nullified by outside pressure.[84]

Establishing new bases in East Asia would thus be the most effective U.S. option logistically, but current political and economic hurdles are so high as to make the establishment

of new permanent bases impractical. Washington should not forswear such options if domestic political conditions change in potential host nations. However, current realities bear out the QDR-driven movement toward flexible basing. Let us consider here the prospects of American access to Hawaii, Diego Garcia, Korea, and Japan.

Hawaii: Homeland Hospitality

Hawaii is already a major American military hub, but there is still room for expansion. Indeed, Oahu contends with Guam for America's second Pacific carrier group, and thanks to better existing infrastructure and formal representation in Congress it is currently the favorite in that competition. Other Oahu bases are slated to receive an Air Force warfighting headquarters and a Stryker brigade with attendant C-17 lift.[85]

Hawaii, however, suffers from even higher real estate and living costs and worse traffic congestion than does Guam, and it is at least 3,700 miles farther from Asia's hot spots.[86] A carrier battle group steaming at twenty knots from Pearl Harbor would take over twelve days to reach the East Asian littoral, closer to the sixteen days from San Diego than the mere three days required from Guam.[87] With the USS *Buffalo*'s transfer, Hawaii will have fourteen *Los Angeles*–class submarines to Guam's three. This ratio may shift in Guam's favor, especially when one considers that there are no major areas of U.S. security concern between Hawaii and Guam, and that submarines risk shortening the lives of their reactor cores when repeatedly covering such distances.

Diego Garcia: Deliberately Decommissioning

Located in the center of the Indian Ocean, Diego Garcia is a British colony populated primarily by U.S. Navy and Air Force personnel. Started as a naval communications station in 1973, the dependency was rapidly transformed into a full-fledged naval support facility that enabled numerous bombing runs during the first Gulf war and the 2001 war in Afghanistan.

While tiny Diego Garcia has recently played a disproportionate role and survived the December 2004 tsunami, it has limitations. It is extremely remote, over one thousand miles from any other landmass, and even farther from East Asia's strategic flash points. The horseshoe-shaped reef, only thirty-seven miles long, is essentially a permanent aircraft carrier with no room for major new facilities. Despite extreme vulnerability to typhoons, the island provides virtually no wind protection, because its maximum elevation is only twenty-two feet.

Japan: Avoiding Tough Choices

In a Taiwan crisis, resupply from Japan might not work. Despite solid infrastructure supporting fifty-two thousand American uniformed personnel stationed at 158 sites in Japan and a wide variety of joint military exercises, actual combat scenarios raise issues of concern.[88] The U.S.-Japan alliance, despite its strengths, has limitations. A variety of causes, including the stoning of the Japanese consulate in Shanghai by Chinese protesters in April 2005, ongoing territorial disputes with China, and growing concerns about China's military[89] and economic rise—particularly in the maritime dimension[90]—have fueled recent increases in Japanese nationalism. Japan remains in a difficult position and wants to avoid making controversial decisions. It will honor its commitments to assist American forces under the U.S.-Japan Security Treaty—including $4.4 billion in annual cost sharing;[91] nonetheless, it would doubtless prefer not to become directly involved in a Taiwan crisis. Japan fears Chinese economic sanctions and, in an extreme case, military retaliation.

Japanese constitutional issues (and the resulting political debate) might prevent *any* support, even air refueling or other forms of combat support from Kadena Air Force Base.[92] Although U.S. ships would not be constrained by such problems, the overall situation could become needlessly complicated. Defensive capability remains a gray area of the Japanese constitution and subject to interpretation. Even preparations for the adoption of theater missile defenses against the growing North Korean threat might require extensive constitutional revision.[93]

An issue of special sensitivity for Japan is the stationing of U.S. nuclear-powered aircraft carriers at Yokosuka, already home to fourteen thousand American personnel and eighteen ships.[94] The USS *Kitty Hawk* (CV 63) and *John F. Kennedy* (CV 67) are slated for decommissioning by 2008, leaving the United States with only nuclear-powered carriers. During IRAQI FREEDOM the *Kitty Hawk* battle group deployed to the Persian Gulf. The nuclear-powered *Carl Vinson* assumed responsibility for the Korean theater and made several port calls at Yokosuka. Tokyo has officially agreed to accept a home-ported U.S. nuclear carrier in 2008.[95] Given historical sensitivities, however, anti-nuclear opposition could develop political traction, making a strong fallback option in Guam all the more attractive.

There are no significant American naval assets in Okinawa, and there is no possibility of any. For its eighteen thousand Marines, Okinawa is geographically and topographically constrained; the island lacks live-fire artillery ranges and has no areas for tank-infantry, close air support, or battalion or regimental training. The Sakishima Islands (the southernmost islands of the Ryukyu group) are geographically attractive but politically problematic. An American presence there would be particularly provocative for China,

given the extremely close proximity to Taiwan. Okinawans are already upset with existing U.S. bases; if not for the pressure from Tokyo, local residents would have rejected them long ago. American deployment to Okinawa is also subject to the same domestic political problems as are other parts of Japan. The bottom line is that there is a danger that American regional capabilities could become excessively linked to Japanese politics. Indeed, perhaps as part of a larger American effort to relieve political pressure on the U.S.-Japan alliance, Guam is already scheduled to receive seven thousand Marines slated to be moved from Okinawa;[96] it is also to receive the headquarters of III Marine Expeditionary Force.[97]

South Korea: Developing Domestic Dissent

Basing in Korea has many significant disadvantages. First, the Korean Peninsula is highly unstable because of uncertainty over the future of North Korea and its nuclear weapons program. Second, South Korea has growing economic interdependence with China, giving Beijing leverage. China also has great control over Pyongyang's future and thus generally serves as a "power broker" on the peninsula.[98] Given the magnitude of both Pyongyang's threat and Beijing's leverage, Seoul may be resistant to using South Korea–based assets for extra-peninsular missions.[99] The U.S. Navy's Korea-based assets number only 293 sailors and fifty-two Marines; they include no dedicated seagoing forces at all.[100]

Moreover, anti-American demonstrations in South Korea over the past few years and increasing anti-American sentiment across East Asia suggest that the United States may not forever enjoy basing rights in South Korea or even in Japan. Secretary of Defense Donald Rumsfeld suggested in testimony to the Senate Armed Services Committee in February 2003 that U.S. troops in South Korea might be better "oriented toward an air hub and sea hub."[101] Under the Land Partnership Plan, which is to cost Seoul $5.4 billion and Washington $2.6 billion, U.S. "forces will relocate away from the increasing congestion . . . of the greater Seoul area and will be consolidated into two major hubs in the central and southern sections of the country."[102] This is in addition to Seoul's $843 million cost-sharing contribution.[103]

These measures will bring U.S. troops out of the range of North Korean artillery and reduce the societal impact of America's presence in South Korea.[104] The sooner the American military restructures its force deployment footprint in East Asia to address host-country realities and emerging security threats, the more effectively it will be able to maintain a strong and stable presence in this vital but volatile region.

Go West—to Guam

All along the Pacific Rim, political and military forces combine to challenge American influence, and the future looks only worse. If America does not better prepare to face

the challenges ahead, an inappropriate force posture—or worse, an inadequate deployment of assets to East Asia—will reduce both its leverage in peacetime and its flexibility in crisis. An effective response will require political and geographical diversification of the U.S. naval presence in the region, with a chain of overlapping bases and access rights. The linchpin can be a strengthened base in Guam. American naval planners recognize the need to move resources westward to Guam as a first step in a long-term effort to pursue American interests in the region in a flexible way. Such investment should continue, strengthening the sovereign anchor of the American presence in East Asia. As yet, Guam remains a small base, in need of both capital investment and heightened respect from planners. Improving Guam's infrastructure is a necessary first step toward correcting these deficiencies.

At its core, the George W. Bush administration's national security strategy calls for decisive—and if necessary, preemptive—action to protect primary U.S. interests. Existing political and geographical problems with current Pacific basing options cast doubt on the nation's ability to conduct such actions in times of crisis. In Operation IRAQI FREEDOM, regional military cooperation was difficult to obtain (even through coercion), a fact that starkly reminds American policy makers of the need for diplomatic and military flexibility. Washington therefore must be ready to act, as a last resort, with a small coalition of partners, or even alone. To retain freedom of action in East Asia, American planners would do well to establish a presence for strike and deterrence not wholly dependent on outside support.

Current basing arrangements and operating patterns in the Pacific Fleet seem to reflect excessive optimism about getting "more from less." They strain U.S.-based naval assets, slow response time to the region, and rely too heavily on access rights that could evaporate during a crisis. Such problems are hardly unique to East Asia; American forces everywhere are stretched thin. But it would be a mistake to underestimate the growing need for increased presence in-theater or to keep extracting more from a burdened Pacific Fleet. Policy makers rightly conceptualize U.S. force posture in East Asia as a chain of overlapping bases and access rights. Fortunately, American planners have already committed to reducing long-term dependence on these foreign bases through a significant expansion of Guam's facilities.

Along with cosmetic and structural improvements on Guam, America needs to expand its portfolio of military assets in East Asia. U.S. force posture should reflect not only a capability to respond without delay to problems in the Korean Peninsula, the Taiwan Strait, and critical sea-lanes in Southeast Asia but also to check the scourge of terrorism and the proliferation of weapons of mass destruction. These distinct but related tasks require a layered military strategy. In the event of a crisis on the Korean

Peninsula, for instance, such a strategy would involve the use of bases in Korea as the front line, bases in Japan as the ready reserve, and a base in Guam as the deep reserve.

In a region where basing options are hamstrung by domestic politics, America needs access if it is to have influence. Operational readiness without support structures cannot be long maintained. But access to the Asia-Pacific theater is not enough. America needs a reliable center of operations, including supply, repair, logistics, and training, to "walk on stage" prepared to act. Deteriorating port facilities and infrastructure in Guam need to be expanded and updated. The recent assignment of three *Los Angeles*–class attack submarines on the island is a good first step. Increasing power projection into East Asia, however, will require that the U.S. Navy continue to "move west," shifting operational and support assets from San Diego and Pearl Harbor closer to their main area of operations, to an available site—such as Guam.

There are no new islands or new access points in East Asia;[105] therefore, the United States must use existing access points and bases. Building up the American presence on Guam is the single most important step that can be taken to effect this crucial transition. To maximize its ability to deter hostility, gather information, and overcome aggression, the Navy should continue to develop Guam as a forward base. A diversified and expanded American military presence on Guam will offer maximum flexibility in times of crisis and will help ensure that such future scenarios as the rise of a belligerent China, a change in Japanese foreign policy, or a reunification of the Koreas do not create a missing or weak link in the chain of American capabilities. Moving assets westward across the Pacific and maintaining a flexible and growing constellation of facilities and access rights in East Asia would keep that chain strong; anchoring the chain on Guam would render even the most determined enemies unable able to dislodge it.

Clearly, America's national interests call for maintaining a strong East Asian presence. Both current conditions and emerging long-term trends underscore the importance of building up Guam as a sovereign forward base to ensure American regional influence. But this significant strategic move merits careful consideration. It has already triggered significant scrutiny by China. One-fifth of the U.S. attack submarine fleet may soon be stationed at Guam. What level of forces on Guam would represent an over-concentration of assets?[106] How defensible is Guam from surprise attack? How easy, for instance, would it be for China to launch a surprise attack with cruise missiles several years from now? Could Chinese submarines hide in the waters around Guam? Will the United States station P-3 aircraft in Guam to protect submarines? Given their responsibility to prepare for worst-case contingencies, American defense planners must address these and other equally challenging questions.

Notes

This chapter in part expands on information previously published by the authors as "Anchoring America's Asian Assets: Why Washington Must Strengthen Guam," *Comparative Strategy* 24, no. 2 (April–June 2005), pp. 153–71. The opinions expressed here are solely those of the authors and do not represent the official policy of the U.S. Navy or any other branch of the U.S. government. Much of the information for this article comes from interviews and consultations with the following individuals, to whom the authors owe tremendous thanks: Col. James Conklin, USMC; Dr. Lyle J. Goldstein; Mr. Mel Labrador, Cubic Applications, Inc.; Cdr. Bruce H. Lindsey, USN; Lt. Col. Scott A. Lindsey, USMC (Ret.); Capt. Wesley E. Lindsey, USN (Ret.); Capt. Robert A. Mirick, USN; Prof. William S. Murray; Lt. (j.g.) Henry G. Nuzum, USN; Dr. Michael O'Hanlon; Dr. Jonathan D. Pollack; Adm. Carlisle A. H. Trost, USN (Ret.); and Capt. Clyde Villemez, USN. Dr. Carnes Lord reviewed the manuscript and provided valuable suggestions. The authors, and not these individuals, are responsible for any errors herein.

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1. Paul H. B. Godwin, "China's Defense Establishment: The Hard Lessons of Incomplete Modernization," in 歷史的教訓 [The Lessons of History: The Chinese People's Liberation Army at 75], ed. Laurie Burkitt et al. (Carlisle, Penna.: Strategic Studies Institute, U.S. Army War College, 2002), p. 35. See also 长风 [Zhang Feng], "核潜艇与中国海军" [Nuclear Submarines and China's Navy], 舰船知识 [Naval & Merchant Ships] (March 2005), p. 12.
2. "PACOM Facts," U.S. Pacific Command, www.pacom.mil/about/pacom.shtml.
3. James Brooke, "Looking for Friendly Overseas Bases, Pentagon Finds It Already Has One," *New York Times,* 7 April 2004, p. A17.
4. Bill Gertz and Rowan Scarborough, "Inside the Ring," *Washington Times,* 28 November 2003, www.washingtontimes.com/.
5. America's other sovereign "overseas" bases are in Hawaii.
6. James Brooke, "On Farthest U.S. Shores, Iraq Is a Way to a Dream," *New York Times,* 31 July 2005, p. A13.
7. Information for this paragraph was largely derived from "Guam & the CNMI [Commonwealth of the Northern Mariana Islands]: Projecting Sea Power 21," jointly prepared by the Guam and Saipan Chambers of Commerce, August 2003, available at www.guamchamber.com.gu/private/FINAL2Guam%20Sea%20Power.ppt.
8. "PACOM Announces Bomber Deployment to Guam," U.S. Pacific Command Public Affairs Office, 2 February 2004, www.pacom.mil/news/news2004/040202bomber.shtml.
9. Steve Limtiaco, "Admiral: Guam Key to Strategy," *Pacific Daily News* (Guam), 21 July 2004.
10. Robert F. Rogers, *Destiny's Landfall: A History of Guam* (Honolulu: Univ. of Hawaii Press, 1995), p. 133.
11. For a detailed overview of Guam's history as a strategic American outpost, see ibid., particularly chaps. 7–15.
12. "Guam in State of Emergency after Supertyphoon," U.S. Pacific Command Public Affairs Office, 9 December 2002, www.pacom.mil/guamtyphoon/0212typhoon/index.shtml.
13. "Rear Adm. Konetzni: Changing a Subculture from Inside Out," *Hawaii Navy News,* 20 April 2001, www.hnn.navy.mil/Archives/010420/konetzni_042001.htm. The USS *San Francisco* and USS *City of Corpus Christi* transferred from Norfolk, Virginia. Both had just completed refueling overhauls. USS *Houston* joined them from San Diego, California, in January 2004.
14. See *Chairman of the Joint Chiefs of Staff Submarine Study* (Washington, D.C.: Joint Chiefs of Staff, November 1999); U.S. General Accounting Office, *Force Structure: Options for Enhancing the Navy's Attack Submarine Force,* Report GAO-02-97 (Washington, D.C.: November 2001); U.S. Congressional Budget Office, *Increasing the Mission Capability of the Attack Submarine Force* (Washington, D.C.: March 2002), table 6, pp. 11, 33.
15. Statement of Admiral Vernon Clark before the Senate Armed Services Committee, 10 February 2005; "Resource Implications of the Navy's Interim Report on Shipbuilding," 25 April 2005, Congressional Budget Office.
16. This calculation assumes that a submarine is able to cover 480 nautical miles per day. The outer limit of Chinese territorial waters near

Qingdao, for example, is approximately 1,824 nautical miles from Guam. See also Commission on Review of Overseas Military Facility Structure of the United States, *May 2005 Report to the President and the U.S. Congress* [hereafter Overseas Basing Commission], p. J5.

17. Nuclear submarines have to be recored every fifteen to twenty years. The U.S. Navy now faces a costly decision concerning whether to recore some boats for the second time.

18. Capt. Wesley E. Lindsey, USN (Ret.), e-mail interview with Justin Mikolay, 23 January 2004.

19. Congressional Budget Office, as cited in Frank Oliveri, "Navy May Base More Subs in Pacific," *Honolulu Advertiser,* 30 October 2004.

20. Information in this and the next paragraph derived from Associated Press, "U.S. Carrier Still in Balance for Hawaii, Guam," 1 June 2005.

21. For a thought-provoking analysis concerning the political implications of establishing overseas bases, see Alexander Cooley, "The Politics of U.S. Bases Abroad," *Foreign Affairs* 84, no. 6 (November/December 2005), pp. 79–92. For a Chinese analysis of the foreign basing problems that have made sovereign bases more attractive to the U.S. military, see Liu Qing, "The Impact of U.S. Global Military Strategic Readjustment on Asia-Pacific Security," *Guoji Wenti Yanjiu,* 13 July 2005, FBIS CPP20050810000262. For Chinese concerns that America's recent force posture adjustments, including the shifting of additional assets to Guam, "break down constitutional or legal barriers . . . reduce the pressure on governments in this region . . . [and] give the U.S. a new strategic stage on which to dictate Asian-Pacific affairs"; see Bi Lei, "Sending an Additional Aircraft Carrier and Stationing Massive Forces: The U.S. Military's Adjustment of Its Strategic Disposition in the Asia-Pacific Region," *Renmin Wang,* 23 August 2004, FBIS CPP20040823000025.

22. James Brooke, "Guam, Hurt by Slump, Hopes for Economic Help from the Military," *New York Times,* 10 March 2003, p. A14. Guam's 160,000 residents stand to benefit economically from the island's increased military presence. Each additional submarine would bring roughly 150 sailors to Guam and $9 million in salaries for them and their support personnel.

23. Adam J. Hebert, "Footholds on the Pacific Rim: The Air Force Believes That, When It Comes to Access, More Is Definitely Better," *Air Force Magazine* (November 2002), p. 58; Justin Bernier and Stuart Gold, "China's Closing Window of Opportunity," *Naval War College Review* 56, no. 3 (Summer 2003), p. 10.

24. Robert D. Kaplan, "How We Would Fight China," *Atlantic Monthly* (June 2005).

25. Natalie J. Quinata, "Fighter Squadron Arrives on Guam: 12 Jets to Conduct Training Missions to Familiarize with Asia-Pacific Region," *Pacific Daily News,* 30 April 2005.

26. "America's Alliances in East Asia: Purposes and Prospects," *IISS Strategic Comments* 11, no. 3 (May 2005); William Cole, "Air Force Shifts Unit to Bolster Response," *Honolulu Advertiser,* 23 March 2005; David Isenberg, "Reshaping Washington's Global Footprint," *Asia Times,* 20 August 2004.

27. Unless otherwise specified, information in this and the following paragraph is derived from Overseas Basing Commission, pp. J3, J4, and H11.

28. The U.S. Navy is currently working to retain a total of three nuclear-powered attack submarines in Guam. Following the extensive damage to USS *San Francisco* in a grounding on 7 January 2005, which necessitated its transport to Bremerton, Washington, for repairs, USS *Buffalo* is scheduled to be homeported in Guam starting in September 2006. Mike Gordon, "Pearl Harbor Sub May Be Assigned to Guam," *Honolulu Advertiser,* 3 November 2005.

29. Malina Brown, "Classified Study Proposes Basing More Subs in Guam, Cutting Force," *Inside the Navy,* 14 June 2004, p. 1; Bryan Bender, "Sub Officers Objected to Closing Base in Groton," *Boston Globe,* 22 July 2005, p. 1.

30. Andrew Koch, "U.S. Basing Plans Shape Up for Speed and Flexibility," *Jane's Defence Weekly,* 16 June 2004.

31. Overseas Basing Commission, p. J5.

32. "U.S. to Boost Naval, Air Presence in Asia-Pacific," *New York Times,* 23 June 2004.

33. Gaynor Dumot-ol Daleno, "Bombers May Be Based at Andersen," *Pacific Daily News,* 27 September 2003, available at www.guampdn.com/news/.

34. "U.S. Navy and Raytheon Sign $328.4 Million Guam Base Operations Support Contract," Raytheon Company media news release, 10 January 2000, available at www.prnewswire.com/.

35. Overseas Basing Commission, p. H11.

36. Owen R. Cote, Jr., correctly observes that "it is unlikely that access to [foreign] bases will become more predictable in the future because it is unlikely that the U.S. will establish new military alliances as formal as those it established to prosecute the Cold War." Owen R. Cote, Jr., "The Look of the Battlefield," *Aviation Week & Space Technology,* 15 December 2003, p. 72.

37. At the same time, Cote notes, "unlike in air warfare, the technical trends in antisubmarine warfare will likely continue to favor stealth. Thus quiet submarines, especially those that deploy in littoral waters, will retain a significant advantage over submarine hunters. Together, these trends will make it more dangerous for U.S. surface combatants, amphibious ships, and sealift vessels to close hostile coastlines early in a conflict when opposing submarines are still extant." Cote foresees "an accompanying U.S. shift toward submarines deploying both overland sensor networks and fast standoff strike weapons," in part because "U.S. submarines will be the most effective means of providing a persistent source of fast standoff weapons close to opposing targets early in a conflict." Ibid., p. 73.

38. Scott Snyder, *Negotiating on the Edge: North Korean Negotiating Behavior* (Washington, D.C.: U.S. Institute of Peace Press, 1998), p. 117; Jonathan D. Pollack, "The United States, North Korea, and the End of the Agreed Framework," *Naval War College Review* 56, no. 3 (Summer 2003), pp. 11–49.

39. See Edward Rhodes et al., "Forward Presence and Engagement: Historical Insights into the Problem of 'Shaping,'" *Naval War College Review* 53, no. 1 (Winter 2000), pp. 25–61.

40. Philip Shenon, "Gunboat Diplomacy, 96 Model," *New York Times,* 17 March 1996, p. IV-1.

41. China seeks to restrict severely the actions of foreign vessels not only within its territorial waters (out to twelve miles) but also within its exclusive economic zone (between twelve and two hundred miles from shore). Article 6 of the Territorial Waters and Adjoining Areas Act of the People's Republic of China requires all military vessels to obtain permission before transiting Chinese waters. Article 7 requires that "all foreign submarines and other underwater vehicles" must be surfaced. These regulations are referenced in Beijing's closest known equivalent to an operations law handbook, 赵培英 [Zhao Peiying, ed.], 当代军人国际法基础 [Basis of International Law for Modern Soldiers], (Beijing: 解放军出版社 [People's Liberation Army Press], 1996), "全军军事科研工作'八五'计划列项课题" [Army-Wide Military Affairs Research Work '85' Plan Study Subject], pp. 87–88.

42. Overseas Basing Commission, p. J5.

43. Weng Hangsong, "An Analysis of Adjustments of U.S. Global Military Deployment," *Renmin Wang,* 18 May 2005, FBIS CPP20050518000054.

44. For a Chinese perspective on the U.S. deployment of three attack submarines to Guam, see 台风 [Tai Feng], "中国需要反潜巡逻机马?" [Does China Need Antisubmarine Patrol Aircraft?], 舰载武器 [Shipborne Weapons], no. 3 (2005), pp. 70–75; "美国陈兵关岛虎视台海" [U.S. Troops Deployed in Guam Vigorously Watch the Taiwan Strait], 世界新闻报 [World News Report], 15 February 2001; "美核攻击潜艇欲驻关岛意何为" [Why America Stations Nuclear Attack Submarines in Guam], 信息日报 [News Daily], 3 November 2000, p. 22; "美国核潜艇关岛触礁" [U.S. Nuclear Submarine Strikes a Reef Near Guam], 环球时报 [World Times], 20 January 2005; Zhao Xiaozhuo, "The United States Does Not Want to Get Involved in a Crisis in the Taiwan Strait," *Huanqiu Shibao,* 3 January 2005, FBIS CPP20050114000176.

45. See "美军战略调整中的关岛" [Guam Undergoing U.S. Strategic Adjustment], 中国国防报 [China National Defense News], 24 February 2004; "关岛: 美军亚洲'战略漂浮岛'?" [Guam: The U.S. Military's 'Strategic Buoy' in Asia?], 中国国防报 [China National Defense News], 22 June 2004; "美拟在关岛部署战机" [America Plans to Deploy Combat Aircraft to Guam], 人民日报 [People's Daily], 15 January 2004; "美军增派远程轰炸机赴关岛内幕" [The Inside Story of America's Deployment of Additional Long-Range Bombers to Guam], 世界新闻报 [World News Report], 12 April 2004, p. 11; "美战略调整中的关岛" [Guam Undergoing U.S. Strategic Adjustment], 西部时报 [Western Times], 14 April 2004, p. 8; "陈水扁带蚊帐'过境'关岛" [Chen Shui Bian 'Transits' Guam with Mosquito Net], 环球时报 [World Times], 28 January 2005; "关岛: 美军从这里进军亚太" [Guam: From Here the U.S. Military Advances to the Asia Pacific], 中国国防报 [China National Defense News], 3 September 2002; 江南 [Jiang Nan], "美军又要增兵关岛" [The U.S. Military Will Once Again

Increase Forces on Guam], 世界新闻报 [World News Report], 16 September 2002, p. 15. For Chinese concerns that the U.S. monitors undersea cables that transit Guam and Hawaii, see "全球1/10通话被美国监听" [The U.S. Monitors 1/10 of All Global Communications], 国防科技 [National Defense Science & Technology] (January 2005), p. 18; Lu Yousheng, "Readjustment of U.S. Global Military Deployment Gets into High Gear," *Liaowang,* no. 24, June 13, 2005, pp. 47–48, FBIS CPP20050621000103.

46. See for example 江南 [Jiang Nan], "关岛: 战略地位非同一般" [Guam: Unusual Strategic Position], 世界新闻报 [World News Report], 16 September 2002, p. 15; "美国重兵屯关岛" [U.S. Stations Massive Forces on Guam], 人民日报 [People's Daily], 19 February 2001, www.xinhuanet.com.cn; and 黄明君 [Huang Mingjun], "关岛将成美霸权的筹码" [Guam Is Becoming America's Hegemonic Bargaining Chip], 军事展望 [Military Prospect] (June 2002), pp. 58–59. For related Japanese observations, see Yoichi Kato and Tsutomu Watanabe, "Transformation of the U.S. Pacific Command in Full Swing," *Asahi Shimbun,* 11 August 2005.

47. See, for example, 海鹰 [Hai Ying], "美军核潜艇关岛触礁内幕" [The Inside Story on the USN Nuclear Submarine Accident], 舰载武器 [Shipborne Weapons], no. 3 (2005), p. 17.

48. 陆宝生 [Lu Baosheng], 透视美国军事战略大调整 [A Perspective on the U.S. Military's Major Strategic Adjustment], 党政论坛 [Party & Government Forum] (May 2005), pp. 32–33. For similar analysis, see "U.S. Wanton Distortion Clearly Reveals Its Attempt," *Renmin Ribao,* 21 July 2005, FBIS CPP20050721000150; Zhang Jiye and Chen Wenxin, "Why Is the U.S. Military Playing Up the 'China Military Threat Theory'?" *Xiandai Guoji Guanxi* (July 2005), pp. 34, 38, FBIS CPP20050912000249; Su Kaihua, "Continuity and Impact of the Bush Doctrine," *Guoji Wenti Yanjiu* (March 2005), FBIS CPP20050415000197.

49. Liu served as commander of the Chinese People's Liberation Army Navy (PLAN) from 1982 to 1988. He is known for both his instrumental role in modernizing China's navy and for his recommendation that China develop an aircraft carrier. See 刘华清 [Liu Huaqing], 刘华清回忆录 [The Memoirs of Liu Huaqing] (Beijing: People's Liberation Army Press, 2004), p. 437; Bernard D. Cole, *The Great Wall at Sea: China's Navy Enters the Twenty-first Century* (Annapolis, Md.: Naval Institute Press, 2001), pp. 165–68.

50. See for example, "横戈海疆" [Patrolling Our Territorial Seas], 中国水运报 [China Water Transport News], 17 May 2002, p. 4.

51. According to one Chinese operator, "The so-called 'island chain' is a peculiar concept; it has both geographical implications and political-military substance. We Chinese soldiers, especially navy sailors, have complex emotions regarding this term." "我在太平洋上航行" [I Sailed in the Pacific], 华夏时报 [Huaxia Times], 10 July 2001, p. 5. For indigenous analyses of China's evolving maritime strategy, see "思虑新时期国家最高利益需求展望大海军时代的黎明 我提出中国'海军战略' 问题" [Consider Carefully Our Highest National Interests of the New Period/Looking Ahead to the Dawn of a Large Navy Era/Posing the Issue of China's Naval Strategy], 军事历史 [Military History], no. 1 (2005); "中国近代海军战略战术思想的演进" [The Evolution of China's Modern Naval Strategy, Tactics, and Thought], 军事历史研究 [Military Historical Research], no. 1 (2000); "中国未来的海军建设与海军战略" [China's Future Naval Construction and Naval Strategy] 战略与管理 [Strategy & Management], no. 5 (1999); "中国海军的未来舰队" [The Future Fleet of China's Navy], 舰载武器 [Shipborne Weapons], no. 12 (2004).

52. For a Chinese argument that the United States cooperates with Japan militarily to contain China, see "西太平洋美军'岛链'情结" [The U.S. Military's Strong 'Island Chain' Sentiment in the Western Pacific], 中国国防报 [China National Defense News], 29 June 2004; "武士刀 出鞘:日本对华政策硬化" [The Samurai Sword Is Out of Its Scabbard: The Hardening of Japan's China Policy], 国际先驱导报 [International Herald], 21 January 2005.

53. See note 52. On the archipelagos, see "日本军舰跟踪我国科 考船" [Japanese Warships Track Our Scientific Research Vessels], 世界新闻报 [World News Report], 17 May 2004, p. 24.

54. Unless otherwise specified, information for this paragraph is derived from 王京 [Wang Jing, editor], "美航母在台湾周围演习什么？"（二）[The American Aircraft Carrier Conducts What Exercises around Taiwan? (Part 2)] 央视国际 [CCTV International], 19 June 2004, 6:25 PM,

www.cctv.com/program/hxla/20040620/100489.shtml. For similar analysis by Zhao concerning Guam's strategic location, see "Across the Strait," *CCTV,* 8 April 2005, FBIS CPP20050409000033. A more expansive definition of the island chains considers the first to run south from Alaska and the Aleutian Islands and the second to run south to Australia and New Zealand. See Dan Jie and Ju Lang, "Russian Strategic Bomber to Fly to China," *Jianzai Wuqi,* March 2005, pp. 12–16, FBIS CPP20050328000206.

55. See, for example, "海上逐鹿" [Maritime Contention for State Power], 中国船舶报 [China Shipping News], 27 August 2004, p. 11.

56. For similar analyses, see Yu Yang and Qi Xiaodong, "Major Realignment of U.S. Military Bases: Deployment Aimed at Launching 'Preemptive Strike,'" *Zhongguo Guofang Bao,* 19 April 2005, p. 2, FBIS CPP20050420000062; Wu Qingli and Xie Jingsheng, "Analysis of Global Force Readjustment by U.S. Military," *Jiefangjun Bao,* 1 September 2004, p. 12, FBIS CPP20040901000043; "U.S. Military Commitment to Asia to Be Smaller but Deadlier after Realignment," *Xinhua,* 18 August 2004, FBIS CPP20040818000106; Li Xuejiang, "People's Commentary on Current Affairs: Why Is the United States Always Unable to Get On with China?" *Renmin Wang,* 19 July 2004, FBIS CPP20040719000097. For other Chinese perceptions of a specific American threat from Guam, see "美全力加强关岛战备 遏制中国" [America's All-Out War Preparation to Strengthen Guam and Contain China], 联合早报网讯 [Zaobao Network], 27 June 2005, www.zaobao.com/special/newspapers/2005/06/others050627g.html; "美国欲用顶级隐形战机压制中国苏-30" [The U.S. Wishes to Use Top Class Stealth Fighters to Suppress China's Su-30], 国际先驱导报 [International Herald], 23 April 2004, p. 1; "核潜艇进关岛 美国居心叵测" [Nuclear Submarines Enter Guam: The U.S. Harbors Unfathomable, Evil Intentions], 中国国防报 [China National Defense News], 2 April 2002, p. B04; "美国屯兵关岛意欲何为" [Why America Places Weapons in Guam], 河北工人报 [Hebei Worker News], 24 February 2001, p. 6.

57. A recent issue of China's official *People's Daily* mentions only two "island chains," the first and the second. "美军忙著大调整" [U.S. Navy Preoccupied with Major Adjustment], 人民日报 [People's Daily], 9 July 2004.

58. "美国鹰派人物再放狂言: 透视美国空中打击中国计划" [Members of the U.S. 'Hawk Faction' Rave Again: A Perspective on a U.S. Plan to Attack China from the Air], 国际展望 [World Outlook], no. 9 (May 2005), pp. 27–28.

59. U.S. Department of Defense, *2005 Annual Report to Congress on the Military Power of the People's Republic of China, Pursuant to the National Defense Authorization Act Fiscal Year 2000* (Washington, D.C.: 19 July 2005), p. 29. See also Wendell Minnick, "China Tests New Land-Attack Cruise Missile," *Jane's Missiles & Rockets*, 21 September 2004, www.janes.com.

60. See, for example, "美军在关岛部署巡航导弹" [The U.S. Military Deploys Cruise Missiles in Guam] 人民日报 [People's Daily], 30 August 2000, p. 6; "美常规空射巡航导弹移防太平洋关岛" [America Shifts Conventional Air-Launched Cruise Missiles to Guam in the Pacific], 中国国防报 [China National Defense News], 4 September 2000, p. 1; "美国空射巡航导弹部署关岛真想" [The Real Considerations behind America's Deployment of Air-Launched Cruise Missiles in Guam], 信息日报 [News Daily], 29 August 2000, p. 3; "美巡航导弹部署关岛真相" [The Real Considerations behind America's Deployment of Cruise Missiles to Guam], 河南商报 [Henan Business News], 1 September 2000, p. 7; "关岛导弹瞄准谁" [Who Are Guam's Missiles Aimed At?], 经济导报 [Economic News], 30 August 2000, p. 24. For a detailed analysis of how China might attempt to defeat a U.S. attack using cruise missiles based in Guam, see "关岛的巡航导弹瞄准谁?" [Who Are Guam's Cruise Missiles Aimed At?] 山西科技报 [Shanxi Science & Technology News], 5 May 2001, p. 8. For information on China's cruise missile development, see 田金文 [Tian Jinwen], "如何提高巡航导弹生存能力和打击效果" [How to Improve Cruise Missile Survivability and Attack Effectiveness], 航天电子对抗 [Aerospace Electronic Warfare], no. 1 (2005), pp. 12–14. For an overview of China's cruise missile development, see 曹晓盼 [Cao Xiaopan], "中国的巡航导弹现状" [The Current Status of China's Cruise Missiles], 舰载武器 [Shipborne Weapons] (November 2004), pp. 26–27.

61. For a detailed account of China's indigenous Song-class submarine development and testing, see 人民日报记者翟启运, 新华社记者陈万军 [People's Daily Reporter Zhai Qiyun, Xinhua News Agency Reporter Chen Wanjun] "为了新型潜艇的诞生:记海军驻438厂 军事代表室" [For the Birth of a New

Class of Submarines: Commemorating the Military Affairs Representatives Office Stationed at Factory 438], 新华社武汉 8 月 1 9 日电 [Xinhua News Agency, Wuhan, morning of 19 August 2005, electronic], 解放军报社版 权所有 [PLA General Newspaper Office possesses all copyright].

62. For information on PRC maritime satellites, see "HY-1 Satellite," China Aerospace Science and Technology Corporation (CASC), www.spaceproducts.com.cn/default.htm; 孙自法 [Sun Zifa], "中国"海洋一号"A卫星成效显著" [China's Haiyang-1A Satellite Achieves Remarkable Success], 中新社北京 [Zhongxin News Agency Beijing], 28 May 2004; 左赛春 [Zuo Saiqun], "'天眼' 瞰视万里海疆: 记我国第一颗海洋卫星" ['Sea Eye' Looks Down on 10,000 Miles of Sea Dominion: Recording Our Country's First Ocean Satellite], 人民网 [People's Net], 16 May 2002, www.people.com.cn/GB/kejiao/42/155/20020516/729817.html.

63. See, for example, "天波后向散射超视距雷达反隐身及在我国国防建设中的作用" [The Use of Skywave Over-the-Horizon Radar in China's Defense Construction], 现代国防技术 [Modern Defense Technology], no. 3 (1995).

64. See "中国双星定位系统" [China's Two-Satellite Positioning System], She Jinpei, Yang Genqing, and Liang Xuwen, chief editors, 现代小卫星技术与应用 [Modern Small Satellite Technology and Application] (Shanghai: Shanghai Universal Science, 2004), p. 252; "北斗一号"为中国导航" [Beidou-1 Navigates for China], *Remote Sensing and Information,* no. 2 (2003); "北斗卫星是怎样导航定 位的" [This Is How the Beidou Satellites' Navigation Positioning Works], *Computer Automated Measurement & Control,* no. 6 (2003).

65. See "北斗卫星为神州导航" [Beidou Satellites and the Shenzhou (Manned Spacecraft's) Navigation], *China Surveying and Mapping,* no. 4 (2003); "北斗卫星通信功能在水文自动测报系统中的应用" [*Beidou* Satellites' Communication Capacity for Use in an Automatic Hydrological Survey System], *Hydrology,* no. 5 (2003); "北斗卫星在陕南雨量监测系统中 的应用" [The Use of *Beidou* Satellites in the South Shaanxi Province Rainfall Monitoring System], *Journal of Northwest Hydroelectric Power,* no. S1 (2004); "大有作为的卫星移动 信息管理应用系统" [There Is Great Potential for the Use of Satellite Motion Information Management], *Auto and Safety,* no. 7 (2002).

66. See "有中国特色的GPS系统: '北斗'卫星系统的战略运用" [There Is a GPS System with 'Chinese Characteristics': The *Beidou* Satellite System's Strategic Use], *World Outlook,* no. 8 (2004).

67. "Chinese Firms Join Galileo Project," *Washington Post,* 29 July 2005, p. D5.

68. See 王逸峰, 叶景 [Wang Yifeng, Ye Jing], 从中日核潜艇事件看我核潜艇的突防 [What the Nuclear Submarine Incident between China and Japan Tells Us about the Ability of China's Nuclear Submarines to Penetrate Defenses, part 1], 舰载武器 [Shipborne Weapons] (January 2005), pp. 27–31; part 2 (February 2005), pp. 34–41; part 3 (March 2005), pp. 45–51. See Andrew Erickson, Lyle Goldstein, and William Murray, "'Gate Crashing': China's Submarine Force Tests New Waters," *Chinese Military Update* 2, no. 7 (April 2005), pp. 1–4. For an analysis of the 'Han Incident' by the former JMSDF chief of staff, see 大賀 良平 [Oga Ryohei], "中国潜水 艦部隊が目指すもの" [What the PLAN Submarine Force Is Aiming For], 世界の艦船 [Ships of the World] 644, no. 7 (July 2005), pp. 96–101.

69. Edward Cody, "Shifts in Pacific Force U.S. Military to Adapt Thinking: New Plan Reflects Reaction to China's Growing Power," *Washington Post,* 17 September 2005, p. A1.

70. "中国海军舰队访问关岛" [China's Naval Fleet Calls on Guam], 人民日报 [People's Daily], 24 October 2004.

71. "Navy Fleet Visits Heart of U.S. Forces in the Pacific," *People's Daily,* 2 November 2003, available at www2.chinadaily.com.cn/en/doc/2003-11/02/content_277636.htm.

72. Douglas J. Feith, *Strengthening U.S. Global Defense Posture, Report to Congress* (Washington, D.C.: September 2004).

73. Jim Garamone, "Officials Discuss Global Posture Process," American Forces Information Service, 9 January 2004, www.defenselink.mil/news/.

74. Ibid.

75. Overseas Basing Commission, see esp. pp. ii–ix, K6–K7.

76. The USS *Cole* tragedy is reason for caution and careful planning but not for rejecting the idea of bases outright.

77. Overseas Basing Commission, p. 9.
78. U.S. Defense Dept., *Quadrennial Defense Review* (Washington, D.C.: 30 September 2001), available at www.defenselink.mil/pubs/qdr2001.pdf.
79. Thomas J. Christensen, "Posing Problems without Catching Up," *International Security* 25, no. 4 (Spring 2001), p. 34.
80. Joel Wuthnow, *The Impact of Missile Threats on the Reliability of U.S. Overseas Bases: A Framework for Analysis* (Carlisle Barracks, Penna.: U.S. Army War College, Strategic Studies Institute, January 2005), p. 35, available at www.carlisle.army.mil/ssi/pubs/.
81. Unless otherwise specified, data from this and the next paragraph are derived from Overseas Basing Commission, pp. J4, J6, J11.
82. Angel Rabasa, "The Changing Political-Military Environment: Southeast Asia," in *The United States and Asia: Toward a New U.S. Strategy and Force Posture*, ed. Zalmay Khalilzad et al. (Washington, D.C.: Project Air Force, RAND, 2001), app. C.
83. U.S. Defense Dept., *Quadrennial Defense Review.*
84. For instance, if Vietnam offered America access to Cam Ranh Bay but was then threatened by China during a Taiwan Strait crisis, Hanoi might back down, and Washington's position could be greatly complicated.
85. Overseas Basing Commission, p. H11.
86. Gregg K. Kakesako, "Admiral Evaluating Ideal Sport for Carrier," *Honolulu Star-Bulletin,* 21 August 2005.
87. Guam is approximately 1,381 miles from Taiwan. At twenty knots, the transit would take sixty-nine hours, just under three days.
88. Overseas Basing Commission, p. O1.
89. Exemplifying the detail in which Japanese analysts scrutinize China's military buildup, Japan's premier naval monthly *Sekai no Kansen* recently devoted an issue to China's naval development. See "今日の中国軍艦" [Chinese Warships Today], 世界の艦船 [Ships of the World] 651, no. 12 (September 2005), pp. 21–45, 47; 藤木 平八郎 [Fujiki Heihachiro], "中国海軍 その現況と将来" [The Present and Future of the Chinese Navy], pp. 69–75; 編集部 [Editorial Department], "注目の中国新型艦艇" [The Chinese Navy's New Warships], pp. 77–89; 多田 智彦 [Tada Tomohiko], "中国海軍のウエポンシステム" [The Chinese Navy's Weapon Systems], pp. 90–95; 石川 潤一 [Ishikawa Junichi], "中国海軍航空部隊の実力" [The Chinese Navy's Fleet Air Arm], pp. 96–99; 竹田 純一 [Takeda Junichi], "対中武器禁輸措置の中身と今後" [Western Nations' Arms Ban against China], pp. 100–105; "中国をめぐる軍事力バランス" [The Military Balance Around China], pp. 106–10.
90. The November 2004 issue of *Sekai no Kansen,* for instance, focuses on "The Sea Power Balance: Japan vs. China" [日本vs中国そのシーパワーを比較する]. A wide range of Japanese specialists address all major components of Sino-Japanese maritime development: 竹田 純一 [Takeda Junichi], "21世紀の東アジア海洋覇権を競う日本と中国" [Japan and China: Rivals for East Asian Sea Mastery in the Twenty-first Century], 世界の艦船 [Ships of the World] 633, no. 11 (November 2004), pp. 75–81; 木津 徹 [Kizu Tohru], "海軍" [Naval Forces], pp. 84–91; 渡辺 一正 [Watanabe Kazumasa], "コーストガード" [Coast Guard], pp. 92–95; 土井 全二郎 [Doi Zenjiro], "海運" [Marine Transportation], pp. 96–101; 長塚 誠治 [Nagatsuka Seiji], "造船" [Shipbuilding Industry], pp. 102–107; 土井 全二郎 [Doi Zenjiro], "水産" [Marine Product Industry], pp. 108–11; 寺島 紘士 [Terashima Hiroshi], "どうなる!?海底資源をめぐる日中の角逐" [Maritime Boundary Problems between Japan and China], pp. 112–17.
91. Overseas Basing Commission, p. M9.
92. Japanese support is uncertain, given the fragility of its ruling coalition. The Komeito and Soka Gakkai parties have close ties to China and strained relations with Taiwan. In the event of a crisis, they might seek to place constraints on the operation of U.S. forces and the Japan Self-Defense Forces.
93. David Pilling, "Japan Finds Missile Defense Plans Are Difficult to Launch: Tokyo May Be Forced to Dismantle Its Postwar Constitution If It Is to Combat North Korea's Ambitious Nuclear Program," *Financial Times,* 16 January 2004.
94. Overseas Basing Commission, p. H5.
95. Thom Shanker, "U.S. and Japan Agree to Strengthen Military Ties," *New York Times,* 30 October 2005.
96. "News Briefing with Secretary of Defense Donald Rumsfeld," U.S. Department of Defense Office of the Assistant Secretary of Defense (Public Affairs), 29 October 2005, available at www.defenselink.mil/transcripts/.

97. Ann Scott Tyson, "New U.S.-Japan Plan to Realign Military Defenses," *Washington Post,* 30 October 2005, p. 18.

98. The future of North Korea is far more important to Seoul than is the future of Taiwan; Beijing could exploit this situation as leverage in the event of a Taiwan Strait crisis.

99. Overseas Basing Commission, p. H7.

100. Ibid., p. H9.

101. Brooke, "Guam, Hurt by Slump, Hopes for Economic Help from the Military," p. A14.

102. Overseas Basing Commission, p. M3; U.S. Defense Dept., *Strengthening U.S. Global Defense Posture,* report to Congress (Washington, D.C.: September 2004), p. 12.

103. Unless otherwise specified, information for this and the next two paragraphs is derived from Overseas Basing Commission, pp. M9, H8, i, H5, J6.

104. The U.S. military has already begun working with the South Korean government to adjust its basing footprint on the peninsula. In 2004, the United States moved the five-thousand-strong 2nd Brigade Combat Team back to the continental United States permanently (via duty in Iraq) and is shifting remaining forces south of the Han River, where they will be consolidated into ten sites, from forty-one. The three major sites will be South West hub Osan/Camp Humphreys, South East hub Chinhae/Taegu, and Kunsan. Redeployment of 12,500 U.S. troops from Korea by 2008 will represent a 33 percent reduction of U.S. personnel, to, respectively eighteen thousand, four thousand, and three thousand at the major sites. Rapid reinforcement for the Eighth Army's remaining heavy brigade will be available from Okinawa, from which Marines will also rotate in for training. Seoul will acquire vacated U.S. installations, offer the Americans the use of joint facilities, and gradually shoulder an increasing share of self-defense responsibilities.

105. It might someday be possible to acquire rights to a small island or to create a man-made structure that would be the functional equivalent.

106. For a cost-based argument against basing more than three submarines in Guam, see Jason Ma, "Admiral: Three Submarines Is 'About the Right Number' on Guam," *Inside the Navy,* 13 June 2005.

CHAPTER FIVE

On Sea Basing

ROBERT O. WORK

The Impetus for Sea Basing

A Return to an Expeditionary Posture

The abrupt end to the Cold War, marked by the maintenance of powerful U.S. forward garrisons along the frontiers of the Soviet empire, took American defense planners by surprise. Even in 1989, after the dismantling of the Berlin Wall and the ensuing turmoil in Eastern Europe, the Joint Chiefs of Staff still believed the Soviet Union would remain the most serious threat to the United States through the 1990s.[1] As is typical of all transitions from one strategic era to the next, the period leading up to the final implosion of the Soviet Union in 1991, and just after, was one of enormous strategic uncertainty.

One thing was certain, however—that the need to maintain strong U.S. garrisons overseas would diminish over time. Some of the forces assigned to these garrisons would be relocated to the continental United States (CONUS); others would be demobilized altogether. The pace and scope of the drawdown would be determined less by existing threats than by the need to reassure allies that America would not retreat from world affairs.

Sixteen years into this new strategic era, the drawdown of forces stationed overseas continues, and the U.S. global posture is increasingly settled. The broad outlines of this posture should be quite familiar. Just as in the period from roughly 1890 until the end of World War II—a period I will refer to as the "Expeditionary Era"—the primary base and jumping-off point for most overseas U.S. expeditions will be the continental United States. CONUS-based forces will be augmented by rotational, forward-based forces, but for major power-projection operations most U.S. forces will originate from American soil. These expeditions will continue to be supported by the residual Cold War basing infrastructure. However, these bases will increasingly represent "coaling stations" for forces transiting from the United States and adjacent theaters.

U.S. expeditionary operations have occurred with steady frequency since the end of the Cold War. Freed from the requirement to be immediately ready for full-scale war against the Soviet Union, American leaders have employed the military for a variety of tasks, and operational tempo for all of the armed forces has climbed dramatically. In just sixteen years the United States has fought two major wars; conducted armed interventions in Panama, Somalia, Bosnia, Kosovo, and Afghanistan; and committed armed forces in a variety of other places and circumstances. During this period the term "expeditionary" gradually infused the lexicon of all the services, much to the chagrin of the Marine Corps, which felt it had cornered the (expeditionary) market during the Cold War.

Whether or not this high pace of military activity diminishes over time, as it did in the third and fourth decades of the Expeditionary Era, this new national security era shares several striking similarities with that earlier era. As it did then, the focus of U.S. defense strategists and military planners is gradually shifting away from Europe and toward Asia, albeit with a wider aperture. Today's national security focus is on the Greater Asian littoral, which extends from the Persian Gulf (Southwest Asia) to North Korea (Northeast Asia)—an area now often referred to as the "arc of instability."

The emerging American overseas basing network is eerily similar to that of the Expeditionary Era: Hawaii, Alaska, Midway and Wake islands, and Guam continue to play either major or supporting roles. The United States no longer has the sovereign hub it had in the Philippines, but it does have strong bilateral security treaties with Japan and South Korea that give it similar access to major sea, air, and ground facilities in the western Pacific. Although it no longer bases troops in Australia, the United States has ready access to that nation's superb ports, logistics support facilities, and training ranges. The two key additions to the U.S. naval overseas basing structure along the Asian littoral are the Fifth Fleet support facilities in Bahrain and on the island of Diego Garcia in the Indian Ocean.

Just as defense planners worried incessantly about the loss of forward Pacific bases in the Expeditionary Era, defense planners are increasingly worried about maintaining future forward base access when and where it is needed . This problem was first raised in a serious way by the 1997 National Defense Panel (NDP), an independent body tasked by Congress to critique the 1997 Quadrennial Defense Review (QDR) and to provide an alternative strategic review. The panel warned that future access to forward bases would be less assured over time, for two key reasons. First, absent a compelling, unifying threat like the expansionist Soviet empire, political access would have to be negotiated on a case basis and could not be counted upon. Depending on the circumstances, even reliable allies might balk at the prospect of U.S. forces mounting combat

operations from their soil in a crisis. Second, the vulnerability of fixed forward bases to ballistic and cruise missiles, possibly armed with weapons of mass destruction (WMD), would likely increase over time. At best, then, the NDP warned, U.S. forces operating from forward bases could be subject to preemptive or incessant attack by guided weapons or WMD. At worst, the United States might lose access to forward land bases altogether.[2]

Juxtaposed against the similarities between the current national security policy era and the first Expeditionary Era are several striking differences The most evident is that unlike during that earlier period, the United States is now the sole global "superpower." Accordingly, and despite the implosion of the Soviet Union, American global responsibilities continue to require substantial military capability. The standing "peacetime" U.S. armed forces are thus larger and far more capable than those maintained in the Expeditionary Era.

A second difference is that the current U.S. Navy is the most capable naval power in the world—by a wide margin. It is sufficient to say here that the Navy now enjoys uncontested command of the high seas; it no longer needs to concern itself about fighting its way across any ocean, as it did throughout the Expeditionary Era.

A third difference is that the U.S. military now consists exclusively of volunteers, coupled with the fact that the costs of continuing that force continue to increase. Growing manpower costs now influence how the force is used, designed, and structured in ways unimaginable during the Expeditionary Era, when peacetime forces were small and poorly paid and the majority of wartime troops were conscripts.

As just one example of how the volunteer force has changed U.S. force management, all the services have been obliged to make concerted attempts to keep the tremendous stresses created by the high operational tempo of the past sixteen years from impacting force retention. In this regard, all the services either have developed or are developing unit rotational bases to help manage the amount of time servicemen and women spend overseas. The Department of the Navy (DoN) rotational deployment model developed during the Cold War continued to work well with little modification for the Navy and the Marines after that competition was over. However, the Air Force and Army, both of which had adopted garrison deployment and reinforcement models during the Cold War, took some time to find approaches that worked in the new environment. For its part, the Air Force adopted in the middle to late 1990s a variation of the DoN model for its Aerospace Expeditionary Force (AEF) concept. The Air Force organized ten AEFs, of which two are always ready for immediate deployment at any time.[3] As for the Army, it took the stresses of the "global war on terrorism" to spur an ongoing transition to a modular brigade reorganization, which will result in a rotational base comprising forty-three active brigades and thirty-four National Guard brigades and capable of maintaining twenty brigades forward at any one time.

A fourth key difference between the current strategic era and the Expeditionary Era is that in the earlier period warfighting strategies centered on dominant industrial capacity and the massing of firepower and forces. In contrast, current warfighting concepts revolve much more around distributed operations, "information superiority," and the discrete, precise application of firepower, forces, and effects. There are many reasons for this, but perhaps none is as important as the maturation of guided weapons and munitions and of their associated planning and targeting networks.

A key characteristic of all guided weapons is accuracy independent of range. This characteristic turned weapons that mostly missed into weapons that mostly hit, with consistently impressive combat results. The first guided weapon—an air-dropped acoustical homing torpedo—was employed in combat in March 1943. Over the next four decades, guided weapons were introduced into more and more tactical operating regimes: surface-to-air, air-to-air, antisubmarine, antisurface, antitank, and air-to-ground warfare. Generally, whenever guided weapons were pursued or introduced, planning and targeting networks followed, as manifested by the rise of continental air defense networks, integrated air defense networks, and air battle management networks.

By the early 1980s, Soviet military theorists had concluded that the combination of these networks into coherent "reconnaissance strike complexes" would spark a military technical revolution. The impressive American victory in Operation DESERT STORM appeared to confirm this conclusion, despite the relatively small number of guided weapons employed. After the war, many American military officers began to speak of a broader "revolution in military affairs" (RMA) based on better guided weapons, sensors, and information, and improved networking of forces.[4]

Of course, the uniquely American RMA was not due solely to improved guided weapons and networks. Equally important were the improved quality of the men and women in the U.S. all-volunteer armed forces and the revolution in *joint* military affairs sparked by the Goldwater-Nichols Act. The rise of "jointness" has had a profound effect on U.S. military operations, in that it has greatly lessened the power and independence of the individual services and spurred increasingly effective joint battlefield cooperation and collaboration.

The major-combat phase of Operation IRAQI FREEDOM (OIF) came as close as any operation to date to achieving the visions associated with Soviet military theorists of the Cold War, the Goldwater-Nichols Act, and post–DESERT STORM American military thinking. In OIF the U.S. armed forces moved over a quarter of a million men and women and their equipment from bases in the continental United States and from residual Cold War bases and prepared a major invasion, all in less than six months. Once

the invasion began, thoroughly linked U.S. air, ground, sea, space, "cyberspace," and special operations forces operated in relatively smooth, synchronized fashion, and their actions were thoroughly integrated in a fast-moving, hard-hitting, multidimensional campaign built around massed guided-weapons fire and opportunistic maneuver.

Indeed, OIF suggests the basic warfighting model for U.S. expeditionary operations in the current strategic environment, as well as the powerful positive influence that improved jointness has had, and will continue to have, on American combat performance. Together with the "new" expeditionary posture now adopted by the U.S. military, these concepts provide an apt label for the new post–Cold War strategic period—"the Joint Expeditionary Era."

Initial Naval Course Changes during the Joint Expeditionary Era

The shift to the Joint Expeditionary Era had a profound impact on the thinking of all American strategists and planners, including those in the Navy. With the collapse of the Soviet Union and its powerful navy, there was no longer any credible threat to U.S. maritime dominance. When combined with radical improvements in combat efficiency facilitated by the growing maturity of guided weapons and distributed, joint operations, this circumstance spurred DoN planners to shift their attention from open-ocean sea control operations toward power-projection operations designed to influence decisively events ashore.

Less than a year after the Soviet Union ceased to exist, DoN strategists were thinking seriously about how the Navy needed to be resized and reshaped in response to the new national security era, as indicated in the 1992 DoN vision document . . . *From the Sea:*

> Our ability to command the seas in areas where we anticipate future operations allows us to resize our naval forces and to concentrate more on capabilities required in the complex operating environment of the "littoral" or coastlines of the earth. . . . As a result, our national maritime policies can afford to deemphasize efforts in some naval warfare areas. *But the challenge is much more complex than simply reducing our present naval forces. We must structure a fundamentally different naval force to respond to strategic demands, and that new force must be sufficiently flexible and powerful to satisfy enduring national security requirements.*[5]

In other words, DoN strategists anticipated that the locale for the future naval competition would shift from the high seas into the world's littorals.[6] From this new operating environment, the Navy needed to be resized and reshaped for a new mission—delivering joint goods and services ashore.[7]

The initial DoN moves to resize and reshape the fleet satisfied almost no one. Even among proponents of the Navy, some fretted about the extent of the fleet's inevitable post–Cold War demobilization. Between 30 September 1989 and 30 September 1997, the Navy fell from 592 to 365 ships, with additional cuts planned.[8] That year the QDR

set the post–Cold War "floor" at approximately 305 ships. This reduction represented a hefty 48 percent shrinkage in less than a decade.[9] These observers considered the dismantling of the Cold War "six-hundred-ship Navy" a mistake of monumental proportions, and they constantly disparaged the size of the Joint Expeditionary Era fleet in comparison to that of the Cold War.

Meanwhile, other critics, outside the service, charged that this smaller Navy was not the "fundamentally different naval force" promised by DoN leaders. They pointed out that the QDR target fleet—twelve aircraft carriers, fifty nuclear-powered attack submarines, and 116 surface combatants—was merely a shrunken version of the Cold War force, which, they argued, would be unsuited to the demands of the new national-security era.[10] Consistent with this line of thinking, some critics argued for a dramatic reduction in the size of the carrier fleet, others for a far larger submarine fleet, still others for a fleet made up of small, fast combatants. Underlying all these proposals was a belief that the Navy was in danger of becoming a relic of the Cold War.

Despite criticisms both inside and outside the service, one thing stayed constant throughout the initial decade and a half of the fleet's post–Cold War reshaping and resizing—the U.S. Navy remained the world's most powerful naval force in the world by a wide, and steadily growing, margin. Though it is smaller than the Cold War fleet in numbers, the U.S. fleet's current *capabilities* are unmatched. Moreover, comparing the fleet's current and previous sizes provides no indication of the Navy's current dominating position in the global naval competition. The U.S. Navy operates a war fleet that displaces some 2.85 million tons; the entire rest of the world operates a combined war fleet of 3.03 million tons. Only seventeen nations operate fleets with aggregate displacements greater than fifty thousand tons, and fifteen of these are friends, allies, or strategic partners of the United States. The contemporary U.S. battle fleet is a force without equal, and it enjoys a competitive advantage in combat capabilities perhaps unparalleled in naval history.[11]

The charge that today's Navy is just a smaller version of the Cold War force is also questionable. Although contemporary fleet platforms may look familiar, they have been substantially modified, the better to exploit guided weapons and to share data and information with other fleet units and joint forces. For example, as both the number of carrier aircraft capable of dropping guided munitions and the quantity of these munitions in shipboard magazines increased, carriers have gained vastly more powerful capabilities. Moreover, by virtue of substantial improvements to their information and planning systems, carrier air wings can now be seamlessly integrated in joint air campaigns. Similarly, the rapid and extensive introduction of vertical-launch missile systems in American surface combatants and submarines during the 1990s has

transformed the fleet into a large, operationally mobile missile battery capable of projecting enormous firepower in support of joint forces. If today's fleet looks generally the same as the Cold War fleet, it is in fact a far different and more capable one.

Beat to Quarters: Preparing for Future Naval Challenges

Despite the logic of the initial course changes made by DoN planners during the first decade after the Cold War, and despite the commanding position now enjoyed by the U.S. Navy, it is fair to say that further alterations to the fleet's course and speed will be necessary. The character and demands of the emerging Joint Expeditionary Era are far clearer than were the challenges of the early 1990s. For example, it seems increasingly apparent that dominating scale and capabilities in the guided weapons warfare regime have given the Navy and the other U.S. armed services an excess capacity over that needed to deal with "traditional" military challengers.[12] At the same time, it also is increasingly apparent that the Navy lacks the full range of capabilities needed to cope with three new "nontraditional" challenges that are emerging as natural responses to the crushing American advantage in guided weapons warfare, multidimensional planning. and targeting networks.

One observed response to American dominance in high-technology force-on-force warfare has been attempts to avoid it. As demonstrated in operations in Afghanistan and Iraq, many future challengers—especially nonstate actors—will elect not to mass and directly challenge the U.S. military. Instead, they will opt to wage irregular warfare, to employ terrorism, guerrilla tactics, and other means of indirect combat. These challengers will often fight in small, cell-based tactical organizations, favor close-in ambush tactics, and conduct operations that aim to inflict "death from a thousand cuts." The goal of these "irregular challengers" will be to frustrate the superior firepower of the U.S. military, cause the United States a steady level of pain, and simply survive long enough to exhaust American staying power.[13]

A second observed response to American conventional military dominance has been attempts to outflank it by seeking weapons of mass destruction, particularly nuclear weapons. Possessing an ability to inflict "catastrophic" damage on U.S. interests is seen by some governments, especially autocratic regimes like North Korea and Iran, as the only way to deter U.S. attacks—and, in the event of a confrontation, to overcome the huge American lead in conventional guided weapons. Similarly, nonstate actors see nuclear weapons as a means to attack U.S. territory, forces, and interests directly. As a result, protecting the homeland from catastrophic attacks and conducting power-projection operations under threat of nuclear attack will be key requirements during the Joint Expeditionary Era.[14]

A third likely response by future "near-peer competitors" will be to try to leap over U.S. conventional dominance with a combination of "disruptive" strategies and technologies.[15] The development of asymmetric, multidimensional battle networks as powerful as our own or of high-end counter-network weapons might represent one type of disruptive challenge.[16] Other types might be new forms of robotic warfare, space warfare, or low-cost, long-range, weapons that make extended-range barrage attacks against U.S. forces feasible.[17] New types of information warfare, biological warfare ("bio-war"), war using nanotechnology ("nano-war"), and the introduction of directed-energy weapons (DEW) might also qualify as serious disruptive challenges. Any of these possibilities would create a very different warfighting regime, one in which the United States might no longer have a clear advantage.

None of these three emerging challenges would necessarily entail a broader naval competition on the open ocean. Therefore, a continued driving impetus for further change will be the requirement to meet these challenges in the shallow and constricted waters along the world's littorals. Indeed, given its total command of the high seas, for the next several decades the Navy's value will be defined primarily by the degree to which it can contribute to joint campaign objectives after an uncontested transoceanic voyage. In other words, the Navy's value will primarily depend on the ease with which it can operate "right up to within a few miles of the enemy's shores."[18]

Said another way, the speed with which U.S. naval power can be brought to bear will be determined largely by its degree of littoral access.[19] Littoral maritime access can be described by one of four general conditions:

- *Unimpeded access,* in which the enemy has no credible naval forces or land-based defenses that threaten the advance of naval forces into littoral waters. Under these conditions, the Navy can immediately establish itself adjacent to the coast and provide appropriate support to joint expeditionary forces operating ashore. While U.S. naval forces might be subject to irregular surprise attacks, these attacks likely would have little impact on American strategic operations.
- *Guarded access,* referring to conditions in which the enemy has a coast guard or an irregular navy whose primary function is to guard maritime approaches and warn of an impending attack from the sea. In these circumstances, although the enemy might be able to subject U.S. naval forces to minor attacks or perhaps threaten them with mines, it would not be able to deny them freedom of action.
- *Defended access,* where the enemy can mount multidimensional attacks against naval forces, has maritime defensive capabilities credible enough to deter intervention, or is able to prevent American freedom of action in regional waters. Only U.S. assets designed to penetrate a defended battle space would initially

venture into the waters immediately adjacent to the enemy's coast. The bulk of the force would remain farther out to sea until defenses were reduced; only then would it move closer to the shore.

- *Contested access,* the most severe condition, is a situation in which the enemy has a robust, redundant, and survivable naval anti-access/area-denial (A2/AD) network capable of conducting long-range, over-the-horizon sensing and of controlling intense and sustained multidimensional guided-weapon attacks to the limits of its sensor range. Here, U.S. maritime access would be seriously contested; extensive counter-A2/AD operations would be required to mitigate the threat. While these operations were going on, the bulk of the naval force would need to remain in a high-seas sanctuary.[20]

The number of nations capable of mounting a serious defense of their maritime approaches or contesting American littoral maritime supremacy is today declining rather than increasing.[21] Naval analyst Norman Freidman concludes from a review of worldwide defense expenditures that there is no compelling evidence to suggest that high-end maritime defenses or A2/AD networks are now being broadly pursued. Given the increasing costs and difficulty in employing sophisticated weapons in a way that would seriously contest the Navy's ability to establish itself in regional waters, uncontested and guarded access are the most common conditions. The bottom line, then, is that for the foreseeable future few countries will be able to deter an advancing U.S. naval battle force, and fewer still will be capable of seriously contesting its operations in close-in littoral seas.

A key unknown is how soon this favorable condition will change, and how. A second key unknown is how the three aforementioned operational challenges will begin to manifest themselves in the Joint Expeditionary Era. What is known, however—and what will remain constant—is that in an era of sustained, high-tempo expeditionary operations and of uncertain forward base access, exploiting the littoral seas as a *joint base of operations* in support of U.S. campaigns and objectives will be a key, enduring requirement. The various degrees of littoral maritime access will simply dictate the initial extent of U.S. naval freedom of action and the speed with which naval expeditionary forces will be able to exploit the sea as a base of operations.

This explains the central position senior DoN leaders now place on the importance of "sea basing." As Vice Admiral Charles W. Moore, Jr., USN, and Lieutenant General Edward Hanlon, Jr., USMC, explained in 2003:

> Sea basing is the core of "Sea Power 21." It is about placing at sea—to an extent greater than ever before—capabilities critical to joint and coalition operational success: offensive and defensive firepower, maneuver forces, command and control, and logistics. By doing so, it minimizes the need to build up forces and supplies ashore, reduces their vulnerability, and enhances operational mobility.[22]

In championing this line of thinking, Admiral Vern Clark made clear the impact he expected the new emphasis on sea basing to have when he wrote in 2002, as Chief of Naval Operations (CNO):

> Beyond its operational impact, the Sea Basing concept provides a valuable tool for prioritizing naval programs. Sea-Based forces enjoy advantages of security, immediate employability, and operational independence. All naval programs should foster these attributes to the greatest extent feasible. This means transforming shore-based capabilities to sea-based systems whenever practical, and improving the reach, persistence, and sustainability of systems that are already afloat.[23]

Back to the Future

One might think, given the emphasis now placed on "sea basing" in the DoN's plans and preparations, that the idea represents some dramatically new, "transformational" naval capability. However, the idea of using "floating bases" for transoceanic power-projection is well over a century old. As early as 1901, Marine planners envisioned the need for basing "offensive and defensive firepower, maneuver forces, command and control, and logistics" at sea.[24]

These early ideas—tied to seizing advanced bases for the purposes of establishing sea control in forward theaters—started to take more definitive shape during the interwar period. As planners grappled with the problem of how to force a decisive sea battle with the imperial Japanese fleet, the unstated concept of a *sea-based sea-control fleet* became an important part of Navy war plans. The armored battle line would be a mobile naval artillery base, the primary arm for Battle Force offensive action. Newly developed aircraft carriers would be mobile aviation bases, from which aircraft could scout for the enemy's battle line, protect the U.S. battle line from air attack, and conduct independent raids. The amphibious assault fleet would form mobile assault bases from which to attack and seize forward operating bases. Underway replenishment ships would operate as mobile resupply bases; tenders and other vessels would act as mobile fleet logistics bases. In practice during World War II this vision proved to be remarkably prescient, excepting only that the expected roles of the battle line and aircraft carriers were reversed.

These floating bases were originally conceived to support sea control operations, but by the end of the war, with both the Japanese and German fleets in ruins, naval planners recognized that the broad oceans had been transformed into an uncontested U.S. joint operating base, from which naval forces could project joint power and decisively influence combat operations ashore. Accordingly, by the end of the Second World War the heart of the U.S. Navy had transformed itself into a *sea-based power-projection fleet,* composed of equally capable *strike* and *operational maneuver fleets* supported by a mobile and flexible *logistics sea base*.

The Power-Projection Fleet was designed primarily to support what are now referred to as "joint forcible-entry operations" (JFEOs) in contested theaters, as well as

subsequent joint campaigns ashore. Its power was amply demonstrated during the 1945 invasion of Okinawa, the prelude to what would have been the final invasion of Japan.[25] By late 1945, the Sea-Based Power-Projection Fleet was prepared to land 1.3 million men (including six Marine divisions) on mainland Japan and to support them with thousands of combat aircraft, hundreds of mobile artillery bases (surface combatants), and a vast sea-based logistics support network.

The Power-Projection Fleet was backed up by a huge *transoceanic cargo fleet*. During the war the U.S. Maritime Commission built, and the American merchant marine manned, 5,777 ships, including 2,751 Liberty ships and 531 Victory ships. Together, they transported 85 percent of all troops, equipment, and cargo hauled overseas during the war.[26] In the Cold War, however, the requirement to project joint combat power from the sea took a decided turn. With large standing garrisons maintained overseas, the requirement to project intact, ready-to-fight combat units was replaced by a requirement to deliver garrison reinforcements rapidly through established ports and airfields. The most efficient way to accomplish this task was a combination of prepositioned equipment sets and supplies on land and sea; combat aircraft flown directly to forward main operating bases; troops delivered from the continental United States by airlift; and additional equipment and supplies delivered from CONUS by sealift. All of this was facilitated by a robust forward theater logistics infrastructure, including numerous ports and airfields.

As a result, as the Cold War progressed the likelihood of forcible-entry operations became ever more remote, and all joint combat forces and operations became more and more "access dependent." Over the course of the Cold War, DoN attitudes about the Power-Projection Fleet gradually changed to adjust to these new strategic conditions. With little need to seize joint access or to support maneuver from the sea, Navy officers came to conflate the idea of power projection with strike operations and to view the sea primarily as a base from which to carry out air and missile attacks against targets at sea and on shore. By 1964, and especially after the Vietnam War, many Navy officers viewed the *amphibious landing fleet* as an expensive legacy of a bygone era.

For the Marines—the nation's so-called 911 force—the name of the game became being constantly ready to fight, able to get to a fight as rapidly as possible by whatever means available. Given that forward access was generally assured, the Marines worried less about fighting their way into a theater and more about sustaining operations once there. The sea became more an avenue for global patrolling and transport than a base from which to fight. The Amphibious Landing Fleet was viewed as a rotational pool for small, sea-based crisis-response forces. Large-scale, combined-arms fire and maneuver from the sea became an increasingly lost art.

The legacy of these Cold War attitudes is reflected in the makeup of today's Navy. The Power-Projection Fleet now consists of a *sea-based strike fleet* that requires no theater access "permission slips" and a *sea-based transport fleet* that does. The current Sea-Based Strike Fleet includes eleven "deployable" aircraft carriers (with an additional carrier in long-term overhaul) and seventy-one major surface combatants. Under the new Fleet Response Plan (FRP), this force can theoretically assemble six aircraft carriers and thirty or forty surface combatants anywhere in the world within thirty days.[27] Once in position, the carriers' embarked air wings can provide defensive "fires" for joint forces at sea and ashore, attacking thousands of aimpoints per day for as long as there is ordnance to drop or fire. Carrier aviation would be augmented by the surface combatants, which would bring to the fight as many as three or four thousand veritcal launch system (VLS) cells, filled with a variety of missiles, many devoted to land attack. This powerful naval force would be defended by a number of submarines, which themselves could conduct land attack strikes from their covert underwater sanctuaries. The strike fleet could be sustained at sea indefinitely, with little need for access to forward bases.

In contrast, and as will be discussed in detail in a moment, within the same thirty-day period, by using maritime prepositioning ships, the contemporary Sea-Based Transport Fleet could deliver the equipment and thirty days of supplies for three Marine and one Army combat brigades through deepwater ports or protected anchorages in the theater. Surge sealift forces could move approximately eleven additional sets of equipment for Army brigade "units of action" (UAs) through ports or anchorages—provided, once again, that access to those ports had been secured either politically or militarily. The preponderance of the personnel required to man this equipment would arrive on commercial air transports, through established foreign-government-controlled airfields.

The Sea-Based Transport Fleet retains a vestigial amphibious lift capability. The current force of thirty-five amphibious assault ships can lift approximately 2.0 fully constituted combat brigades with both their personnel and equipment. This is the smallest level of amphibious lift that the United States has maintained since World War II. Unlike the fifteen brigade equipment sets outlined above, these brigades require no port or airfield to facilitate their entry into a theater. They would leave their ships fully ready to fight their way ashore, if necessary.

The fleet's supporting Logistics Fleet has also been dramatically reduced since World War II. Today, underway replenishment capability resides in a small but capable thirty-three-ship Combat Logistics Force (CLF). Forward theater repair and salvage capability has been reduced to two submarine tenders, five fleet tugs, and four salvage ships. Moreover, naval logistics forces are sized to support forward operations of the Sea-Based Strike Fleet only, not larger joint forces.

This Sea-Based Transport Fleet, while ideally suited to the strategic conditions of the Cold War, is woefully inadequate for the emerging conditions and challenges of the Joint Expeditionary Era. The U.S. military and its allies are fighting a persistent, global irregular war in which repositioning and support of scarce ground forces is as important as it was in World War II. They are also faced with the possibility of confronting regional adversaries with nuclear weapons, which may be used to coerce regional neighbors into denying access to U.S. forces and to threaten fixed theater points of entry. Moreover, they confront the prospect of increasingly powerful littoral defenses or A2/AD networks using conventional guided weapons, which will require sustained operations from the sea in order to conduct progressive roll-back and theater break-in operations. Finally, the U.S. military may be tasked to provide logistics support to joint forces operating ashore to a degree not required since World War II. All of these circumstances call for the recreation of operationally independent, sea-based fire, maneuver, and logistics forces.

It would thus be most accurate to say that "sea basing" is an idea whose time has come again. With deference to Admiral Clark, it hardly seems likely that the future Navy will support joint combat power from the sea "to a greater extent" than it did during World War II or Korea. However, it is certainly true that it will need to be able to project and sustain joint combat power from the sea to a far greater degree than was necessary in the Cold War. Therefore, the former CNO was exactly right to conclude that thinking about sea basing and how it should shape the future Navy should be the first priority for DoN strategists, planners, and fleet platform architects.

As a starting point, the Navy should resurrect the idea of a Sea-Based Power-Projection Fleet with three distinct components: a Sea-Based Strike Fleet, consisting of aviation power-projection platforms and VLS-equipped surface combatants and submarines; a *sea-based expeditionary maneuver fleet,* designed to exploit the sea as a broad maneuver space and to mount combined-arms attacks from the sea; and a mobile Logistics Sea Base, including both combat and mobile logistics forces. While each of these three components plays a critical role in the Sea-Based Power-Projection Fleet, the remainder of this chapter will focus on the future requirements for sea-based expeditionary maneuver. Said another way, it will concentrate on the steps needed to transform today's Sea-Based Transport Fleet into a flexible and effective Sea-Based Expeditionary Maneuver Fleet.

Current Thinking about Sea Basing

Start Point: The Contemporary Sea-Based Transport Fleet

As discussed earlier, the current Sea-Based Transport Fleet is a legacy of the Cold War. It includes three major components, backed up by a modernized, albeit much smaller, version of the World War II fleet of transoceanic cargo vessels.

The transport fleet's first component is a thirty-six-ship *sea-based prepositioning fleet,* optimized for rapid response missions in conditions of assured access, including rapid reinforcement of forward-based or deployed joint forces.[28] This fleet includes:

- *The Maritime Prepositioning Force.* The MPF consists of sixteen ships organized into three squadrons. Each squadron is preloaded with the equipment, supplies, ammunition, and fuel to support a single Marine expeditionary brigade (MEB) in sustained combat for thirty days. With squadrons located in the Mediterranean, on Diego Garcia, and on Guam, MPF ships are within ten to fourteen days' steaming time from any accessible port in Europe, the Indian Ocean, or the western Pacific.[29]
- *The Combat Prepositioning Force.* The CPF, known in the Army as Army Prepositioning Afloat or Army Prepositioned Stock 3 (APS-3), resulted from a 1995 congressionally mandated Mobility Requirements Study.[30] This study recommended that the Army develop the means to transport a heavy brigade anywhere in the world within fifteen days. APS-3 is patterned after the MPF program: it consists of ships preloaded with equipment, supplies, ammunition, and fuel associated with an Army "2 x 2" mechanized brigade (i.e., a brigade with two armored and two mechanized infantry battalions), an artillery battalion, an engineer battalion, a combat support battalion, and a theater army logistics package designed to support heavy Army forces until a theater logistics infrastructure can be developed. The CPF currently consists of eight large, medium-speed roll-on/roll-off (RO/RO) ships (LMSRs) and two container ships filled with ammunition—a total of ten ships.[31]
- *The Logistics Prepositioning Force.* The LPF also consists of ten ships. Two are tankers converted by the Defense Logistics Agency (DLA) into offshore petroleum distribution platforms—sea-based fuel farms. Four carry weapons and supplies to support U.S. Air Force operations, and one logistics support ship carries Navy ordnance. All are stationed at Diego Garcia. An additional three ships support the Marine Corps. Two aviation logistics ships (T-AVBs) each carry an intermediate maintenance activity (IMA) for a Marine expeditionary brigade's aviation squadrons. The ships are berthed on the east and west coasts of the continental United States. The third ship is a high-speed transport that supports the Marines based on Okinawa.[32]

All thirty-six ships in the Maritime Prepositioning Fleet are operated by the Military Sealift Command (MSC) and are manned by civilian contract mariners.

The second component of the Sea-Based Transport Fleet is the nineteen-ship *surge sealift fleet* (SSF), which is optimized for the rapid transoceanic transport of joint ground combat equipment from CONUS. These ships are operated by the MSC, which

maintains them in American ports at a high state of readiness (with activation times of ninety-six hours or less). They are designed to load and transport mechanized and armored combat units. Eight of the ships are former high-speed merchant ships built in the early 1970s; although relatively old, they remain the world's fastest oceangoing cargo ships, with speeds in excess of thirty knots. Together, these eight fast sealift ships (FSSs) are capable of lifting nearly all the equipment associated with a legacy Army mechanized division.[33]

The remainder of the SSF consists of eleven LMSRs. These eleven ships—along with eight sisters in the CPF and one in the MPF—are the largest, most capable military RO/RO ships in the world. They were built on the recommendation of the aforementioned Mobility Requirements Study. Each ship is capable of lifting over 390,000 square feet of vehicles and cargo at speeds of twenty-four or twenty-five knots. Their large capacity allows them to carry every vehicle in the joint force, as well as an armored battalion task force that is approximately 75 percent the size of a new Army brigade-sized UA. It would require between thirty-eight and fifty-two C-17 transport sorties to carry a similar load.[34]

The ships assigned to the Prepositioning and Surge Sealift fleets all require a deepwater port or anchorage to discharge their cargos. They are optimized for pierside unloading, using their roll-on/roll-off ramps; however, they all have cranes and can off-load their cargos "in stream"—up to four miles from the shore—albeit at much slower rates than is possible pierside.[35] The personnel associated with the equipment carried by the MPF, CPF, and Surge Sealift Fleet are flown to a nearby airfield to marry up with the equipment and prepare for combat in a procedure known as "reception, staging, onward movement, and integration" (RSOI). This process can take a week or longer. In other words, the forces associated with these ships are not ready to fight when delivered to a distant theater.[36]

The Sea-Based Transport Fleet's final component, the vestigial remnants of the large World War II Amphibious Landing Fleet, are designed to carry intact combat units—including their personnel, equipment, and cargo—and land them ashore in a ready-to-fight condition. The fleet consists of thirty-five active Navy amphibious ships. These ships were all developed during the Cold War and are capable of sustained speeds of between twenty and twenty-two knots. They include:

- *Twelve "big deck" amphibious assault ships.* These ships are the largest (forty thousand tons full-load displacement) and most capable amphibious warships ever built. They have large well decks and expansive aviation facilities, and they can carry up to 1,700 Marines and a considerable amount of landing force equipment. Five of the ships are aging *Tarawa*-class LHAs, commissioned between 1976 and 1980.

Seven belong to the newer *Wasp* class of LHDs, commissioned since 1989. An eighth LHD will be commissioned in 2007 to replace the oldest of the LHAs, maintaining the big-deck amphibious force—at least in the near term—at twelve ships. The remaining LHAs are to be replaced by new big-deck "LHA replacements," or LHARs.[37]

- *Twelve relatively young dock landing ships, or LSDs.* The first LSDs were developed during World War II and were among the most innovative amphibious ships of that war. They introduced the floodable well deck, from which a number of landing craft can be preloaded, stored, transported, launched, and recovered. Today, the eight ships of the LSD 41 class and the four ships of the LSD 49 class are the primary carriers of the high-speed "landing craft air-cushion" (LCAC), which delivers heavy Marine equipment from ship to shore. All twelve LSDs were commissioned after 1985. The ships were not then expected to be replaced until the late 2020s; however, because they were not well maintained in the 1990s, they are in poor shape for their age today and are increasingly expensive to operate.[38]
- *Eleven aging* Austin-*class landing platform docks, or LPDs.* The LPD is a further development of the original LSD concept, in effect trading well-deck space for improved helicopter support facilities. These eleven ships are the oldest in the amphibious landing fleet, having been commissioned between 1965 and 1971. They are to be replaced by the new *San Antonio* (LPD 17) class.[39]

During the Cold War, the U.S. Navy regularly deployed forces to maintain mobile "naval garrisons" along the periphery of Europe and Asia. Three-to-five-ship amphibious ready groups (ARGs) routinely each carried a Marine Corps battalion landing team (BLT) on a six-month patrol. Over time, the standard amphibious patrolling unit became a three-ship ARG consisting of one big-deck LHA or LHD, one LPD, and one LSD. The ARGs carried a Marine expeditionary unit (special operations capable, or MEU[SOC]), consisting of an infantry battalion, a composite air group with helicopters and later vertical/short takeoff and landing (V/STOL) jets, a logistics group, and other attachments. During the Cold War, with no need to worry about a requirement to seize forward access, supporting rotational patrols of ARG/MEU(SOC)s became the most important task of the Amphibious Landing Fleet.

A major post–Cold War development was the partial integration of the amphibious fleet into the strike fleet. So-called expeditionary strike groups (ESGs) combined a three-ship amphibious ready group and its embarked MEU(SOC) with three missile-equipped surface combatants, a nuclear-powered attack submarine (SSN), and other forces. The ESGs allowed the Navy to create a more dispersed naval global strike network and provide presence in areas where a carrier strike group (CSG) was either unavailable or inappropriate. Given their balanced strike and maneuver capabilities, the

twelve ESGs rapidly became the DoN's preferred quick-response force for the global war on terrorism.[40]

For major power-projection operations, the ESGs would combine to form an amphibious task force. The total lift requirement for an amphibious task force is expressed in terms of five lift-related "fingerprints": number of troops carried; vehicle storage area, expressed in thousands of square feet ("vehicle square"); cargo stowage area, expressed in thousands of cubic feet ("cargo cube"); number of aircraft parking and operating spots, expressed in CH-46 helicopter parking spot equivalents ("deck spots"); and the number of LCACs carried.[41] Today, the combined thirty-five-ship Amphibious Landing Fleet can carry 3.0 Marine expeditionary brigade equivalents with respect to cargo cube, helicopter deck spots, and LCACs; 2.5 MEB equivalents in troops carried; but only 1.9 MEB equivalents in vehicle square. As the *force* lift is limited by the smallest of these five fingerprints, the Amphibious Landing Fleet can technically carry only 1.9 MEB equivalents.[42]

The combined ninety-ship Sea-Based Transport Fleet (thirty-six prepositioning ships, nineteen surge sealift ships, and thirty-five amphibious ships) is backed up by a fifty-eight-ship *ready reserve fleet.* The RRF, the modern version of the World War II fleet of transoceanic cargo vessels, is maintained and operated by the MSC and optimized to provide sustained logistical support for U.S. expeditionary operations. RRF ships are maintained in a reduced operating status in American ports; they can be activated in four, five, ten, or twenty days. The RRF includes government-owned tankers, auxiliary crane ships, roll-on/roll-off ships, and heavy lift ships. Because of their configurations, these ships are especially suitable for transporting and off-loading bulky, oversized military equipment.[43]

The RRF provides the essential sustained logistic support for all joint power-projection operations. For example, between 1 January and 1 May 2003, in support of OIF, the combined force—augmented by ships from the Prepositioning and Surge Sealift fleets—delivered 25.9 million square feet of combat cargo, including nearly two hundred thousand pallets of munitions and food, and 261 million gallons of fuel to U.S. forces in the Persian Gulf.[44]

A Question of Deployment and Employment

As is readily evident from the foregoing discussion, and consistent with the strategic requirements of the Cold War, the contemporary Sea-Based Transport Fleet is an "access-sensitive" force optimized for unimpeded and guarded access scenarios but heavily dependent on the availability of deepwater ports and airfields in forward theaters. This is a far cry from World War II, when the operational maneuver fleet was designed primarily for conditions of contested or uncertain access.

The distinction between the Sea-Based Transport Fleet and a *sea-based operational maneuver* fleet is best explained by envisioning expeditionary maneuver operations as involving three basic steps: the *deployment* of combat units, the *employment* of combat units, and the *sustainment* of combat units.[45] A force designed for uncertain access considers the first two steps—deployment and employment—as one seamless step, requiring that the units be transported and inserted in ready-to-fight condition. In other words, the units must be capable of conducting long-range operational maneuver over and from the sea—transitioning from deployment to direct combat operations with little pause. In contrast, a force designed primarily for assured access considers the deployment and employment steps as separate and distinct. This allows units to be broken up and deployed as separate packets of personnel, equipment, and supplies and then reassembled for employment in a forward theater. Only after the units are reassembled are they ready for combat.

With this in mind, compare the Sea-Based Operational Maneuver Fleet of World War II with the contemporary Sea-Based Transport Fleet. By the end of World War II, the Army had assembled sixty-seven infantry, sixteen armored, two cavalry, and five airborne divisions; the Marines had an additional six amphibious assault divisions.[46] The Sea-Based Operational Maneuver Fleet consisted of 2,547 amphibious landing ships of all types. This was over three times the total number of surface combatants in the 1945 Navy and fully 38 percent of the entire battle force.[47] This large fleet could transport and support the attack from the sea of thirteen full combat divisions, or 14 percent of the existing ninety-one nonairborne divisions.[48] Viewed another way, nearly one-fifth of the entire U.S. division-based ground force could be projected into a distant theater without access to forward land bases (thirteen by sea, five by air).

In comparison, the basic ground unit of action today is the brigade. Assuming that the ongoing modular Army reorganization results in forty-three active and thirty-four reserve brigade UAs—six of them airborne—and that the Marines can field a total of eight active and three reserve regimental combat teams, the current Sea-Based Transport Fleet can lift just less than 2.0 intact brigade equivalents (personnel and equipment) in ready-to-fight condition out of a joint brigade-based ground force structure of eighty-two nonairborne brigades.[49] This represents only 2.4 percent of the entire force. Moreover, there are only eight forcible-entry brigades (two by amphibious lift, six by strategic or tactical airlift)—that is, 9 percent of the force. Assuming that a port or protected anchorage and a nearby airfield are available, the force can quickly transport and deliver another fifteen or so complete brigade sets of equipment—an impressive 18 percent of joint ground-force equipment sets—to a distant theater. The personnel assigned to the equipment would need to be transported via either strategic or commercial airlift to the theater, where they would go through the RSOI process before they could be employed as combat units.

The shift in emphasis from a sea-based operational maneuver force, focused on power projection under conditions of contested access, to one focused on the delivery of troops and equipment under conditions of assured access is apparent. The question for joint and DoN planners, then, is this: Is the current access-sensitive Sea-Based Transport Force—which was constructed primarily to aid the deployment, not the employment, of forces—an appropriate one for the Joint Expeditionary Era?

The Road to Sea Basing

As the conditions of the Joint Expeditionary Era became clearer, an ever-increasing number of analysts and strategists concluded that the answer to the foregoing question was no. As a consequence, they believed that the DoN needed to reshape its sea-based maneuver capabilities so as to provide the nation with much greater global freedom of action. In essence, they argued that future sea-based maneuver forces must be better able to exploit the sea as maneuver space; be more capable of creating joint access, even if confronted by a determined adversary; and be better able to support joint power-projection operations without reliance on land bases.

These arguments struck a chord with Admiral Bill Owens, who as vice chairman of the Joint Chiefs of Staff could direct the services to respond to them. Indeed, he went even farther, directing the Joint Staff in 1994 to consider the development of "mobile offshore bases" (MOBs). As envisioned, these large, modular, ocean megastructures would be deployed to a joint operations area (JOA) to provide aviation, maintenance, supply, logistics, and operational support for U.S. and allied forces. Some concepts envisioned MOBs as large as a mile long and four hundred feet wide, enabling the takeoff and landing of C-17 and C-130 transport aircraft and housing complete combat brigades.[50]

The MOB concept was subject to intense scrutiny by both the Joint Staff and industry throughout the mid-1990s, but due to technical uncertainties and high costs (up to eight billion dollars) the MOB was ultimately scuttled.[51] However, the mere fact that the concept received such attention was evidence of the great changes in both the strategic environment and American strategic thinking. It is important to note, however, that the MOB was strongly influenced by Cold War thinking that separated the deployment and employment steps. It envisioned transporting separate MOB modules, stuffed with equipment, to a JOA and assembling them there into complete MOBs. U.S. combat forces would then be flown to the base, where they would marry up with their equipment and prepare for combat. In other words, the concept merely moved the port and airfield necessary for RSOI to sea, off an enemy's coast.

As the Joint Staff pondered the MOB, Marine planners concluded they should concentrate less on the rapid reinforcement of forward garrisons and allies and more on

arriving in-theater ready to either seize access or inject ready-to-fight combat forces into a rapidly developing fight. The initial Marine thinking was reflected in *Operational Maneuver from the Sea* (OMFTS) and *Ship-to-Objective Maneuver* (STOM), published in 1996 and 1997, respectively.[52] These two publications offered "new" concepts built explicitly on launching intact combat units directly from ships at sea toward objectives ashore and on creating joint force access. Importantly, both concepts explicitly rejected the idea of conducting amphibious *assaults* directly across defended beaches, embracing instead the model espoused and practiced by the Army during the World War II Southwest Pacific campaign—that is, to land where the enemy wasn't and then to expand access for follow-on operations from there.[53]

Soon after the publishing of these concepts, the 1997 National Defense Panel (NDP) wrote about the increasing threats to land bases:

> Even if we retain the necessary bases and port infrastructure to support forward deployed forces, they will be vulnerable to strike that could reduce or neutralize their utility. Precision strikes, weapons of mass destruction, and cruise and ballistic missiles all represent threats to our forward presence, particularly at stand off ranges. So, too, do they threaten access to strategic geographic areas [of importance to the United States].[54]

The NDP's key point was that the U.S. dominant lead in guided-weapons technology would undoubtedly diminish over time, making all future American power-projection operations more difficult and costly. However, naval advocates found the opportunity to emphasize the vulnerabilities of land bases too tempting to pass up; they began to assert that "for the most part, sea basing will likely prove more . . . operationally useful in the emerging strategic environment than land bases."[55]

Accordingly, just as the NDP published its final report in December 1997, the Marines followed up both OMFTS and STOM with *Maritime Prepositioning Force (MPF) 2010 and Beyond*.[56] The leases on the three MPF squadrons were scheduled to expire starting in 2009. The Marines—fully aware of the NDP's deliberations—were anxious to make the follow-on MPF squadrons less dependent on deepwater ports and airfields. One way to do this would be for MPF units to conduct the RSOI process onboard ships while they made their way to a JOA, thereby combining the deployment/employment phases. This thinking, known as "at-sea arrival and assembly" of MPF forces, was spurred, no doubt, by plans to use MPF squadrons in support of amphibious landings during Operation DESERT STORM.[57] However, it was also in line with both the NDP's work and the Marines' broader thinking on improving their ability to conduct operational maneuver from the sea.

However, the MPF 2010 and Beyond concept was much more expansive than just "RSOI at sea." Once the forces were ashore, the MPF ships would logistically support them directly from sea, obviating the need to create vulnerable "iron mountains" of

supplies ashore. This would require that the ships be capable of "selective off-load" of equipment and supplies. Finally, once the mission was complete they would serve as an offshore base to reconstitute and prepare forces for follow-on operations. In other words, MPF 2010 and Beyond aimed for a combination of the deployment, employment, and sustainment that had previously been possible only through the Amphibious Landing Fleet. Additionally, in contrast to the larger, monolithic MOB, MPF 2010 and Beyond described a more flexible, distributed approach to sea basing.[58]

Importantly, the Marines viewed this new MPF capability as *additive* to the existing Amphibious Landing Fleet, which would retain the mission of supporting joint forcible-entry operations. It would allow the "assault follow-on echelon" to transition more quickly from deployment to employment, thereby rapidly reinforcing the assault echelon deployed from amphibious assault ships, and then support both logistically until the follow-on joint force was established ashore.[59] However, because the capabilities outlined in the publication *MPF 2010 and Beyond* were portrayed as additive capabilities by Marine planners, the Navy, concerned about their potential costs, stonewalled the concept. Six months after being delivered for review, it remained buried in the Navy's staffing process.

Even as Marine recommendations for improved sea-based maneuver capabilities languished in the Navy Staff, the Army was making another push for new sea-based *operational* maneuver capabilities. Through the 1990s, Army thinkers engaged in a broad experimental and conceptual development process referred to as the "Army after Next" project.[60] The essential purpose of the project was to develop new ways of thinking about projecting ready-to-fight Army combat units over long ranges, a concept known as "operational maneuver from strategic distances."[61]

The Army after Next project explored both the air and sea-based technological requirements needed to support operational maneuver from strategic distances. Also, while new air maneuver transports that could land small, mobile combat units were considered valuable assets, Army planners were cognizant of the lessons of World War II, when many Army units—like Marine units—had been carried to the fight as intact combat units aboard amphibious ships. It is not surprising, then, that Army planners conceived of a new type, the Shallow-Draft High-Speed Ship, or SDHSS, as a key means to enable operational maneuver from strategic distances:

> Of all air and sea, current and future, lift capabilities, shallow-draft high-speed ships (SDHSS)—because of their speed, throughput capability, and capacity—most significantly impacted force closure. Air deployment remains the only way to rapidly establish the initial crisis-response presence of air expeditionary forces and a division equivalent of ground forces needed to preclude enemy forces' early success. But after a few days, SDHSS had a distinct advantage. It was the only strategic platform that *could deliver troops and equipment together in sufficient size to bring immediate combat power to bear. While in transit, commanders could conduct en route planning and receive intelligence updates.*

> Moreover, the SDHSS did not require a fixed port because it could discharge its combat power wherever there was at least a ten-foot draft and an acceptable beach gradient or discharge site. *Troops drove the future combat system (FCS) from the ship ready to fight onward to the tactical assembly area.*[62]

In addition to the large transoceanic SDHSS, Army after Next planners also espoused the virtues of smaller, high-speed, intratheater-range Theater Support Vessels (TSVs). Like the SDHSSs, the TSVs were envisioned as able to discharge their cargos through austere ports or possibly even over beaches, providing enormous flexibility in deploying and employing intact combat units.[63]

Needless to say, the Army's (re)embrace of sea-based maneuver nettled some Marines, who saw that province as theirs alone. However, by championing the idea of the SDHSS and TSVs, the Army provided indirect support to the Marines' own calls for improved sea-based maneuver capabilities.

Reinforcing Fires

The general concept of improving joint sea-based maneuver capabilities was further reinforced by follow-on studies as well as growing operational experiences. First, the Institute for Defense Analyses (IDA), a Pentagon-sponsored think tank, conducted a cost-effectiveness evaluation of the MOB and other potential operational alternatives. In 2001, IDA concluded that a MOB would be less cost-effective than a distributed sea base made up of a combination of nuclear-powered carriers and high-speed cargo ships. While the MPF was not specifically included as a part of this mix, it benefited from the explicit endorsement of a distributed, sea-based "system of systems" comprising a heterogeneous mix of platforms.[64]

Soon thereafter, DoD plans for offensive operations in distant, landlocked Afghanistan were complicated by the fact that the United States did not have immediate and ready access to nearby Central Asian bases. Although substantial access to land bases was subsequently negotiated, sea-based forces provided critical early access and support during ENDURING FREEDOM.[65] The nuclear-powered aircraft carriers USS *Enterprise* and *Carl Vinson* supported tactical aviation strikes from the Arabian Sea.[66] Moreover, the first conventional ground combat formation projected into Afghanistan was a Marine unit that originated from Task Force 58—a sea base hastily assembled off the coast of Pakistan.[67] Then, in early 2003, Turkey refused to allow the U.S. 4th Infantry Division use of Turkish territory to launch attacks into Iraq, denying the United States a northern axis of attack. It appears unlikely in retrospect that a 4th Division attack from the north would have materially affected the outcome of OIF and the subsequent occupation, but the Turkish refusal did complicate U.S. war planning.[68]

Operations ENDURING FREEDOM and IRAQI FREEDOM helped underscore the three basic strategic realities of the Joint Expeditionary Era. First, the United States would

be forever uncertain over where its next fight would be. Second, future U.S. power-projection operations would normally require the projection of joint forces over great transoceanic distances. Third, the United States would have to work harder to get both political and operational access to bases in distant theaters. One implication of these three strategic realities was that the joint force needed to increase its number of access-insensitive forces and to retain a forcible-entry capability in order to be able to create access if necessary.

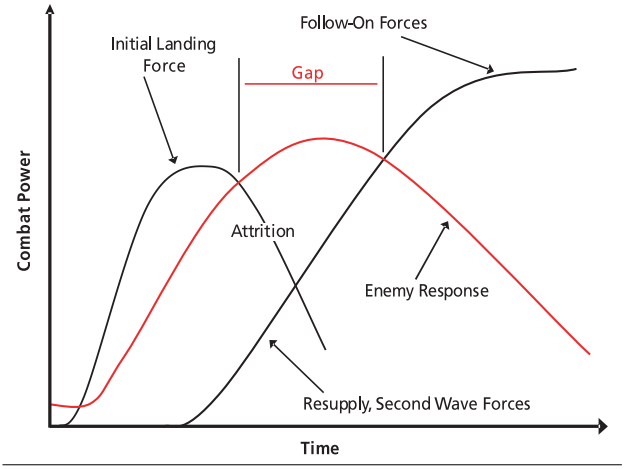
Some might object, pointing out that despite such setbacks as Turkey's refusal to allow entry to the 4th Division, the United States has been consistently able to negotiate land-based access during the Joint Expeditionary Era. In this view, political access has always been an issue.[69] The negotiation process for political access now appears to be more difficult and time consuming than the relatively speedy process associated with the Cold War;[70] nonetheless, neither the process nor the lack of land-based access has ever threatened the outcome of any American expeditionary operation.

Unquestionably, however, political and operational uncertainty over the early availability of bases was on the minds of the members of the Defense Science Board (DSB) Task Force on Sea Basing. This task force, assembled at the request of the Undersecretary of Defense for Acquisition, delivered its final report in August 2003. In this report, the DSB worried that both political *and* operational access would be more difficult to get in the future:

> Scenarios of future war rest on having intermediate staging in or near the theater of operations to support troops, logistics, and combat fire support. Recent events in Kosovo, Afghanistan, and Iraq have underlined, however, that availability of these bases, more often than not, is uncertain due to political factors that delay, limit, or prevent their use. Moreover, modern weaponry, such as precision cruise and ballistic missiles which will become widely available in the future, threaten to make fixed bases vulnerable to attack. The assumption of readily available, secure land bases is now open to serious question.[71]

The DSB concluded that a bedrock requirement for future joint forces would be the capability to create operational access, especially in contested theaters. They therefore focused on how "sea bases," functioning as mobile theater intermediate staging bases, would facilitate *joint forcible-entry operations.* In this regard, DSB members were clearly aware of the operational limitations of the Sea-Based Transport Fleet, and clearly influenced by new concepts such as OMFTS, STOM, MPF 2010 and Beyond, and the Army after Next. In their final report, the DSB wrote that "today's amphibious operations focus on *assaults over the shore and into seaports*, to establish footholds ashore permitting the buildup of sufficient combat power to conduct operations against inland objectives." In contrast, "operations from a future sea base focus on *direct assault of inland objectives* (with no operational pause) followed by moves to capture seaports or safe shore lodgments for heavier follow-on forces."[72]

FIGURE ONE
The Vulnerability Gap in Sea-based Operations



Source: DBS Task Force on Seabasing

To make this concept a reality, the DSB argued, future sea-based maneuver forces would need to be prepared and able to contend with the "vulnerability gap" associated with any power-projection operation in a contested theater (see figure 1). The DSB developed a notional "expeditionary operations profile," in which initial landing forces are placed into battle quickly to limit or shorten the conflict and to "capture and render useful in-theater seaports and airports of debarkation" for the introduction of follow-on forces. The delay between the introduction of initial landing forces and follow-on forces, during which the initial-entry force suffers losses, creates the vulnerability gap.[73]

Although a number of factors influence the magnitude and duration of the postulated vulnerability gap, one way to reduce it would be to limit the losses incurred during the initial insertion operations by the landing force. The DSB assumed that over time, "assaults over the shore" (e.g., surface maneuver over the shore with amphibious landing craft) would be increasingly at risk due to the threat of mines and precision-guided weapons fire. Moving a landing force through the shallows and across an easily targeted beach would simply be too casualty intensive. Moreover, task force members judged that future enemy A2/AD defenses would push naval forces much farther offshore, perhaps a hundred miles to seaward—much too far for a practical surface assault. Accordingly, the DSB concluded, the initial insertion of forces would be conducted, first and foremost, by the vertical maneuver from the sea base.[74] Its approach emphasized "light, rapidly deployable, maneuver forces" that were inserted into a theater by air and supported by remote guided weapon fires.[75]

Amphibious operations are defined as "a military operation launched from the sea by an amphibious force, embarked in ships or craft with the primary purpose of introducing a landing force ashore to accomplish the assigned mission."[76] The DSB's conflation of amphibious operations with *surface*-borne assaults, as well as its implicit assumption that aerial maneuvers would be inherently less risky than surface assaults in the future, is a clear indication of its bias toward air landing and air assault operations. The DSB never made clear, for example, how an enemy A2/AD network strong enough to force a naval force a hundred miles to seaward or to smother a surface littoral penetration point with precision fire would be incapable of detecting large-scale aerial maneuvers or shifting its fires to suspected helicopter landing zones. In any event, its new, "transformational" conception of "sea basing" was nothing more than a new expression of the idea of "vertical envelopment," a concept pioneered by the Marine Corps over fifty years ago.

In the early years of the Cold War, Marine planners were well aware that their surface assault forces could not rapidly cross a beach and immediately transition to high-tempo maneuver toward inland objectives. Faced with the prospect of nuclear attacks against forces stacked up on a defended beach, amphibious planners looked to the helicopter to create the conditions for the rapid movement of surface forces deep inland, with little pause at the beach. The initial concept was that air-landed assault forces would envelop *from the rear* the enemy forces defending the beaches, landing so close that they could not employ atomic weapons. Once the enemy forces were destroyed, heavy surface assault forces could traverse rapidly through an uncontested littoral penetration point and disperse inland before being targeted with nuclear strikes.[77] This was the very same thought expressed by the DSB, except that its members substituted a defended seaport for a defended beach. As they said, the goal of aerial forcible-entry operations was "to support the early stages of combat and to provide sustainment until, *with the seizure of ports,* heavier forces [could] arrive."[78]

The DSB's emphasis on sea-based aerial maneuver and support did not stop with the assault phase. The need to provide logistics support to deep-landed aerial assault forces was also central to the DSB's thinking. Task force members concluded that "sea-based sustainment" of the initial landing force, primarily by aerial resupply, would give the sea-based force the staying power to persist until heavier forces arrived.[79]

If the DSB's vision was an update of an old concept, its ultimate expression was breathtaking in scope. It was based on the assumption that there would be no land-based intermediate staging bases (ISBs) within two thousand miles of a joint operations area. Due to likely anti-access threats inside the JOA, they also believed, the sea base had to be able to support operational aerial maneuver from the sea from ranges beyond a

hundred miles from an enemy's coast and perhaps as far as 250 to 300 miles inland. The sea base also had to be continuously resupplied with all cargo and supplies necessary to sustain deep, air-landed forces and to be able to transfer these supplies to forces ashore. Moreover, it had to be able to do all of this in sea state 4.[80] Upon hearing these ambitious requirements, one British brigadier remarked dryly, "Now that would be *real* sea control."[81]

The DSB judged the future sea-basing "system of systems" to be "well beyond" current Navy and Marine Corps operational capabilities. It therefore recommended the formation of a Joint Sea Basing Office to oversee a coordinated, spiral development effort based on the realistic testing of the technologies and concepts needed to make sea basing work. To guide this testing, the DSB identified twelve key issues that required attention before the vision could be realized—sea basing's "Dirty Dozen." Of these twelve issues, DSB members believed three required capabilities stood out: new ships designed as part of a sea base system of systems; a sea-based heavy-lift aircraft capable of lifting more than twenty tons over theaterwide ranges; and an ability to handle and to transfer between ships heavy equipment and twenty-thousand-pound twenty-foot-equivalent-unit (TEU) containers in sea state 4.[82]

The DSB considered its vision, grand in scope as it was, achievable only after a decade or two of experimentation and technological development. Its members believed that a sea base with the desired characteristics could not be constructed until after 2020.[83]

The Need for Speed

The DSB's recommendation for an extended experimental period to develop further maneuver sea-base technologies and concepts of operations was derailed, in large part by a DoD emphasis on improved strategic reaction times. In 2002, the Joint Staff began a planning effort called "Operational Availability 2003." OA 2003 resulted when the Secretary of Defense challenged the metrics used by joint war planners for achieving rapid victory in two nearly simultaneous major combat operations (MCOs). OA 2003 reexamined the planning metrics for near-simultaneous MCOs in the Middle East and the Northeast Asian theaters in light of new mobility improvements and a dominating American lead in guided weapons. This review occurred in late 2002 and early 2003, after Operation ENDURING FREEDOM but before IRAQI FREEDOM.[84]

One of the original planning metrics developed in the early Joint Expeditionary Era for two near-simultaneous MCOs was a necessary forty-five-day delay between the first and the second. This delay was caused primarily by the need to "swing" sealift forces from one theater to another in order to shift ground maneuver forces, equipment, and supplies. OA 2003 suggested that the transition-time assumption could be reduced from forty-five to

thirty days, primarily because of improvements to the strategic sealift fleet made since the first Gulf War—particularly the construction of the new LMSRs—as well as the improved aerial throughput provided by the new C-17 transport aircraft.

OA 2003 also reevaluated how quickly a major theater war might be won. Starting with the U.S. invasion of Panama in 1989 and thereafter throughout the 1990s, joint military planners had increasingly emphasized the importance of rapidly applying overwhelming force against any potential adversary and achieving a quick victory. Joint forcible-entry operations would become just the first step of a set of "immediate, continuous, and overwhelming" operations designed to achieve decisive battlefield results. They would be part of a series of actions designed to seize the initiative early in a campaign so that an enemy would never be able to consolidate his military gains.

Staff action officers concluded that U.S. joint forces should strive to "seize the initiative" within ten days and to achieve all "swift defeat objectives" within thirty. This thinking was based on professional judgment and "gut feel," backed up by decade-old analyses of war plans against potential opponents in Southwest Asia, the western Pacific, and Northeast Asia. In any event, the Secretary of Defense subsequently endorsed this thinking by approving and inserting into Defense Planning Guidance what is now known as the "10-30-30" metric. The metric, described as a "stretch goal" by senior Office of the Secretary of Defense (OSD) officials, required that future U.S. forces be able to seize the initiative in any potential MCO within ten days, swiftly defeat a first enemy in thirty days, and then repeat the process on a second enemy in a different theater thirty days after that.[85]

The 10-30-30 metric represented the culmination of the force sizing and planning construct first adopted by the Bottom Up Review in 1993. This new goal was adopted after the most cursory of analyses and accepted without debate. Apparently, no one on the Joint Chiefs of Staff or in OSD questioned the wisdom of a planning metric that counted on the United States always winning short, thirty-day wars, or two wars in ninety days. In any event, the 10-30-30 metric was to have a major influence on the direction of joint sea basing plans.

The Fox in the Henhouse

By January 2004 the concept of sea basing was becoming more widely accepted within OSD, the Joint Staff, and the DoN. As discussed above, the concept was shaped and focused by two key goals: to provide joint forces with increasing operational independence from foreign bases, and to generate higher strategic and operational speeds.[86] Plans were to stand up the Joint Sea Basing Office recommended by the DSB.[87] However, these plans were soon modified, with fateful consequences.

In July 2004, after heavy lobbying by the services, the Joint Requirements Oversight Council (JROC) decided to forgo the establishment of the Joint Project Office and to instead pursue sea basing within the new Joint Capabilities and Integration and Development System (JCIDS). In the arcane jargon associated with the new process, the first step was to develop a "joint integrating concept," or JIC. The JIC, in turn, would guide a follow-on "capabilities-based assessment" (CBA). In the event, no doubt guided by the 10-30-30 metric, now institutionalized in Defense Planning Guidance, the JROC decided that the focus of the JIC should be to "seize the initiative phase of a major combat operation around the 2015–2025 timeframe" and that the Navy should be the lead service for the effort.[88]

The impact of these two JROC decisions was profound. First, by focusing on a near-term operational goal (i.e., being able to seize the initiative within ten days of a major combat operation, as soon as 2015), the JROC diverted the sea-basing effort from the long-term experimental and technological focus recommended by the DSB. By so doing, the JROC consigned that effort to a search for quick material solutions rather than a more measured and broader examination of how to exploit more fully the world's oceans as a vast joint base. Second, by assigning the JIC to the Navy, the JROC converted the JCIDS process into nothing more than the joint validation of DoN plans to recapitalize key components of its Sea-Based Transport Fleet.

Predictably, then, the subsequent Sea Basing JIC plowed little new ground. It simply integrated some concept work conducted by the U.S. Joint Forces Command with two updated DoN concepts published under the title *Enhanced Networked Seabasing and Maritime Prepositioning Force (Future)*.[89] As a result, the definition of sea basing outlined in the JIC was nothing more than a restatement of concepts outlined in *MPF 2010 and Beyond:* "Sea basing is the rapid deployment, assembly, command, projection, reconstitution, and reemployment of joint combat power from the sea, while providing continuous support, sustainment, and force protection to select expeditionary joint forces without reliance on land bases within the [joint operational area]."[90]

Not that it would have mattered. By making the Navy the lead service on the JIC, the JROC had guaranteed that the sea-basing effort would become more and more DoN-centric and less and less joint-centric, as was concisely captured by a remarkably candid statement made by a retired Marine officer before a large audience in 2003: "It has unfortunately—in my opinion—become vogue to talk about the Seabase in Joint terms. Seabase is not a Joint requirement. Seabase is a Joint force enabler, and there is a critical difference. Seabasing is a [naval] core competency and we need to keep it one."[91]

An increased emphasis on strategic speed, the shortened timeline and narrow focus of the sea-basing JIC, and the failure of the JROC to establish a Joint Planning Office

meant that a decade or more of thinking about the strategic and operational implications of uncertain access and the need to improve joint sea-based maneuver options had come down to this: a single-minded DoN pursuit for an ability to conduct a brigade-sized forcible entry in approximately ten days.

All Ahead, Flank—Pursuing the MPF(F) Solution

Given the joint "top cover" necessary for the development of any new major force capability, DoN planners began to look for appropriate material solutions for the new sea base. In this regard, the only plausible way to reach the timelines called for by the 10-30-30 metric was to build a forcible-entry capability into the MPF fleet. The Navy already had a demonstrated ability to assemble and employ an amphibious task force using a combination of forward-deployed and CONUS-based amphibious landing ships in just less than thirty days. However, cutting the employment timeline by two-thirds using amphibious landing ships was not practical. There simply was no way to load and sail the bulk of the amphibious fleet (which was located in the United States) and assemble the force over transoceanic distances in much less than four weeks.

In contrast, with three MPF squadrons anchored in the Mediterranean, Diego Garcia, and Guam, at least one squadron could steam to any point in Europe, Africa, or Southwest, Central, Southeast, or Northeast Asia within ten to fourteen days, allowing the DoN to get close to the ten-day arrival and employment benchmark called for by 10-30-30.[92] Therefore, despite the Marines' initial hesitation about using MPF ships as a substitute for amphibious ships in forcible-entry operations and earlier Navy misgivings about the high potential costs of advanced MPF ships, DoN planners began to fashion a new Maritime Prepositioning Force (Future), known as the MPF(F), that could conduct rapid "sea based" forcible-entry operations.[93]

Any DoN hesitation and misgivings about using the MPF(F) in forcible entry were swept aside as the promise of total independence from land bases left naval officers, especially Marines, positively giddy. Two Marine officers wrote, "*Even when secure ports and airfields are available* . . . Sea Basing [will be] the preferred means of engagement."[94] Indeed, General Michael Hagee, Commandant of the Marine Corps, thought that future sea bases would allow the Marines to launch a 2020 OIF without using Kuwait as a staging base.[95] Because of its operational independence from land bases, one admiral mused that the sea base would present an "infinite number of problems for the enemy."[96]

Without question, being able to respond quickly was the key DoN motivation behind support for the new MPF(F) concept. Admiral Clark, during his terms as CNO, said that the key to the future was "to [size] the force for speed of response";[97] further, sea

basing would allow the Navy to "deliver more combat capacity to the fight much faster, [with] much more lethality and much more agility."[98] General Hagee agreed: "When you are able to respond that fast, it is going to change the calculus of the battlefield. . . . You might be able to get there so quickly that you may not need large follow-on forces."[99]

The rare shared Navy and Marine enthusiasm for the sea-basing concept caused a rapid thaw in the normally glacial interservice planning process, and the MPF(F) concept began to move forward quickly within the DoN. An analysis of alternatives for the future MPF force completed by the Center for Naval Analyses outlined several options for the way ahead. These options ranged from a replacement in kind of current MPF ships with LMSRs to an eight-ship squadron with ships capable of supporting a MEB, all of its thirty Joint Strike Fighters (JSFs), and all of its rotary-wing and LCAC requirements. Inevitably, DoN planners—especially Marines—opted for the widest array of capabilities possible, firm in their conviction that requirements, not budget, should drive the development cycle.[100]

By the summer of 2004, however, it was becoming clear that the sheer enthusiasm for the program, coupled with the DoN proclivity to seek ever more capable (and expensive) ships, was threatening to break the DoN's entire shipbuilding budget. Total operating costs for squadron options, including full tactical aviation support capabilities (i.e., JSF runways), were estimated at $28 billion, clearly far more than the expected budgets could support. Estimated costs for individual ships rose to between two and four billion dollars apiece.[101] As General Hagee wryly noted, "You design the perfect ship, then all of a sudden you get sticker shock as to what the ship could cost."[102] The sea-basing dream was becoming a programmer's nightmare; the DoN needed a "wakeup call."[103]

That call came in July 2004, when twenty-five top DoN officials met to try to reduce the ever-expanding capabilities of MPF(F) squadrons and ships. The participants agreed, among other things, to remove JSF runways from the squadron; remove the ability of MPF(F) ships to arm or disarm helicopters; limit the ships' ability to withstand damage by building them to enhanced commercial rather than combatant standards; and lower the sea state in which the ships could externally load and unload cargo from sea state 4 to 3.[104]

Despite these moves, projected costs for the new MPF(F) squadrons remained high. The Congressional Budget Office estimated that DoN plans for its future Expeditionary Maneuver Fleet would cost more than twice as much per year, on average, than the DoN had spent on the Sea-Based Transport Fleet between 1980 and 2003.[105] While the MPF(F) vision was perhaps perfectly defensible given emerging strategic conditions, it was not welcome given likely yearly shipbuilding budgets. It became increasingly

evident that any moves to enhance the MPF(F) would require important trade-offs within the overall naval platform architecture.

Understandably, Navy officers argued these trade-offs should be reflected in the Amphibious Landing Fleet.[106] Even before the July 2004 meeting, Navy officials started to float the idea that the number of ESGs needed to be reduced in order to fund the MPF(F). These reductions were defended by explaining that the smaller amphibious fleet would see no decrease in forward presence; "sea swaps" of entire ESGs—to include their embarked Marine expeditionary units—would allow the smaller force to maintain the same number of ships routinely deployed.[107]

Marine leaders apparently never anticipated that the MPF(F) program would compete with amphibious ships for scarce DoN budget dollars or might result in a 33–50 percent reduction in the number of purpose-built amphibious ships.[108] While Navy officials justified the cuts in order to "transform [the Marine Corps] to the next level of speed"—a direct reflection of the importance the Navy placed on achieving the 10-30-30 goal—these reductions caused serious unrest among senior Marine officers and increased tension between the Navy and Marine Corps.[109]

The sea-basing concept also caused some confusion and unease among the other services and departments. Although touted as a transformational *joint* capability, the DoN's transformation plans appeared to primarily support the Marines. For this reason, Navy and Marine officials found it initially difficult to sell the merits of sea basing in the joint arena. Rather than changing their plans, however, they simply tried to do a better job of explaining sea basing to the other services. Key to their approach was a renewed emphasis on the joint "enabling" function of the concept: "Putting a [Marine expeditionary brigade] ashore is extremely important to our nation, but Marines and the Navy don't win wars. Armies and air forces with their eventual mass—and effects, increasingly in the future—really need to be brought forward, if they're not already there."[110]

Despite their new "sales approach" and the addition of a logistics support capability for a single Army combat unit, the current DoN sea-basing vision remains very focused on "closing" a single Marine JFEO brigade within ten to fourteen days; conducting at-sea RSOI and mission preparation in two to three days; conducting initial entry operations under the cover of darkness; and sustaining two brigades (either Army or Marine) ashore.[111]

To accomplish these tasks, the DoN now plans on a single MPF(F) squadron consisting of fourteen ships: two LHARs with Marine expeditionary brigade command-and-control (C2) suites, one LHD with a MEB air combat element C2 suite, three LMSR variants, three T-AKE cargo ship variants, three new "mobile landing platforms" (MLPs), and two "dense packed" legacy MPF ships. The total cost for the squadron is estimated to

be $14.5 billion.[112] The squadron will be supported by a single high-speed ship, sometimes referred to as the Rapid Strategic Lift Ship (RSLS), which would deliver non-deployable helicopters to the squadron's three big-deck amphibious ships. At an estimated cost of $1.3 billion, this would result in a total squadron cost of $15.8 billion, not counting the equipment stored inside the ships.[113] Presumably, this new sea-basing squadron would be augmented by an additional, "legacy" MPF squadron.

To help pay for this new sea-basing squadron, the current thirty-five-ship amphibious force will fall to thirty-one ships, with a combined lift capability of no more than 1.9 MEBs. Under the best of circumstances, then, it appears that the total number of Marine expeditionary brigade equivalents that the Navy will be able to lift in the future will be less than it can today: the current Sea-Based Transport Force can lift 4.9 MEBs (1.9 brigades on amphibious ships plus three brigades on MPF ships), whereas the planned future force will lift no more than 3.9 MEBs (1.9 brigades on amphibious ships, 1.0 on MPF[F] ships, and 1.0 on legacy MPF ships). Moreover, it is important to note that today's force lifts less than the long-stated requirement of six brigade equivalents (3.0 brigades on amphibious ships and 3.0 brigades on MPF ships), or even the "fiscally constrained" lift goal of 5.5 MEBs. In other words, the total amount of fleet maneuver lift will be reduced by between 20 and 33 percent, depending on the perspective—and this in an era where sea-based maneuver capabilities seem certain to be more important than at any other time in nearly five decades.

What does the fleet get in exchange for its substantial reduction in sea-based maneuver lift? Not much. With the exception of being able to claim faster closure times and an expanded selective cargo discharge capability, a new MPF(F) squadron offers no great improvement over the capabilities of the current Amphibious Landing Fleet in forcible-entry operations. It will have the same aviation support ships and aerial maneuver platforms, which will operate at the same distances offshore and have the same throughput. It will be able to insert one battalion by air and one battalion by surface means in one eight-to-ten-hour period of darkness—operational capabilities well within that of the current Amphibious Landing Fleet. Additionally, because there is only one well deck in the entire squadron, surface assaults by MPF(F) ships will be far less efficient. The current squadron concept of operations requires that heavy equipment be removed from the LMSRs and transferred—in up to sea state 3—to the Mobile Logistics Platforms, which would in turn transfer the equipment to landing craft, which would in turn deliver the equipment to the beach.[114] Given the squadron's $15.8 billion price tag, one has to wonder if the opportunity costs for these "transformational" capabilities are worth it.

Similarly, what does this "transformational" sea-basing plan give to the joint force? Again, not much. It will give joint commanders an option to assemble a single JFEO

brigade in twelve to seventeen, days rather than the twenty-eight days now required, and an improved ability to resupply joint ground forces ashore. However, a single brigade will be too large for most irregular-warfare tasks and too small for most power-projection operations, especially those in defended-access scenarios. Also, the improved timelines are mostly irrelevant. They are still too slow for the most immediate irregular-warfare tasks, such as prompt strikes against fleeting terrorist targets or prompt counter-proliferation raids to nab weapons of mass destruction. Conversely they are too fast for any stressing forcible-entry scenario, which is unlikely to see the insertion of a single brigade deep into enemy territory before a powerful, joint follow-on force is assembled and the enemy's A2/AD defenses thoroughly suppressed. Finally, the compressed timeline makes no difference at all in irregular counter-sanctuary or stability operations, which are most often elective undertakings.

Pentomic Redux

Upon reflection, the evolution of the thinking about sea basing is not unlike the wishful thinking that led to the Army's "Pentomic Division" in the 1950s. Immediately after World War II, Army war planners, responding to the development of nuclear weapons and acting to preserve their shrinking budget share, developed a conceptual framework that justified a wide-ranging, forcewide Army "transformation." They envisioned a world in which tactical nuclear warfare was not only a possibility but a certainty;[115] at one point Army planners forecast that future Army corps would employ over four hundred nuclear weapons *per day*.[116] Naturally, battalion commanders (in the grade of lieutenant colonel) would need nuclear release authority and small nuclear-tipped rockets with which to exercise it.[117]

For this world the proven Army division was deemed too slow and too ponderous.[118] It needed to become more nimble, with larger numbers of "self-contained" and "self-sustaining" organic units. Therefore, the division's three regiments would be broken up; in their place would be five smaller groups that would be like "amorphous biological cells" whose loss would not impair the ability of the rest of the division to fight on.[119] Of course, to be operationally effective the new division organization would depend on dramatic future improvements in tactical air and ground mobility and much more responsive logistics. But why wait? Change the organization, and the technology would surely follow.

Of course, the enthusiastic pursuit of the new division proved to be premature. The world envisioned by Army leaders did not come about; the assumptions upon which they based their transformation plans were utterly wrong. Even so, many of the design goals for the Pentomic Division were sound. Indeed, after comparing the proposed organization and structure of the Pentomic Division with the modern Army's planned "modular division," one might conclude that the Pentomic designers had the structure

about right—they were simply seven decades ahead of the technology curve. In the intervening period, however, improvements to equipment, training, and tactics showed that the older triangular division had a lot of life left in it after all.

So, perhaps there is a future in which the capability to seize the strategic initiative within ten to fourteen days will be decisive. In this future, ability to project rapidly a single combat brigade deep into enemy territory, with little preparation of the battle space, will be a valid goal—and the MPF force will provide the logical means to achieve it. In this surprising future, any land base within two thousand miles of the JOA will be more vulnerable than large commercial ships steaming a hundred miles off a hostile coast, and enemies with maritime anti-access capabilities formidable enough to push the joint sea base a hundred miles seaward will be incapable of sensing, much less stopping, long-range aerial insertions of ground forces deep into their own territory.

In this world the legacy Amphibious Landing Fleet will be far too slow and ponderous. The operational requirements of being able to lift 2.5 to 3.0 MEBs on amphibious landing ships and the equipment of an additional 3.0 MEBs on MPF ships will be replaced by the requirement for speed and an ability to sea-base approximately three brigades. Of course, the sea base will require transportation and logistics capabilities well beyond those of the current force—such as transferring twenty-thousand-pound TEUs from ship to ship in sea state 3; "skin to skin" transfer of heavy equipment; and stabilized, motion-compensating cargo cranes—which are "*at least* ten years away from system development."[120] But why wait for technology to catch up? Change the organization and the technology will surely follow the concept.

Of course, this line of thinking is likely to be as faulty as it was five decades ago. It is therefore far past time for OSD, the Joint Staff, and the DoN to stop and reconsider the current trajectory of sea basing. A good starting point would be a vigorous institutional debate over an important conceptual question: Should the intent of the DoN's transformation efforts be to construct bases at sea or to exploit the sea as a joint base? The distinction, while subtle, has important implications for naval force design.

Sea Base or Sea *as* Base?

Those who think the goal of the effort should be to construct land bases at sea appear to be animated by a thought first articulated by Samuel P. Huntington in 1954. In a *Proceedings* article in which he pondered the implications of unchallenged command of the high seas by the United States, Huntington wrote:

> With its command of the sea it is now possible for the United States Navy to develop the base-characteristics of the world's oceans to a much greater degree than it has in the past, and to extend significantly the "floating base" which it originated in World War II. *The objective should be to perform as far as practical the functions now performed on land at sea bases closer to the scene of operations.*[121]

The lure of constructing land bases at sea is a strong one, especially for naval officers. As one Marine officer put it in 1971,

> The time is upon us, when we . . . can cut the umbilical cord of shore based facilities, including beaches, beach exits, gradients, airfields, ports, etc., and operate entirely from bases afloat. Seabase is the coming era of the amphibious force. . . . It is a way of providing an appropriate sized landing force anywhere in the world. The requirement for "stepping stones" or land bases on foreign soil is drastically reduced or in some cases eliminated.[122]

As has been discussed, however, sea basing was an idea for which the time had not yet come in 1971, much less 1954. The strategic conditions of the Cold War argued against the expenditure of national resources to re-create land bases at sea. With the transition to the Joint Expeditionary Era, however, strategic conditions have changed dramatically, and many of Huntington's powerful thoughts have gained currency—as indicated in part by the thinking of the Defense Science Board and the current trajectory of DoN sea-basing plans.

However, a careful reading of Huntington reveals a much more balanced and nuanced view of the powerful advantages that the United States enjoys when it can claim unchallenged command of the seas:

> It is also possible to argue . . . in a very real sense *the sea is now the base* from which the Navy operates in carrying out its offensive activities against the land. . . . *The base of the United States Navy should be conceived of as including all those land areas under our control and the seas of the world right up to within a few miles of the enemy's shores.* This gives American power a flexibility and a breadth impossible of achievement by land-locked powers.[123]

Within this more powerful context, Huntington understood that there were many different base characteristics the DoN might exploit, and he implied that some, however conceptually attractive they might be, would be impractical to implement. Indeed, Huntington would likely argue that any meaningful debate about sea basing would need to focus first on a fuller discussion of the great strategic, operational, and tactical advantages enjoyed by any great power that claims the sea *as base,* rather than the pursuit of any particular sea-basing capability.

For example, as described below, there are at least eight different "base characteristics" of the world's oceans:

- Claiming the sea as a base provides future joint forces with rapid, unobstructed global freedom of movement. As a consequence, the U.S. military can rapidly reposition and resupply forward expeditionary forces largely without threat. Importantly, transports, mobile logistics ships, and combat logistics ships can, in most circumstances, move freely, without escort, which means the future Navy can be smaller than it might otherwise be.

- Enjoying freedom on the seas allows the United States to consider most of the world's oceans as a vast, secure operating sanctuary. It allows for the establishment of global listening posts, facilitates global scouting and patrolling, and provides advanced staging bases for tactical-aviation, strike, special-operations, and rapid-reaction forces. This improves America's global intelligence, surveillance, and reconnaissance (ISR) posture and provides staging points for surprise punitive strikes and small maneuver raids from hidden locations over the horizon. It also provides the ideal base from which to conduct offshore prosecution of a persistent irregular war. To exploit this advantage, the Navy and Marine Corps must keep some forces forward to provide sustained ISR, fire, and maneuver coverage.
- For the foreseeable future, any joint power-projection operation larger than a medium-sized raid will require that the United States introduce land-based air and ground forces into the theater. In conditions of unimpeded or guarded littoral access and with established theater infrastructure, the current Transport Fleet is quite effective in the delivery of equipment and supplies; personnel are normally transported by air. Sea-based air and missile defense, tactical aviation, and fire-support platforms can conduct advance force operations and screen the arrival and delivery of equipment and personnel and support them once they are committed to combat.
- For joint power-projection operations in defended and contested-access scenarios, the sea can be used as a base from which to conduct sustained air and missile strikes against the enemy. Sea-based aviation, missiles, and artillery can threaten an enemy across the entire breadth and depth of his battle space. This was the prime role of the Navy in the Cold War, and it will remain an important one for the foreseeable future.
- In defended and contested-access scenarios, the sea also can be used to project operational maneuver forces into an enemy's defended battle space. Given that most joint forces are now "access sensitive," an important mission for the relatively small residual sea-based operational maneuver forces will be to enter forcibly a defended theater and create a lodgment for follow-on forces.[124] The forces typically associated with this mission are airborne, air assault, special operations forces, and amphibious assault forces.
- Joint forces operating inland can also be resupplied from the sea. In this way, no large, immobile, and tempting logistics targets are built up ashore. Being able to warehouse the majority of supplies at sea and selectively off-load and deliver the right matériel to the right unit at the right time—an approach now known as "just in time" or "sense-and-response" logistics—would help mask a critical joint force vulnerability, especially early in a JFEO.[125]

- At some point, however, normally, it will be necessary to push large amounts of supplies ashore. Adversaries of the United States would be well aware that its current power-projection model depends heavily on the availability of deepwater ports. They may make special provisions to defend, destroy, or target established ports in the theater. In these cases, the sea can be used to create a theater logistics portal—a harbor or a sea-based logistics hub—where one did not exist before. An ability rapidly to create a working theater logistics portal, along with improved capabilities to off-load the Sea-Based Transport Fleet in-stream, would allow the United States to perform future power-projection operations without seizing a deepwater port. Such an ability opens a wide range of operational options and complicates the job of any defender.[126]
- The ultimate exploitation of the sea would be to re-create land bases at sea "closer to the scene of operations"—perhaps in the form of mobile offshore bases, distributed bases, or logistics sea bases. What makes this level of exploitation so different are its goals of completely eliminating the logistics footprint ashore and allowing forces to *assemble, constitute, and reconstitute at sea*. If achieved, these goals would decouple the joint force from any dependence on land bases and allow the United States complete freedom of action along the world's littorals.[127]

This list of base characteristics of the world's oceans is not exhaustive. However, it provides a useful start point for a critique of the DoN's current sea-basing plans. In this regard, eleven observations stand out.

First, thinking about exploiting the sea as a joint base is a critically important endeavor. In an era when access is increasingly uncertain due to both political and operational challenges, being able to exploit the sea as a secure avenue of maneuver, an operational sanctuary, and an advanced assembly base for operations ashore will provide the U.S. military with enormous strategic, tactical, and operational benefits. It seems certain that American power-projection operations in the Joint Expeditionary Era will rely on improved capabilities to support strike, maneuver, and logistics from the sea to a degree not seen in over five decades.

Second, "sea basing" is not an end in itself but a means to an end—to provide U.S. joint military operations with global freedom of action and operational independence. As two senior officers have written, "Twenty-first century Sea Basing will be our nation's asymmetric military advantage. . . . *It is the key to operational independence in the dangerous decades before us*."[128] Transformation plans for the Sea-Based Transport Fleet should be guided by the broad strategic goal to develop the base characteristics of the world's oceans in order to "exploit the freedom of maneuver."[129] This demands that the nation improve its transoceanic expeditionary maneuver capabilities.

Third, improving strategic closure times is subordinate to achieving operational independence and improving naval expeditionary maneuver capabilities. The "stretch goal" to seize the initiative in ten days and plan for two successive month-long wars is the result of a decade-long defense planning and "shaping" strategy that is increasingly out of touch with reality. The four assumptions upon which 10-30-30 is based—that the primary future threat will be traditional military challengers; that the primary force structure and planning scenario should be for two nearly simultaneous traditional combat operations; that American dominance in guided weapons warfare will remain unchallenged; and that adversaries will not adapt to this dominance—are all questionable. Far less debatable is the assumption that in future joint power-projection operations, political and operational access will be more difficult to take for granted, especially during their early phases.

Regardless, the 10-30-30 metric should be reassessed. The United States already has the most agile, responsive military force in history. After 11 September 2001 it initiated a military counterattack in a landlocked country located halfway around the world in less than four weeks. In preparation for IRAQI FREEDOM the DoN "put 60–70,000 Marines and Sailors into Kuwait, with all their equipment, ready to cross the line of departure in less than 60 days."[130] There seems little reason to increase these already impressive strategic timelines, other than blind adherence to the mantra of "faster is better" and a growing but unsupported faith that "early measures" and quick actions "rapidly alter initial conditions" and "lock out" enemy options and strategies.[131]

Speed is often vitally important in tactical encounters, and it has enormous benefits at the operational level of war.[132] However, the value of speed at the strategic level of war is far less clear; indeed, it is often counterproductive. An emphasis on strategic speed contributed to the tragedy of World War I, doomed Japanese and German war planning for World War II, and likely contributed greatly to the lack of postwar planning for IRAQI FREEDOM. All three examples provide evidence that "obsession with speed denies the fundamental truth that in strategy, everything is contextual, and circumstance is paramount. . . . In the end, the current thinking about speed mistakes an important and expensive capacity for an inherent and intrinsic advantage."[133]

This thought was explicitly captured in the Army after Next project. As described by two of the project's leading thinkers,

> One consistent study finding in the Army's series of war games has been that the crucial measure of successful force projection *is not the speed with which the first combat element engages*. Rather, it is the rate at which the United States and its allies achieve decisive operational superiority, depriving an enemy of freedom of action and making its ultimate defeat both inevitable and irreversible.[134]

In cases where joint forces may have to confront a regional power armed with nuclear weapons or hardened, redundant A2/AD networks, the speed of the initial combat

response will likely be less important than the pace of deliberate operations designed to achieve "decisive operational superiority."

Even more importantly, there is no evidence whatsoever that improved strategic speed will be decisive against irregular challengers, who can be expected often to rely on strategies that expand the strategic timeline in order to outlast the United States.[135] As one strategist presciently wrote before OIF, "The fast, overwhelming and decisive application of maximum force in minimum time . . . may produce effective short term results [but it may] be irrelevant, probably even counterproductive, when matched against the very difficult internal problems that form the underlying problems in target countries."[136]

Fourth, improving strategic closure timelines should also be subordinated to improving ability to conduct forcible-entry operations or operational maneuver from the sea—the foundation of transoceanic expeditionary maneuver. For the next several decades, regardless of moves made now, the majority of equipment for joint ground forces will get to distant theaters on ships optimized for unloading in deepwater ports or anchorages in a benign environment. The majority of joint force personnel will arrive on commercial airliners through airports provided by host governments. As the DSB concluded, the future may require that the DoN work with other joint forces to seize and create access before equipment and people can arrive in theater. Therefore, for the foreseeable future, the ability to seize *sea* and *air points of debarkation* (SPODs and APODs) in hostile, or potentially hostile, territory will be a fundamental joint requirement.[137]

Recall that by the end of World War II, when access was always uncertain and often contested, amphibious landing ships made up nearly 40 percent of the Navy. Even during the Cold War the nation maintained a hedge against the possible requirement to seize access, though the likelihood of having to do so was extremely remote. The requirement for amphibious lift during that era was never less than 3.0 MEBs and often more. Given that future access looks far more uncertain than at any time since 1950, should not the Navy retain a viable forcible-entry capability and perhaps improve the priority afforded to the Amphibious Landing Fleet? Both logic and prudence suggest that the answer to this question is yes—a judgment implicitly endorsed by the DSB. If so, a logical follow-on question comes quickly to mind: Is there any evidence to suggest that MPF(F) squadrons *as currently envisioned* will be able to support forcible-entry operations better than, or as well as, purpose-built amphibious assault ships? The answer to this question, if not clearly no, is certainly: not yet.

Amphibious ships are "combat loaded" in accordance with specific landing plans, tailored especially for expected missions. Moreover, amphibious assault ships all have purpose-built interfaces for both air and surface assault "connectors," allowing smooth and efficient off-loading of personnel and their equipment at sea. In

contrast, since MPF ships are anchored forward in-theater without prior knowledge of the mission, their cargo is "unit loaded"—organized by major subordinate unit. Units arriving on MPF(F) ships must retrieve their equipment, off-load what is stowed on their assigned vehicles, repackage and restow what is not needed, and repack the vehicles—all within the cramped confines of the ship. This process is likely to be far less efficient than pre-mission combat loading by amphibious assault units at their ports of embarkation.[138]

Furthermore, the current MPF(F) plan will always involve a major transshipment of unit vehicles from one ship (generally an LMSR) to another (the Mobile Logistic Platform). Carrying out this transshipment in choppy seas, in the rain, or at night will inject considerable friction into one of the most difficult military operations imaginable. Indeed, it is hard to imagine a rehearsal before an operation, since that would involve a minimum of three at-sea transshipments of cargo—a lengthy process, and certainly a dangerous one, in all but the most benign sea conditions.

Fifth, the DSB's unbalanced overemphasis on aerial maneuver needs to be reexamined. As mentioned earlier, the genesis of the DSB's air-maneuver concepts can be traced to Marine thinking in the late 1940s about the implications of nuclear warfare for amphibious operations. These early ideas for vertical envelopment gradually expanded to include the idea of direct aerial ship-to-objective maneuver (vertical assault), which placed further emphasis on helicopter delivery of amphibious assault forces. Ultimately, this new thinking spurred DoN experimentation with helicopter carriers and the development of the landing platform helicopter (LPH) with accommodations for a full Marine battalion and a squadron of helicopters.[139]

Early Marine thinking about vertical envelopment caught the attention of the 1950s Army leadership. After the Korean War, the Army enthusiastically pursued the idea of helicopter-borne air cavalry and air assault units, and it pioneered the use of helicopter gunships to provide organic close air support.[140] However, both Army and Marine enthusiasm for air assault was tempered somewhat during the Vietnam War, which proved that using rotary-wing aircraft in defended-access scenarios was a risky proposition. Over the course of the Vietnam War, American forces lost approximately five thousand of the 11,827 helicopters in the theater—a loss rate of over 40 percent.[141] The bulk of these losses came *before* the battlefield introduction of man-portable guided anti-helicopter weapons like the U.S. Redeye or Soviet SA-7 Strela in April 1972.[142]

Based on the hard-learned lessons of Vietnam, Marine and Army planners made several course corrections. For their part, Navy and Marine planners rejected further LPHs, opting instead for the LHAs and LHDs, which combined the aviation support capabilities of an LPH with the well deck of an LSD or LPD. This provided the ships

with interfaces for both air and surface connectors, giving them far more flexibility in amphibious landing operations. They also decided to pursue tilt-rotor aircraft for the vertical-envelopment mission. With its greater speed and higher operating ceiling, a tilt-rotor promised to have greater operational reach and survivability than any helicopter and to allow faster troop buildup times, especially over long ranges.[143]

Army planners, generally satisfied with the capabilities of the helicopter, concluded that only its concept of employment needed to be changed. They gradually moved toward the concept of "aerial maneuver"—landing forces behind enemy lines where the enemy wasn't. As for its helicopter gunship fleet, the Army decided to introduce new armored helicopters that would employ stand-off guided weapons. The result was the AH-64 Apache.[144] The wisdom of these moves was amply demonstrated during Operation DESERT STORM, when the 101st Division (Air Assault) conducted two major aerial maneuvers and the AH-64 performed admirably.

During the 1990s, leaders associated with the Army after Next project began to combine the thinking of aerial maneuver with the emerging ideas of operational maneuver from strategic distances to form an even broader vision: "air mechanization." The leading proponent was Major General Robert H. Scales, Jr. General Scales envisioned the insertion of "light, mobile, *armored combat units* directly into an enemy's defended battle space from intratheater bases located 500 miles from the enemy's defended territory."[145] Partly as a result of General Scales's intense salesmanship, this idea began to gain currency within DoD, particularly within the DSB, the Office of Force Transformation, and the Army Staff. The requirement that the Army's new Future Combat System (FCS) must be transportable by C-130 tactical transports was driven by both strategic deployability and the promise of air mechanization.[146]

Despite the concept's attractions, the size and cost of a tactical transport force designed to support the aerial maneuver of even one large armored combat unit from bases more than five hundred miles away would be substantial. More troubling than projected cost is recent combat experience in Somalia, Afghanistan, and Iraq suggesting that air maneuver and air mechanization operations in the face of guided antiair weapons promise to be every bit as risky as airborne drops were in earlier eras.[147]

A recent RAND study on Operation IRAQI FREEDOM concluded, "Though planned, no air assault operations were undertaken, primarily because the risks outweighed the expected benefits. . . . The experience in Iraq involving the employment of attack helicopters raises questions about some of the emerging concepts that place high reliance on so-called vertical envelopment operations deep into enemy territory."[148] As other RAND analysts make clear, a rapid aerial *deployment* capability remains an enviable goal. However, in their opinion, greater emphasis needs to be placed on prepositioning

options and increased exploitation of high-speed sealift technologies.[149] IDA reached the same conclusion in a study on the transportability of the Army's FCS. Its analysts concluded that sea lift was the fastest mode of global transportation for FCS units of action, anywhere and any time.[150]

Sixth, if DSB's bias for air-maneuver operations from ships at sea needs to be revisited, so too must its bias against surface maneuver. In the future, a force landing from the sea will be able to generate tactical speeds unheard of in previous eras. To gain an impression of future sea-based maneuver operations, think of the major combat operations phase of OIF as a breakout from an amphibious lodgment area. In Iraq, U.S. Marine combined-arms columns, using the same equipment they would have used in an amphibious surface landing, were able to move over four hundred miles inland in little more than three weeks. They accomplished this impressive feat of arms by concentrating a relatively small number of tanks at the heads of their columns, screening the columns' flanks using airpower, disrupting enemy blocking movements by massed guided-weapons fire, and using high-volume artillery fire to suppress enemy forces encountered in meeting engagements.

Recall that the DSB's rejection of future surface maneuver derived from its belief that mines and precision fires would prevent surface "amphibious operations." However, it is highly unlikely that an enemy will be equally strong along his entire coast. Using the sea for maneuver, naval forces can probe the enemy's defenses to determine where he is weakest before landing forces ashore. If OIF provides any indication, future Marine surface landings could land up to four hundred miles away from a defended littoral penetration point and, covered by fleet guided-weapons fire, move quickly to attack the forces located there in less than a month. Future ship-to-shore connectors like improved LCACs and the new Expeditionary Fighting Vehicle (EFV) will provide means to conduct even more effective distributed, high-speed surface attacks from ships at sea.[151]

Moreover, once ashore, surface forces face far less of a "vulnerability gap" than the DSB imagined. By 1944 the Japanese island defenders in the Pacific had concluded that there was no exploitable operational pause between the initial landing waves and the follow-on waves of an American surface assault. The Japanese began to move their forces inland and to dig in, the better to oppose the American forces once they were ashore. In the end, their approach proved no better than that adopted by the Germans in the European theater—counterattacks against surface lodgments by mobile armored forces. In the face of Allied air superiority, German reinforcements were either deterred from getting to the beach or destroyed outright attempting to get there.[152] Given the degree of American air superiority and the scale of its guided-weapons usage, any enemy who mounts a massed attack against a U.S. surface lodgment defended by the full

capability of the joint force will likely find it as difficult "to get to the beach" as did the Germans in 1944–45.

Ironically, the "vulnerability gap" applies much more directly to initial attacks made by airborne, light infantry, or light armored forces air-landed deep in enemy territory. Air assaults tend to come in intermittent, concentrated pulses of combat power rather than the sustained pulses associated with well planned surface maneuver operations. At extended ranges, the interval between pulses—the delay between the initial and follow-on air-landed waves—would likely be substantial and the defensive and offensive firepower of the United States far less effective. History suggests that success of future aerial maneuver operations will depend far less on whether the support base for the landings are at sea or on land than on the distance between the support base and the landing point.[153]

The "vulnerability gap" will be especially severe for Marine air-landed and Army airborne forces, both of which move only as fast as their feet can take them. Major General Scales had it right when he concluded that *foot-mobile* infantry landed deep behind enemy lines will be especially vulnerable to interdiction and attack, particularly on battlefields with guided or nuclear weapons. True air mechanization, which would give the air-landed force the mobility to survive, is likely decades away. For this reason, mechanized forces that can attack from the sea likely will remain useful for some time to come.

This is not meant to imply that aerial maneuver should be abandoned. Rather, the foregoing suggests that a *balance* of aerial and surface maneuver capabilities will give future sea-based maneuver forces enormous flexibility. For the foreseeable future, then, the fleet would do well to retain a strong surface maneuver capability.

Seventh, keeping personnel and equipment at sea will be no panacea. The same "precision strikes, weapons of mass destruction, and cruise and ballistic missiles" that the NDP warned would threaten future land bases will pose equally severe threats to future naval forces operating in coastal waters. Indeed—nuclear weapons aside—small numbers of guided-missile "leakers" hitting a sea base could have a far more catastrophic impact than similar attacks against a sprawling land base. At sea, one hit could result in the total loss of an entire combat unit or a critical component of the joint force.[154] As for nuclear weapons, would an adversary be less or more likely to employ nuclear weapons against U.S. forces at sea, as opposed to a city or port on his own territory? Work done during the Cold War suggests that the bar for employing nuclear weapons at sea is much lower than it is on land.[155]

In any event, if fleet defenses can be made leakproof, why can the same level of protection not be provided over ports and airfields? Indeed, extending fleet defenses over allied territory, facilities, and forces ashore is one of the basic tenets of Sea Shield.[156] In

the end, the debate over whether land or sea bases are more vulnerable is a false one. All but the most ardent sea-basing proponents recognize that for any major power-projection operation, the majority of the joint force—and the support tail—will inevitably have to move ashore. Joint forces on both land and sea will be subject to attack by guided weapons, and each will have inherent vulnerabilities that will need to be accounted for in joint plans and schemes of maneuver.

Eighth, while selective cargo off-load should be a key goal for all expeditionary maneuver ships because the majority of joint forces will continue to operate ashore, resupplying joint forces ashore directly from sea bases will likely be a niche capability for the foreseeable future. Sustained support of forces ashore from a sea base will work only for relatively small forces, perhaps up to two brigades in size, operating relatively close to the sea. This capability will be most useful during the early phases of a joint forcible-entry operation before an effective support structure can be established ashore, or for the sustained support of small garrisons fighting the global irregular war, in which a major footprint ashore is neither required nor desired.

In any case, combining a selective-offload cargo ship with a troopship carrying a large number of personnel, once the goal of the MPF(F) program, is not a good idea. To maximize their cargo capacity, legacy prepositioning ships are "dense packed" with both vehicles and supplies. This makes the selective off-load of any particular item very difficult. For example, during OIF Army logisticians had to unload eight hundred containers from an ammunition container ship to get at the 560 they wanted.[157] To provide the space necessary to move cargo about internally, selective-offload ships need to be far less densely packed. In other words, selective-offload ships carrying equivalent amounts of cargo need to be larger than regular cargo ships and to be designed with roomier holds with fewer impediments to the movement of matériel.

This makes the ship inherently more vulnerable to guided-weapons attack. As one admiral explained, a selective-discharge cargo ship is like a floating Wal-Mart store, whereas, "by the way, we usually have lots of compartments on Navy ships, so if you get hit, it won't sink. You can't do that if [the ship] is to be a Wal-Mart type of environment."[158] Interestingly, the admiral was arguing that if the Marines wanted an MPF(F) ship with both troop-carrying and a selective-offload capability, they would have to accept the risks associated with operating large numbers of troops from commercial ships. Of course, the far more sensible approach—evident in the current MPF(F) squadron design—is to separate the cargo resupply and maneuver support roles, keeping the troops aboard the most protected ships possible. This is the same thinking that drove the Navy to design separate troop and cargo transports during World War II.

Separating the resupply function from the maneuver support function brings to light an entirely new set of alternatives to resupplying joint forces from the sea. One is to assign the ashore resupply function to the Amphibious Landing Force and to build updated versions of the *Charleston*-class LKA of the Cold War.[159] Another would be to make the mission of "underway replenishment" of ground forces ashore the responsibility of the Navy's Combat Logistics Force. Another would be to expand the Logistics Prepositioning Force to support all joint ground forces ashore with ammunition, fuel, water, and basic supplies. The point here is that the MPF(F) squadron is not the only, or necessarily the best, way to solve the niche mission of supplying joint ground forces ashore.

Ninth, perhaps as important, if not more, than a selective-offload cargo capability is the ability to create a heavy theater logistics portal where there is none. Such a capability would dramatically improve the Navy's ability to support transoceanic expeditionary maneuver. Potential adversaries are well aware that major U.S. power-projection operations require the seizure of deepwater port and nearby airfields. This makes their defensive plans easier to develop.

An ability to assemble rapidly an artificial harbor like the World War II MULBERRY, anywhere in the world, complete with breakwaters, causeways, cranes, and the like, would seriously complicate an adversary's defensive problem and dramatically improve the joint force's ability to introduce heavy forces into a theater.[160] Moreover, many officers in the other services view the most critical contribution of sea basing to be the introduction of responsive joint logistics.[161] Developing the ability to create a theater logistics portal where none exists, coupled with an improved ability to provide "underway replenishment" of joint forces operating ashore, will go a long way toward making the sea base a truly joint force multiplier.

Tenth, as the above discussion suggests, the JROC's disregard of the DSB's prudent call for an extended period of joint concept development and technological experimentation for sea basing needs to be revisited. The current focus on the midterm operational goal of conducting a brigade-sized forcible-entry operation in ten to fourteen days is short-sighted. Instead, the United States should embark on a long-term effort aimed at developing the ocean's base characteristics more fully and improving all aspects of its expeditionary maneuver capability. Only in this way can we ensure that important sea-basing options are fully considered and not foreclosed prematurely.

Development of the sea-basing "system of systems" needed to exploit fully the sea as a joint base will be vastly more complicated than was the development of carrier aviation during the interwar years. It took two decades of hard conceptual and technological development and experimentation before the Navy finally got carrier aviation right. The answers for the final sea-as-base system of systems likely will take at least as long

to discover. As the DSB recommended, the development of sea-as-joint-base capabilities should be a long-term endeavor, shaped by experimentation, war gaming, analysis, technological research, and prototype development. The belief that the full conceptual and contextual development of something as complex as sea basing could take place in little more than three years is foolish.

Eleventh, as a result, current sea-base transformation plans appear to be both premature and out of balance. In July 2004, when asked by Senator John Warner if the Navy would maintain twelve ESGs, the CNO responded that the requirement was for twelve ESGs and would stay at twelve ESGs. He went on: "I will tell you that I'm in the process of . . . setting up a sea swap experiment for the Expeditionary Strike Group to see if we can do something that large. If we could, it would affect my recommended investment profile."[162] Since that time, there have been no "sea swap" experiments involving ESGs, with the exception of the "cross-decking" of a command group from one ESG to another, which is far easier than the complete swapping-out of an entire ESG.[163] Yet the current plan is to reduce the number of ESGs to nine—a reduction of 25 percent.

Nor have there been any systematic experiments on MPF(F) sea-basing concepts or technologies. Certainly, there have been a number of "limited objective experiments" and technological demonstrations over the past three years, but nothing on the scale that accompanied the development of carrier aviation. Because of the lack of empirical data, current DoN plans endorse a vision that makes important but untested assumptions about the entire MPF(F) concept of operations. In other words, current plans for the Expeditionary Maneuver Fleet presuppose success in experiments that have yet to be conceived, much less conducted.

What explains this apparent rush to judgment? One reason might be that by substituting three MPF(F) civilian-crewed (i.e., operated by the MSC) big-deck assault ships for regular Navy amphibious landing ships, the DoN will save up to three thousand active-duty billets. The Navy will also accrue additional Operation and Support (O&S) savings, all of which could be diverted into Navy procurement accounts. Another reason might be to help maintain the industrial base.[164] Worthy as both these goals are, none should be used to justify the premature foreclosure of all potential options for the sea-as-base Expeditionary Maneuver Fleet.

A Global Amphibious Renaissance

The backdrop of the DoN's embrace of MPF(F) over general improvements to the Amphibious Landing Fleet is a global renaissance in amphibious assault platforms. While the platforms associated with this worldwide resurgence are varied, four key platform trends are conspicuous.

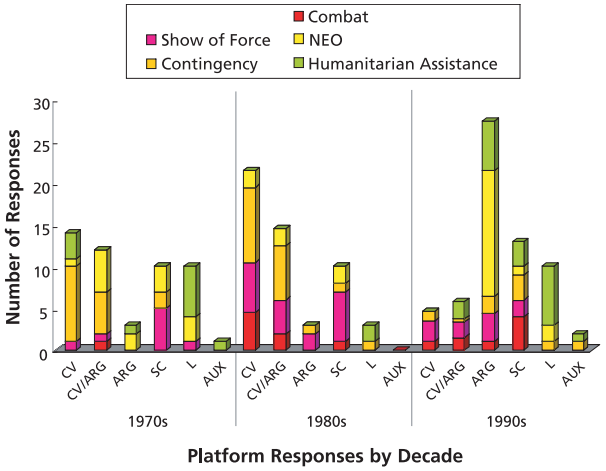
The first is that the purpose-built LPH is a dying breed; there remains only one in the world—HMS *Ocean,* operated by the Royal Navy. However, a new variation of the type is the V/STOL carrier, or CVV, with an additional capability to carry troops. Heretofore, the prime example was the Italian navy's 13,850-ton *Garibaldi*. Italy is now pursuing a much larger (twenty-seven-thousand-ton) ship, the *Cavour,* which will be able to carry eight STOVL JSFs, twelve medium-lift helicopters, and up to 450 troops and a hundred small vehicles, off-loadable through two roll-on/roll-off ramps.[165] The planned U.S. LHARs are the only other examples of this type.

The second trend is that LHDs—with both a full-length flight deck and a floodable well deck—are the clear platform of choice for navies that can afford them.[166] France, Spain, South Korea, and Australia are between them either building or planning to build at least eight LHDs. The two French *Mistral*-class LHDs can carry 450 troops and sixty armored vehicles. They have a full-length flight deck, a below-deck hangar that can accommodate sixteen medium/heavy lift helicopters, and a well deck that can hold four large-displacement landing craft or two LCACs. The single Spanish LHD will be even larger. It will carry a staff, an air group, and a landing force of 1,220 personnel; its full-length flight and hangar decks will accommodate twenty-two helicopters, and its floodable well deck will carry four large landing craft. Both the French and Spanish LHD designs are competing for an Australian requirement for two LHDs. The three South Korean "mini-LHDs" will be slightly smaller but will have the same full-length flight deck and well deck characteristic of the class.[167] In addition, the Italian navy recently announced an intention to build a LHD with a floodable well deck, suggesting that Italian planners are uncomfortable with relying on CVVs for the amphibious mission.[168]

The third key trend is that LPDs—with their substantial helicopter capacity and floodable well decks—are the clear platform of choice among medium-sized amphibious landing ships. The Netherlands, Spain, and Britain will soon operate ten modern LPDs. The Netherlands will have two variations of the *Rotterdam* class. The ships, designed to commercial standards, will carry landing forces of from five to seven hundred personnel; four or six troop-lifting helicopters, respectively; and a variety of landing craft in their large well decks. The same basic design was chosen by Spain for its two LPDs and by Britain for its four *Largs Bay*–class auxiliary LPDs. The British also have two modern *Albion*-class LPDs, built to warship standards.[169]

The final trend is that new classes of "multirole" vessels capable of transporting and landing troops and vehicles are the preference of an increasing number of navies. For example, Canada is planning to build up to three Strategic Multirole Aid and Replenishment Transports (SMARTs), large ships designed both to replenish Canadian combatants and transport Canadian peacekeeping troops and their vehicles.[170] Moreover,

FIGURE 2
Naval Responses by Ship Class



Source: D0002763.A2, U.S. Naval Responses to Situations, 1970–1999, *December 2000. © 2000 The CNA Corporation, www.cna.org.*

this trend is not confined to the larger navies. New Zealand is building a Multi-Role Vessel (MRV) based on a RO/RO ferry design; it will carry 150 troops and a small number of vehicles.[171] Even the smallest navies are seeking to improve their sea-based transport or maneuver capabilities.[172]

A particularly innovative approach is being taken in the Royal Danish Navy—a design that combines the features of a frigate and a transport vessel in one hull. Called "Flexible Support Ships," these 6,300-ton vessels are armed with a five-inch naval gun, eight Harpoon antiship cruise missiles (ASCMs), and vertically launched Sea Sparrow missiles. They have a flight deck large enough to handle heavyweight helicopters and a hangar large enough to accommodate two medium-lift helicopters. They also have a wide (nine-hundred-square-meter) "flex-deck" that can accommodate ten sixty-two-ton tanks or a variety of other cargo or combat systems. The ship can be configured for nine different roles.[173]

As can be seen, as many of the world's navies begin to put renewed emphasis on "out of area" expeditionary power-projection operations, they clearly consider purpose-built amphibious assault ships with both air and surface connector interfaces to be the most efficient and effective transport and maneuver support platforms. While allied decisions and preferences for sea-based maneuver platforms should not dictate DoN choices, they do suggest that the U.S. planners would do well to consider carefully any reduction in the size or capability of its Expeditionary Maneuver Fleet, especially its Amphibious Landing Fleet.

Indeed, as illustrated in figure 2, amphibious ships are now the American crisis response platform of choice. Since 1989, forward-deployed ARGs/ESGs have been

employed twice as much as any other naval component. The ESG/MEU(SOC) combination can be effective in a wide variety of roles, including humanitarian and disaster relief, noncombatant evacuation operations (NEOs), shows of force, raids, prompt counter-proliferation operations, and terrorist counter-sanctuary operations.

There is no evidence that MPF(F) forces will be nearly as useful as amphibious forces. They are clearly less suited for the routine amphibious patrolling function conducted since the beginning of the Cold War. Moreover, as discussed, it is unlikely that they will be better for forcible-entry operations, where access is either defended or contested. In sharp contrast, many of the routine operations associated with supporting the global irregular war will be conducted in unimpeded- and guarded-access conditions—the very conditions for which MPF ships were originally designed. This suggests that the MPF force might be best refocused on supporting the global irregular war. If so, then the packets of combat power carried in MPF squadrons—designed for high-intensity mechanized combat—are clearly too big, and the MPF squadrons themselves are not well aligned to support global operations. To support joint operations focused on prosecuting the irregular global war, MPF squadrons could be both repackaged and dispersed to provide better theater coverage and more rapid response in potential areas of operations.

A Sea-as-Base Expeditionary Maneuver Fleet for the Joint Expeditionary Era

What follows is a proposed Sea-as-Base Expeditionary Maneuver Fleet that captures the preceding thoughts and musings. It uses the same basic building blocks as are evident in the Navy's current plans, but in different ways and for slightly different purposes.

This fleet's primary function is to fight the persistent global irregular war now being fought by U.S. joint forces and to be able to support simultaneously *one* major joint power-projection operation. Importantly, it is capable of confronting a regional power armed with nuclear weapons. When reinforced by other naval capabilities, the Sea-as-Base Maneuver Fleet will also be capable of operating in contested-access conditions. It will have the inherent capability to respond to disaster relief and humanitarian operations.

The fundamental difference between this plan and the current plan is that it places greater emphasis on the Amphibious Landing Fleet. As one admiral recently said, "Sea basing is the one element linking the global war on terror and major combat operations."[174] The Amphibious Landing Fleet is better suited to both the amphibious patrolling mission (so vital to the war on terror) and joint forcible-entry operations.

The force will be sized to sustain forward at least two sea-based rapid-reaction maneuver forces in support of the global war on terrorism and to support a two-brigade JFEO

force. Having two brigades offers at least four sea-based operational maneuver options: an amphibious double envelopment of a joint lodgment area, port, or airfield using two separate brigade thrusts; a one-brigade JFEO followed by an immediate brigade breakout from the joint lodgment area; a two-brigade deep operational penetration; or a broad-front, two-brigade, distributed infiltration attack made under threat of nuclear or guided-weapons attack.

Step One: Take Marine Fixed-Wing Aviation Back to Sea

During the Cold War, Marine aviators assumed that they would have immediate access to land air bases or that their AV-8B Harrier V/STOL jets would be able to operate from austere expeditionary airfields close behind Marines engaged in ground combat. In the Joint Expeditionary Era, guided by the vision of sea basing, Marine planners want to move their aviation assets to sea and maintain them there for as long as possible. This is creating a greater demand for flight deck space in the Amphibious Landing Fleet—a demand complicated by the fact that the new MV-22 tilt-rotor and the STOVL version of the Joint Strike Fighter are both far larger and heavier than the aircraft they replace (the Harrier and the CH-46 helicopter, respectively).[175]

With the exception of the added complication of helicopters, the problem of taking Marine aviation to sea is the same that faced naval planners in 1943–44. For the first several years of World War II, Marine aviation was heavily committed in the Solomons campaign, where its planes operated primarily from land bases. Carrier air wings on the fleet carriers (CVs) were composed entirely of Navy squadrons. As the Solomons campaign moved toward a successful conclusion, and with the decision made to bypass the Japanese base at Rabaul, Navy planners wrestled with the issue of how best to sea-base Marine aviation for the final drive across the Pacific. The options were to integrate Marine squadrons into the large-deck carrier air wings, to put all-Marine air wings on escort carriers (CVEs), or a combination thereof. In 1944 the decision was made to form six all-Marine air wings on *Commencement Bay*–class CVEs, augmenting CV carrier air wings with Marine squadrons only when necessary. A total of four Marine CVEs made it to the Pacific before war's end, and ten Marine fighter squadrons augmented large-deck carrier air wings as the kamikaze threat became more intense.[176]

These discussions shed new light on both the DoN "Tac-Air Integration Plan" and recent moves to recapitalize the big-deck amphibious fleet. Faced with the prospective requirement to lift the larger air combat elements (ACEs) for sea-based MEBs, DoN planners ordered a review of potential alternatives to replace the five oldest big-deck amphibious assault ships in service—the *Tarawa*-class LHAs. In the end, funding considerations drove the design of the new ship, which is now known as the LHAR (for LHA Replacement), toward a minimal-cost conversion of the LHD.[177]

As previously mentioned, to get the enhanced aviation capabilities needed the LHAR would give up its "wet" well deck, which would make it the first big-deck amphibious assault ship since 1976 to be built without one.[178] The removal of the well deck would allow the ship to carry twenty-three STOVL JSFs or twenty-eight MV-22s, or a combination thereof, plus two MH-60 helicopters.[179] The decision to give up the well deck was made in relative haste, with little departmental debate or comment. Nevertheless, Marine aviation officials were happy: the "LHAR is exactly the ship for where we are going with sea-basing."[180]

Marine ground officers were less enthralled, since the decision to remove the well deck in the LHAR dramatically reduces the ship's contribution to a major surface assault. In their eyes, the removal of its well deck made the LHAR nothing more than a repeat of the failed experiment known as the LPH, which disappeared from service because it was optimized only for aerial assault. However, if viewed as an updated version of the *Commencement Bay* CVE, the LHAR will provide a capability not seen in the battle force for over fifty years—a small aviation power-projection platform, capable of keeping up with amphibious task forces and of carrying more than a third of the number of tactical fighters found on the decks of larger CVNs.

Assuming 85 percent aircraft availability and six days of surge operations followed by nine days of sustained operations, a CVE/LHAR carrying twenty-three Marine (or even Air Force) STOVL JSFs could launch 1,115 sorties, an average of about seventy-five a day.[181] While nowhere near the number a large-deck aircraft carrier can generate, this represents a substantial quantity of close-air-support sorties in direct support of a MEB operating ashore, and it would likely be more than enough for normal air support operations associated with the global irregular war.

DoN's recently announced 313-ship plan includes eleven carriers and four LHARs. Two of the LHARs are earmarked for the Amphibious Landing Fleet, two for the MPF(F) squadron. Consistent with the discussion above, this plan trades one CVN-21, at a projected cost of $8.8 billion dollars (for the second ship in the class), for four *Commencement Bay* LHARs, with average projected procurement costs of $2.2 billion apiece.

While the LHARs would retain the inherent ability to support rotary-wing aircraft, they would normally be employed in the CVE role supporting U.S. fixed-wing aircraft. Assuming an average operational availability rate of 85 percent, a four-ship class would normally yield three ships for surge operations. With each LHAR able to carry two ten-plane JSF squadrons with three spares, the force under maximum surge conditions could support sixty-nine JSFs. As one MEB air combat element includes thirty JSFs, three ships provide the required two-brigade lift footprint demanded by a single large JFEO.

Step Two: Recapitalize the Amphibious Landing Fleet

The minimal Cold War requirement for amphibious lift of 3.0 MEB equivalents was validated in the DoN Lift II study, completed in 1990.[182] Ultimately, budget pressure reduced the numbers to the "fiscally constrained" goal of lifting 2.5 MEBs. However, given that the Amphibious Landing Fleet is a key element of the irregular-warfare effort and provides a key forcible-entry capability for the joint force, the full 3.0 MEB amphibious lift requirement should be procured. A 3.0 MEB force is large enough to maintain amphibious crisis response platforms operating in support of the global irregular war and to support simultaneously the two-brigade force assumed to be the minimum necessary for a future joint forcible-entry operation.

The recapitalization plan for the Amphibious Landing Fleet needs to begin with the fleet's big-deck amphibious assault ships. In fiscal year 2007 (FY 07), the USS *Makin Island* (LHD 8)—representing an improved version of the basic LHD—will be commissioned.[183] As *Makin Island* enters service, one of the LHAs will be decommissioned, resulting in a fleet of eight LHDs and four LHAs.

With Marine aviation going back to sea, the character of the big-deck fleet will change slightly over time. Since the four *Commencement Bay* LHARs will replace the remaining four LHAs and eventually become the primary sea-based platform for Marine tactical fixed-wing aircraft, the eight LHDs will concentrate on the traditional Amphibious Landing Fleet role of delivering troops and equipment over the shore and inland. With large flight decks and floodable well decks, these eight ships are particularly well suited to this role. They can land troops by sea, using either LCACs or landing craft utility (LCUs), or by air using helicopters or tilt-rotor aircraft.

In the amphibious patrolling role, the LHD's inherent ability to support STOVL aircraft gives them an ability to carry a flexible composite wing of fixed-wing, tilt-rotor, and rotary-wing aircraft. The planned future wing consists of twelve MV-22 tilt-rotors, four CH-53E heavy-lift helicopters, four AH-1Z helicopter gunships, three UH-1Y utility helicopters, two MH-60S multirole helicopters, and six AV-8Bs or JSFs. This wing will require significantly more than the forty-two CH-46 helicopter–equivalent aircraft spots normally associated with an LHD.[184] However, a recent DoN analysis concluded that, subject to some restrictions, the LHD load could be expanded to fifty-eight CH-46-equivalent spots—albeit with three of seven "H-1s" in "locked spots" when the ship is carrying both MV-22s and JSFs (meaning they cannot be moved until other aircraft have been moved).[185]

During power-projection operations in which the JSFs fly off to operate from the LHARs, the MEB rotary-wing force will find itself a tight fit aboard the eight-ship LHD force. The rotary-wing element supporting two amphibious MEBs requires a notional

371 spots. Assuming a ship availability rate of 85 percent, the seven LHDs that would normally be available provide 294 (7 x 42) spots using old planning factors, and 406 using the new ones (7 x 58). An eight-LHD force thus looks to be marginally capable of carrying the rotary-wing force required to support two MEBs.

The number of spots required is driven primarily by the increased size of the MV-22, which takes 2.22 times the storage space of the CH-46 it replaces. There are several ways to address the resulting shortfall. One is to build an additional LHAR or LHD. This might not be as hard as it seems; for example, with nominal thirty-five-year hull lives, we need build only one big-deck amphibious ship every three years to maintain a force of twelve. If the service lives of all LHARs and LHDs could be extended without major problems to thirty-nine years, the big-deck amphibious assault ship/escort carrier force could grow to thirteen ships (five LHARs and eight LHDs) with no increase in a steady-state three-year build rate. The building of the LHD replacement (LHDX-1) would simply move "to the right" and replace the LHD 1 three years later than originally planned. Moreover, if all complex aviation power-projection ships could be paid for out of a yearly capital investment account established for them, the cost of the ship would be spread out over a thirty-nine-year period, causing little appreciable difference in the $3.56 billion investment necessary to sustain the baseline force of ten CVNs, four LHARs, and eight LHDs.

The next step of the amphibious fleet recapitalization plan involves the replacement of both the eleven aging LPD 4s and all twelve LSDs with new LPD 17s. The development of LPD 17 has been difficult and painful to watch. Original plans called for a class of twelve to replace the LPD 4 class.[186] The first was to be delivered in September 2002, at a target cost of $830 million (in FY 96 dollars, not counting nonrecurring design and engineering costs). However, due to lengthy delays in lead ship design and construction, its delivery date was slipped to September 2003, and cost increased dramatically. When finally delivered in 2005, the *San Antonio* (LPD 17), nameship of the class, received an unflattering evaluation by the Navy's Board of Inspection and Survey, which highlighted over fifteen thousand deficiencies and declared the ship "incomplete." By the time all the deficiencies are completed, the cost of the ship will be about $1.85 billion.[187] Given its problems, it is no wonder that the most recent DoN shipbuilding plan halts production of this class at only ten ships.

Despite this development history, however, production should continue beyond the ten ships now planned. One of the reasons why the lead ship was so troubled was the rigorous set of standards to which it was designed. This twenty-five-thousand-ton expeditionary warship—50 percent larger than the next-largest LPD in the world—was designed to operate twenty-five miles off a defended shore and in a nuclear

environment. The ship has a radar cross section equal to or smaller than that of a DDG 51/79;[188] it features whipping hardening for its hull girders, shock hardening, blast-hardened bulkheads, fragmentation protection, and nuclear blast protection. It has a four-zone collective protective system and can receive contaminated casualties through a specially designed triage center off the flight deck. It is designed with extensive fire insulation, along with mist firefighting and smoke-ejection systems. It is equipped with the same SPQ-9B X-band radar and cooperative-engagement capability being installed on Aegis/VLS combatants, a top-notch electronic countermeasures system, towed torpedo decoys, and a variety of other offboard decoys. It will be armed with two twenty-one-round RAM launchers and two 30 mm counter-boat guns, and it has space and weight reserved for sixteen VLS cells. Given these features, it will be the most survivable amphibious *warship* ever built.[189]

As for its amphibious warfare capabilities, the ship will be able to carry seven hundred troops, with a surge capacity to eight hundred. It will have two medical operating rooms, a twenty-four-bed ward, and overflow capacity for one hundred casualties; a flight deck that will accommodate two MV-22s or CH-53s, or four CH-46s; a hangar that can store an additional MV-22 or CH-53, or two CH-46s, or three AH/UH-1s; a new low-maintenance well deck that can store either two LCACs or one large-displacement landing craft; twenty-four thousand square feet of vehicle stowage on three vehicle decks, one of which can carry fourteen EFVs (enough to carry a full rifle company); and thirty-four thousand cubic feet of cargo and ammunition stowage in two major holds. Moreover, it was designed with the amphibious patrolling mission in mind, with berthing spaces arranged to maintain platoon cohesion, sit-up bunks for its embarked troops, and increased air conditioning. It is, quite simply, a stunningly capable amphibious platform.[190]

Further, the majority of the problems associated with the *San Antonio*'s design now appear to be under control. Follow-on ships for the class are now being built for $1.1 billion.[191] While high for a typical amphibious ship, the price appears reasonable given the ship's capabilities. Moreover, for operations in a defended littoral these capabilities are clearly superior to those of any practical MPF(F) ship alternative, and its ability to operate in a nuclear environment is a critical advantage. Accordingly, the Navy should keep the ship in production at a rate of one per year through FY 2022. With learning-curve efficiencies and multiyear contracts, the cost of the ship might be driven down below $1.1 billion. This plan would result in a class of twenty-four ships by 2025. The first twelve of the class would replace the eleven legacy LPD 4s, and the second twelve would replace the twelve LSD 41/49s, resulting in an efficient and capable all-LHD/LPD force.

An Amphibious Landing Fleet would thus be built around eight LHDs and twenty-four LPD 17s, augmented by the four *Commencement Bay* LHARs. This would provide greater than three MEB equivalents in all amphibious-lift metrics except vehicle square, which would come in at 2.93 MEB equivalents, a deficiency correctable by the optional addition of a fifth LHAR (or ninth LHD). Assuming an 85 percent availability rate, the fleet would exceed the minimum 2.0 MEB forcible-entry requirement with plenty to spare.

These thirty-six or thirty-seven amphibious landing ships would form a distributed sea base consisting of vessels all built to warship standards. Indeed, by capitalizing on these ships' greatly expanded capabilities, planners could improve the fleet's amphibious patrolling function and provide an even better link between the irregular war and major combat operations. They could do so by reconfiguring today's twelve (and tomorrow's planned nine) three-ship expeditionary strike groups into eight four-ship "distributed expeditionary sea bases," or DESBs. These DESBs would consist of one "base support group," consisting of an LHD, one CG 52 guided-missile cruiser or DDG 79 guided-missile destroyer, and three "expeditionary maneuver groups," consisting of one LPD 17 and one DDG 51/79 guided-missile destroyer. Each DESB would also include a two-ship division of Littoral Combat Ships (LCSs).

With one DESB homeported in Japan, the remaining seven would provide a rotational pool for additional deployed DESBs. In this way, two distributed expeditionary sea bases could be maintained forward, where they would conduct the amphibious patrolling function associated with the global irregular war. This posture would provide, on average, six dispersed two-ship naval task elements in the Indian Ocean and western Pacific.[192]

In the event of a crisis, the two forward-based and forward-deployed DESBs could combine anywhere from the Persian Gulf to Northeast Asia (i.e., Korea) in from fourteen to eighteen days.[193] The resulting eight-ship DESB could support six rifle companies with multiple insertion options, including: all under armor in EFVs; two reinforced tank companies; two fires groups, augmented by ten five-inch naval guns and approximately eight hundred VLS cells; twelve JSFs, twenty-four CH-46s or MV-22s, eight CH-53s, and fourteen H-1 helicopters; or twelve LCACs and four large-displacement landing craft. The two LHDs could also receive and house significant additional reinforcements. Indeed, two LHDs and six LPD 17s would have the surge capacity to base over eight thousand total troops. While not a full brigade, this sea-based maneuver force would represent a formidable combat capability for advanced force operations. When combined with one or two forward-deployed carrier strike groups, multiple reinforcing LCS divisions, and forward-deployed SSGNs, the Navy could rapidly assemble a potent combat force with a variety of balanced sea-based strike and maneuver options.

The Marine contingent described herein is not meant to be prescriptive. The point is that an Amphibious Landing Fleet consisting of eight (possibly nine) LHDs and twenty-four LPD 17s would provide an enormously flexible and capable force, equally attuned to the requirements of the global war on terrorism and power-projection operations.[194]

Step Three: Recapitalize the Maritime Prepositioning Fleet

Under this new plan, the Maritime Prepositioning Fleet would be reconfigured the better to support and complement the Amphibious Landing Fleet. A key aim, over time, would be to make the MPF less dependent on the availability of ports and airfields, more able to support operational maneuver from strategic distances, and more able to support the global irregular war.

Combat Prepositioning Force (Future). As the Army presence in Iraq is reduced, plans are for the Army's Afloat Prepositioned Stock-3 to be expanded into a far more capable Army Strategic Flotilla (ASF). These plans call for three five-ship squadrons, each consisting of one LMSR carrying a single "1 x 1" Army brigade set of equipment (i.e., one armored battalion and one mechanized battalion) or heavy unit of action; one LMSR carrying combat support equipment; two container ships, one loaded with supplies, the other with ammunition; and a smaller, shallow-draft RO/RO ship loaded with special humanitarian/disaster relief and special-operations support packages.[195] The addition of a smaller draft RO/RO ship to the Army Regional Flotilla (ARF) squadron mix was made to provide more flexibility in squadron employment options.[196] This plan will release two LMSRs currently dedicated to supporting the CPF to the Surge Sealift Fleet. Original plans were for the Army to begin transition to the new ASF structure by FY 2008. However, ongoing operations in Iraq will likely delay the transition.[197]

Like the current MPF, the ASF squadrons would be anchored in the Mediterranean and at Diego Garcia and Guam, within ten to fourteen days of any port between Europe and Northeast Asia. However, Army planners explicitly assume that an advance force must secure the necessary SPODs and APODs before the ASF squadrons can dock.[198]

As a result, the Army would also like to expand the CPF to include an "afloat forward staging base" (AFSB) large enough to embark an air assault brigade combat team (AABCT) consisting of approximately 3,800 personnel and ninety helicopters of all types. This would be one of the Army's sea-based contributions to JFEO. However, as Army helicopters are not "marinized" (i.e., specially modified to prevent salt-air corrosion), the AFSB would be capable of only limited maintenance. The brigade would shift operations ashore as soon as possible. With the brigade ashore, the AFSB would operate as a selective-offload logistics sustainment facility. Army planners have examined a variety of options to base an AABCT at sea but have yet to settle on a particular

solution.[199] In any event, it is not clear the Army will have the funds necessary to pursue such an approach.

The development of the ASF has important implications for the Navy. Today, the MPF and CPF combined provide lift for four sets of heavy combat brigade equipment requiring an available port and airfield at which to off-load. The new ASF will raise the number to six. This implies that the DoN could reconfigure two Maritime Prepositioning Force squadrons for different duties with no appreciable decrease in today's capabilities. For their part, the Marines would undoubtedly want to convert these two squadrons into MPF(F) "sea basing" squadrons, for $30–$31 billion. However, with the aforementioned changes to the Amphibious Landing Fleet, there is an alternative option that is both less expensive and more attuned to the operational requirements of the Joint Expeditionary Era. It starts with changes to the Logistics Prepositioning Force.

Logistics Prepositioning Force (Future)—the Joint Offshore Logistics Support Base. Sea-based logistical resupply of joint forces operating ashore is a key concern of all services and combat support agencies, not just the Marines. For example, the Defense Logistics Agency sees the sea-basing of supplies as an integral part of its "Global Stock Prepositioning Strategy." This strategy relies on seven dispersed joint depots (in Germany, Italy, Kuwait, Guam, Japan, Korea, and Hawaii); a deployable land-based distribution depot, or "depot in a box"; and DLA "afloat distribution centers," or DADCs. The DADC, a floating warehouse with selective-offload capability, is designed to provide *immediate* sustainment until the logistics sea bridge can be established and expeditionary shore-based deployable distribution depots are up and running.[200] They will focus on providing heavy supplies that would be prohibitively expensive to ship by air but that would take a relatively long time to arrive by sea, such as bulk liquids, construction materials, and major subassemblies and repair parts.[201]

Likewise, the Army is pursuing a "supply support activity afloat" (SSAA), designed to provide selective off-load of cargo until the joint theater logistics infrastructure is established ashore. Both the Army and DLA believe that shore-based distribution is considerably more efficient than sea-based distribution. Moreover, despite the known risks of long-range air or missile attack, both presume that any major joint power-projection operations will eventually require the establishment of bases and logistics infrastructure ashore. This is also the position of the Air Force.[202] All this makes clear once again that while the duplication of land bases at sea is a noble conceptual goal, the higher near- to middle-term payoff would be the development of a forcible-entry capability and a fleet of common cargo ships that would logistically support the *entire* joint force until the land-based distribution system is established.

If that is true, the logical MPF component to take on the mission would be the Logistics Propositioning Force. Consistent with this line of thinking, an expanded force including tankers as well as selective-offload cargo ships capable of handling both containers and breakbulk cargo would provide the foundation for the development of a prepositioned "joint offshore logistics support base" (JOLSB).[203] The JOLSB would be sized to support units conducting a JFEO and to sustain joint forces ashore until the theater logistics infrastructure can be established. The vessels could also support operations ashore in cases where the establishment of a large logistics footprint may not be prudent or during humanitarian and disaster relief undertakings when the ashore infrastructure has been destroyed.

DoN analyses suggest that a selective-offload container ship with the capacity to carry six hundred TEUs, along with a selective-offload breakbulk cargo ship based on the T-AKE cargo ship now in serial production, would provide fourteen or fifteen days of supply for a five-battalion combat brigade operating ashore—as well as the ships supporting them. A single oiler (T-AO) would provide 2.5 days of fuel supply for ships in the sea base and for five battalions ashore.[204] For tentative planning purposes, then, the DoN support element in the JOLSB would include two selective-offload container ships and two T-AKE variants for the Marines, one T-AKE to support Navy shipboard ordnance requirements, and six tankers. This eleven-ship package would provide ordnance, supplies, fuel, and water to support two forcible-entry MEBs in combat for fourteen or fifteen days.

Ships dedicated to DLA, Army, and Air Force support elements would add to these numbers. Although the DoN would incur the nonrecurring engineering costs of redesigning ships for JOLSB requirements, the actual procurement costs for Air Force, Army, and DLA ships would be borne by the respective department or agency. Final size of, and anchorages for, the JOLSB would be determined by follow-on operational analysis.

The requirement for the JOLSB to support shore-based aviation forces suggests the need for a substantial joint aviation support element. The first ship to be added to the element should be the fifth LHAR recommended in this plan. Additional ships might include replacements for the two T-AVB aviation support ships now in the LPF. These ships carry cargo containers with the intermediate maintenance activity for Marine aircraft. They are optimally designed to off-load their containers ashore but can support some operations at sea. Their replacements should be more capable ships specifically designed to service and repair aircraft at sea.[205]

If Congress were to approve the purchase of a hull designed and built overseas, the logical replacement for these two ships might be modified Maersk S-class containerships. Modified with large flight decks, with operating spots for fifteen heavy-lift helicopters

or twelve MV-22 tilt-rotor aircraft, these new T-JAVBs would be able to carry seventy-two CH-46 equivalents during transit, could support every rotary-wing aircraft in the joint inventory, and would have room for two hundred TEU containers and a thousand personnel.[206] Two ships, one on each coast, manned by civilian crews from the Military Sealift Command and ready to be activated in ninety-six hours, would provide an additional 144 CH-46-equivalent parking spots and a mobile joint rotary-wing aviation support facility.[207] When married up with the LHAR, the joint force would have a highly capable aviation-support sea base for both rotary-wing and STOVL aircraft.

MULBERRY 21. A new capability found in the LPF would be an ability to create a harbor and theater logistics portal where none exists, thereby helping to increase the entire fleet's operational independence and freedom of action. This capability, dubbed "MULBERRY 21" after the artificial harbors developed for the invasion of France, would allow joint planners "to think in a rather different geographical box from the [enemy] staff officers whose job was to second guess their plans" and to enable expeditionary "maneuverism" across transoceanic distances.[208]

MULBERRY 21 would expand upon the Joint Enable Theater Access–Sea Ports of Debarkation (JETA-SPOD) program sponsored by the U.S. Pacific Command.[209] This program includes the development of new lightweight, modular causeway systems and of lightweight container-handling systems. These new initiatives would be combined with new rapidly deployed and employed breakwater systems and legacy platforms, like the auxiliary crane ships found in the RRF, to create the ability to form a protected harbor anywhere in the world.

MULBERRY 21 would be both a program and a joint task force, perhaps under the U.S. Transportation Command. The joint task force would be responsible for developing and testing new harbor and SPOD technologies and systems, and for employing MULBERRY 21 during a crisis. The costs for developing this capability should be borne by all the services equally.

Maritime Prepositioning Force (Future). The reshaping of the Amphibious Landing Fleet, the upgrading of the Army's Combat Prepositioning Force into a MPF clone, and the expansion of the Logistics Prepositioning Force into a joint offshore logistics support base would allow the Navy to recast its plans for the Maritime Prepositioning Force. These new plans would be informed by three facts:

- The current MPF ships all have more than twenty years of service life left in them. Indeed, even as it plans for a new MPF(F) capability, the DoN plans to buy out the leases for the legacy MPF ships and place them in the RRF.

- The final character of a future "sea basing" MPF squadron should be determined and shaped by considerably more experimentation and technological development, and possibly prototype development.
- There have recently been moves to provide temporary offshore bases in support of the global war on terrorism.

With regard to the last point, an important supporting mission in the global irregular war is working to increase our partners' capacity to fight local terrorist networks, primarily by providing training and direct support to local governments and militaries. Another is to operate in or near ungoverned areas, conducting operations to disrupt enemy safe operating areas and sanctuaries. In both cases, the ability to establish a temporary sea base to support relatively modest joint operations ashore is an attractive option, especially in cases where infrastructure ashore is nonexistent or a host government desires a minimal U.S. footprint. Significantly, these missions would normally be conducted in unimpeded- or guarded-access scenarios.

Recently, the DoN modified the USNS *GySgt Fred W. Stockham,* one of the sixteen legacy MPF ships, to create an "irregular-warfare maritime support base." The ship was given a new fifty-four-foot flight deck capable of handling two MH-60 helicopters, a commercial-type aviation refueling system, a medical module, communications upgrades, and far more watercraft than were previously assigned to the ship. For a conversion cost of just three million dollars, the *Stockham* "is off doing real good stuff that we can't talk about."[210]

Building on this sensible modification, the leases for the three MPF squadrons should be purchased outright as planned, and two of the three squadrons should be resized and reshaped for a new mission—supporting the global war on terrorism. The two five-ship MPF squadrons would be repackaged as five two-ship "irregular-warfare maritime support squadrons." One squadron might be repositioned to Ascension Island and focus on supporting forces operating in the West African littoral. One squadron would remain in the Mediterranean, supporting forces operating from the northwest African coast to the Horn of Africa. One squadron would be retained on Diego Garcia, from which it could support irregular-warfare operations throughout the Indian Ocean. One squadron might be repositioned to Palau and focused on Southeast Asia. The final squadron would remain on Guam, focused on the western Pacific, from the Philippines to Northeast Asia.

Each of the ships would receive more extensive modifications than did the *Stockham*. At an estimated cost of $25 million per ship, the package would include expanded rotary-wing support capabilities and increased watercraft and lighterage. Most important, the ships would be modified to house, feed, and sustain up to a reinforced rifle battalion. Assuming that the estimate for the conversions is accurate, total conversion costs for ten ships would come to $250 million.

Additionally, the ships would trade the equipment associated with heavy ground combat operations for equipment specifically tailored for irregular warfare. This would mean fewer tanks and more armored "Humvees," armored trucks, engineering equipment, and water purifying units. Because irregular enemies are increasingly drawn to complex terrain like cities and built-up areas, the equipment sets would also emphasize urban warfare capabilities, such as robotics and nonlethal weapons.[211]

The third of the current MPF squadrons would remain at Diego Garcia. It would become a "swing squadron," capable of delivering the equipment set for a Marine expeditionary brigade in support of either a major combat operation or a major stability operation, allowing the Marines to form a full Marine expeditionary force for either mission. The squadron would be unit and combat loaded to the extent practical, and it would be given additional watercraft and lighterage to improve its in-stream off-loading ability. The ships might also be configured to allow some RSOI in transit.

The third squadron would also become the focus of experiments to explore further the idea of basing and supporting large combat units on and from a sea base. The aim would be to transform this "swing squadron" over time to support a MEB fully and directly from the sea.

Step Four: Recapitalize the Surge Sealift Fleet

The eleven LMSRs in the Surge Sealift Fleet, when joined by the two additional ships freed up by the new ASF program, will be able to carry nearly ten Army heavy units of action. The oldest LMSR is less than ten years old. As a result, these thirteen twenty-four-knot ships will remain the backbone of the Surge Sealift Fleet for the next several decades.[212] The focus of attention on surge sealift recapitalization plans should therefore be on the eight aging fast sealift ships. All are approaching forty years of service and will soon need to be replaced. The increased DoD emphasis on reducing strategic closure times will put the DoN under "tremendous pressure to improve high-speed lift."[213] Therefore, the replacement ships should be at least as fast as, if not faster than, the thirty-to-thirty-three-knot FSSs. However, consistent with arguments made earlier in this chapter, high speed should not become, in and of itself, the driving technical consideration for FSS replacements. Instead, the focus should be to improve U.S. global freedom of action and to improve its operational independence.

With the Navy's amphibious lift capacity increased to 3.0 MEB equivalents and with ten irregular-warfare support ships capable of carrying an additional 2.0 brigade equivalents (ten reinforced rifle battalions), the Navy will have five brigades' worth of operationally independent lift across the full range of potential access scenarios. The

new Maritime Prepositioning Force will carry the equipment for at least four brigades (three Army heavy brigades and one MEB) that can be used to reinforce quickly a joint lodgment or to rush forces to a theater with ready access—maintaining today's level of capability. The possible addition of an AABCT afloat would increase the joint lift capability by one brigade. Also, the thirteen LMSRs in the Surge Sealift Fleet will deliver an additional ten brigades' worth of equipment through prepared ports. What is still lacking, however, is any material improvement in the number of heavy *ready-to-fight* brigades that can be delivered to a distant theater without dependence on deepwater ports. This suggests that the first priority for the replacements for the eight fast sealift ships should be to eliminate their dependence on ports while improving their ability to support operational maneuver from strategic distances.

Eliminating the lengthy RSOI required at the other end of a transoceanic voyage would, by itself, improve strategic employment times for expeditionary maneuver forces by up to a week. Said another way, a ship that carries intact combat units can be *slower* than a ship designed to deliver just equipment and still be *faster* in delivering ready-to-fight brigades to a distant theater. Therefore, emphasis should be placed on ships that combine speed and austere delivery capability with an ability to carry intact combat units—perhaps a reinforced battalion task force—much like the High-Speed Shallow Draft Ship envisioned during the Army after Next project. Using these types of ships, now referred to by the Army as "Austere Access High Speed Ships" (AAHSSs), the joint force could inject heavy Army forces from the continental United States or from distant intermediate staging bases directly into and through a littoral, in trail of forcible-entry forces.

Another option would be to avoid having to stop at an austere port or beach entirely, by replacing fast sealift ships with lighter-than-air "hybrid ultra-large aircraft," or HULAs. However, these airships, perhaps twice as fast as practical fast sealift ships, and with potential cargo payloads of from thirty tons to one thousand, would still find it hard to compete with the sheer volume that can be moved by large sealift ships. An analysis conducted by OSD's Office of Force Transformation (OFT) indicated a fleet of twenty HULAs would be able to ship six Apache helicopter battalions from Fort Campbell, Kentucky, to Saudi Arabia in twenty-six days. However, with cargo capacities of nearly four hundred thousand square feet, two or three of today's twenty-four-knot LMSRs and thirty-three-knot FSSs can accomplish the same task in thirty-two days.[214]

Overall, the best option is to replace the eight fast sealift ships with a squadron of ships that can carry the equipment and personnel associated with one Army modular division (three to four heavy UAs) and their basic combat loads of fuel, ammunition, and supplies; travel across transoceanic ranges at speeds of from thirty-six to thirty-nine

knots (the same speed as that of the proposed HSS, now in the Navy's plan); and deliver them through an austere, shallow-draft port or across an undefended beach. This option would increase the number of access-insensitive and ready-to-fight heavy brigades normally delivered by sea in a JFEO from two (delivered on amphibious assault ships) to five or six.

The costs for such ships will undoubtedly be quite high—at least as much as the HSS's projected price tag of $1.3 billion. Adding a capability to discharge the equipment through an austere port or across a beach would likely raise the price even more. Because of their high costs and because the ships would be designed to support directly the Army's ability to conduct operational maneuver from strategic distances, the costs for the ships should be shared equally by the Departments of the Navy and the Army.

Step Five: Recapitalize and Modernize Sea-Base Connectors

Sea-base "connectors" are a critical component of any sea base. They come in three different varieties—intertheater, intratheater, and cargo and assault connectors.[215]

Intertheater connectors provide the primary linkage between the CONUS base of operations, intermediate staging bases, and the sea base. They would deliver high volumes of personnel, equipment, and supplies over transoceanic distances either to transshipment locations or directly to the sea base. Today, it is impossible to land intratheater transports such as the C-130 at sea, let alone the larger and heavier strategic airlifters like the C-5 and C-17. Therefore, for the foreseeable future the primary intertheater sea-base connectors will be ships.[216]

One potential intertheater connector being pursued by the DoN is the aforementioned High Speed Ship. This ship's notional characteristics are a speed of thirty-six to thirty-nine knots, a range of eight thousand nautical miles, and a draft of 8.1 meters. It is designed primarily to deliver a MEB's worth of nondeployable helicopters and 1,650 personnel, to an MPF(F) squadron. The projected cost of the ship is $1.3 billion.[217] However, as this plan relies on the Amphibious Landing Fleet for JFEOs, the requirement to deliver helicopters to the MPF(F) squadron is eliminated. Accordingly, for the reasons previously presented, this plan diverts the money earmarked for the HSS to developing the replacements for the fast sealift ships—the Army's AAHSS.

Intratheater connectors are capable of self-deploying to the theater of operations. Once on the scene, their primary role is to move forces and supplies within the theater. In appropriate threat conditions, they can also be used to insert combat units over intratheater ranges.

In many ways the aforementioned HULA appears to be a much better fit as an *intra*-theater connector. Although their payload is far less than that of strategic sealift ships,

it is several times that of tactical transport aircraft. Unfortunately, the technology needed to support the HULA is still several years away. However, a promising new type of sea-based intratheater connector with similar cargo capacities—the Joint High Speed Vessel (JHSV)—is soon to enter production and service.[218]

Conceptually, the JHSVs are the successors to the World War II sea-based intratheater connectors, particularly the landing ship tank (LST) and the landing ship medium (LSM). These ships ranged in size from the LST's 4,080 tons to the LSM's nine hundred tons, had ranges of four to six thousand miles, and made speeds of less than thirteen knots. While they were slow, both had one key characteristic—they were beachable. LSTs and LSMs formed a fleet of "one-way, one-shot" intratheater connectors that augmented the larger amphibious warships.[219] Nearly 1,700 of these ships were built during World War II, and they saw extensive action in all theaters.[220]

After the war, the smaller LSM faded quickly from service, but the larger LST lived on. Many World War II LSTs were reactivated for the Korean War, and twenty-two new LSTs were built during and after that conflict. They were all later replaced by twenty *Newport*-class LSTs, the ultimate beachable U.S. landing ship. At 8,450 tons, the *Newport*s traded in the clamshell doors characteristic of earlier LSTs for an elevated bow ramp. This arrangement allowed them to keep up with the twenty-knot, transoceanic amphibious ships developed during the Cold War.[221] However, indicative of the declining interest in amphibious operations during the late Cold War and its immediate aftermath, the ships were retired during the 1990s without replacement, long before the end of their thirty-five-to-forty-year service lives.[222]

The only remaining intratheater connectors that can beach themselves are found in a vestigial force of nine *Besson*-class vehicle landing ships (LSVs) and thirty-five large LCU-2000s operated by the Army Transportation Corps. The former displace 4,199 tons, with a range of 5,500 nm and a speed of twelve knots; the latter displace 1,102 tons and have a range of 4,500 miles and a speed of 11.5 knots. Both can discharge vehicles directly over a beach. However, the ships are optimized solely for the intratheater transport of vehicles; they do not have the troop berthing to carry intact combat units.[223]

The inability of either the Army or Navy to deliver small intact combat units over a beach severely hampers the emerging visions of operational maneuver from the sea and operational maneuver from strategic distances. As a result, both the Army and Navy began thinking about new intratheater connectors that could be used in these roles. The Army after Next program called for the development of a Theater Support Vessel, or TSV, which could discharge intact combat units through austere ports or even across beaches, thereby complementing the larger High Speed Shallow Draft Ships.[224]

The DoN vision for its intratheater connector was a modular, high-speed vessel (HSV). The HSV would perform the role of high-speed logistics connector for a sea base, transferring personnel equipment from theater land bases to the sea base, between ships in the sea base, and from the sea base to shore. By virtue of its modular design, the HSV could also perform additional roles, such as mine warfare or support of special operations forces.[225] Rather than "one-way, one-shot" connectors, Navy planners envisioned the HSV as a multifunctional component of a sea base.

Since 2001, the Army, Navy, and Marines have experimented with no fewer than four distinct types of these vessels. One of the vessels was used to support OIF, and another continues to provide logistical support to Marines on Okinawa as part of the LPF. The experiments proved promising enough to prompt both the Army and Navy to launch formal procurement programs for high-speed, sea-based, intratheater connectors.[226]

Happily, in late 2004 the Army and Navy signed a memorandum of intent to merge the TSV and HSV programs into the single Joint High Speed Vessel program mentioned above.[227] The intent was to develop a common hull form to lower costs and ensure interoperability between the two vessels. Critically, the JHSV will have an ability to inject intact combat units from a sea base or theater base directly into an enemy's defended territory. The aim of the program is to:

> provide high speed intratheater surface connector capability to rapidly deploy selected portions of the joint force *that can immediately transition to execution*, even in the absence of developed infrastructure, *and conduct deployment and sustainment activities in support of multiple, simultaneous, distributed, decentralized battles and campaigns*. The primary missions include: support to Theater Cooperation Program and Global War on Terrorism, littoral maneuver, and sea basing.[228]

The JHSV program will result in a modern version of the LSTs and LSMs of World War II but will do those ships one better. JHSV will transport forces and supplies from in-theater intermediate support bases to the sea base or directly to the JOA; transport personnel and supplies within a sea base; or transport personnel, supplies, or intact combat units from the sea base to the shore. As with its predecessors, high speed will likely be less important than payload capability and the ability to deliver payloads directly to the shore.

The *cargo and assault* connector, the third type, is used to get cargo, personnel, and equipment from the sea base ashore. Cargo connectors include lighterage and other craft used to off-load maritime prepositioning, surge sealift, and other cargo ships in-stream, in unimpeded- or guarded-access conditions. These consist of side-loading warping tugs, amphibious warping tugs, powered causeway sections, unpowered pontoon causeways, and self-propelled joint modular lighters. These cargo connectors can be used only in protected harbors or benign sea states. One side-loading warping tug and three or four powered causeway sections are normally carried by each MPF ship.[229]

Assault connectors come in three basic types. The first comprises *ship-to-shore surface connectors*—landing craft or other special-purpose craft that are carried by the larger ships in the sea base. These special-purpose vessels have always played a vital role in amphibious operations.[230] In 1944 alone, over twenty-five thousand landing craft weighing less than fifty tons were built—an average of ten for every large sea-base maneuver platform or intratheater connector.[231] Until a VTOL rotor or aircraft can be developed that lifts twenty-five or more tons, ship-to-shore surface connectors will remain the preferred means of transporting heavy equipment ashore.

The most capable ship-to-shore surface connectors include the landing craft air cushion, the landing craft utility, and the landing craft medium (LCM). The forty-plus-knot LCAC can deliver from sixty to seventy-five tons across 70 percent of the world's beaches. The LCU is a displacement landing craft capable of transporting up to 190 tons directly to the beach at speeds of eleven knots; the smaller LCM can deliver from thirty-four to sixty-five tons of cargo directly to the beach at approximately twelve knots.[232]

Given the ambitious goals of operational maneuver from the sea and ship-to-objective maneuver, as well as Navy sea-basing plans, it is unsurprising that these connectors are being thoroughly modernized. At least seventy-two of the ninety-one original LCACs are being put through a service-life extension program (SLEP) to delay disposal, improve engine performance, and perform upgrades.[233] The LCACs will be augmented by the end of the next decade (and eventually replaced) by a new, more capable LCAC(X). Additionally, the slow but dependable LCUs are to be replaced by a far more capable replacement heavy landing craft, or LCH(X). This craft is expected to have a speed of thirty knots and carry 2,200 short tons.[234]

Ship-to-objective surface connectors are special assault connectors designed to transport a combat team directly from the ship to an inland objective without needing to unload on the beach. In essence these amphibious assault vehicles (AAVs) are armored vehicles that "swim" to the shore at relatively low speeds (eight knots) and then operate as armored personnel carriers. The current AAV is the AAVP7 (i.e., the seventh in the series). It is protected by reactive armor and armed with a .50-caliber heavy machine gun and a 40 mm grenade launcher; it can carry eighteen Marines.[235]

The AAV is scheduled to be replaced by the Expeditionary Fighting Vehicle, or EFV. Although it will carry three fewer troops, the EFV will be much better armed and protected. However, its most dramatic improvement will be in its mobility; it is designed to achieve water speeds as high as twenty-five miles per hour and to have the cross-country mobility of an M1 tank. Marines hope the EFV will allow them to perform high-speed, protected tactical maneuvers directly from the ship to an inland objective.[236]

But capability comes with a cost. The EFV is a very complex and expensive machine—around eight million dollars a copy. Current Marine plans are to buy over a thousand of the vehicles, enough to outfit two amphibious and three MPF brigades. Assuming the vehicle is deemed operationally effective, the expeditionary force recommended above would require a maximum of four, and a minimum of two, brigades' worth of EFVs. The maximum buy would equip three amphibious brigades and one MPF "swing" brigade. The minimum buy would equip two forcible-entry amphibious brigades.

In the years after World War II the Marines pioneered the use of helicopters as *ship-to-objective aerial connectors.* Today, all three of the Marines' utility and troop lift helicopters, and the AH-1 helicopter gunship as well, are updated variants of helicopters first developed during the Vietnam War. Not surprisingly, the Marines plan to replace or upgrade them all.

The CH-46 medium troop-lift helicopters will be replaced with the MV-22 tilt-rotor, which combines the vertical takeoff and landing capabilities of a helicopter with the high speed of a turboprop aircraft. The transition is long overdue; more than twenty years after the start of the "JVX" program that led to its development, the MV-22 has yet to enter squadron service, because of a series of crashes and nagging design problems.[237] However, it appears that the MV-22's troubles are now behind it.[238] With the MV-22 the Marines will have an aircraft that "is twice as fast, can carry three times as much, and goes six times farther than the aging CH-46Es" it replaces.[239]

The MV-22's sharp increase in performance also comes at a sharp increase in price. With a current fly-away cost of $70 million or more, the MV-22 is putting heavy pressure on the aviation procurement account at the same time DoN is trying to fund a number of other important aircraft programs. Setting aside the question of its high costs, the fundamental issue is whether or not the MV-22 is the best fit for the emerging Sea-as-Base Maneuver Fleet. The answer is: perhaps not.[240]

Why? In short, the MV-22 appears to be a poor fit in the system of systems of ship-to-shore aerial connectors. For example, the MV-22's speed and range are much greater than those of the heavy-lift helicopters that haul the landing force equipment, the utility helicopters that provide command and control during aerial maneuver operations, or the helicopter gunships that would normally escort it. A force making a deep air insertion using MV-22s will need to be escorted by AV-8Bs or JSFs and will be limited to what the MV-22 can carry inside its cargo box. Therein lies the second rub—although its cargo "box" is slightly larger than that of the CH-46 it replaces, because of its internal seating arrangement the MV-22's designed load of twenty-four Marines is an extremely tight fit. One Marine sergeant involved in the operational testing of the plane believes the aircraft's true combat load to be closer to twelve Marines.[241]

The problem also extends to cargo. Because the MV-22's cargo box is less than six feet wide at its narrowest point, it can carry only specially modified "internally transportable vehicles"—small jeeplike four-wheel-drive vehicles capable of carrying no more than four Marines. Moreover, although it can carry more than ten thousand pounds externally, when it does it sacrifices its speed and range advantages over a helicopter. At present, it can carry its full external load at speeds up to 110–120 miles per hour over a radius of only about seventy miles.[242]

Summing up, then, the MV-22 is a superb high-speed people mover. As such, it is best suited for Vietnam-era air-assault missions involving the insertion of foot-mobile troops supported by a few small gun carriers or reconnaissance vehicles, the seizure of airheads, or deep raids.[243] Indeed, the aircraft's deep raiding and insertion capability explains the interest of the Special Operations Command (SoCom) in the aircraft.[244] However, the MV-22 appears far less well suited to service as the Marines' primary ship-to-objective aerial connector in forcible-entry operations, primarily because of its limited internal cargo capacity and its impact on the size and design of the Amphibious Landing Fleet.

Since the MV-22 can hold no more troops than the original CH-46—and potentially less—Marine Corps plans have long assumed that the future MV-22 squadron will require the same twelve aircraft as the current CH-46 squadron. As discussed earlier, this has unfortunate ramifications for the sea base, because the MV-22 is twice as big and twice as heavy as the CH-46. Indeed, the aircraft's size is the primary cause of the dramatic increase in the number of spots needed to sea base a MEB's worth of rotary-wing aircraft. While four twelve-plane CH-46 squadrons require forty-eight shipboard spots, four twelve-plane MV-22 squadrons require 106.56 spots. In essence, then, a two-MEB operation supported by MV-22s requires two to three more LHD equivalents than one supported by the CH-46. The fifth LHAR and two new T-JAVBs recommended earlier would make up the spot shortfall, at a shipbuilding cost of approximately $3.4 billion. These shipbuilding costs should be considered overhead for the MV-22 program. For an aircraft buy of 360 MV-22s, this amounts to a $9.7 million shipbuilding premium per aircraft, on top of its current fly-away cost of over $70 million.

This is a very steep price for a high-speed aerial personnel mover. As the DSB pointed out, the key to getting dramatic improvements in the operational capabilities of a sea base is to develop an aerial connector that can compete with surface connectors *in payload.* Accordingly, there have been increasing calls for a number of heavy-lift ship-to-objective aerial connectors. These include "Quad Tilt-rotors";[245] blimps;[246] a Joint Heavy Lift aircraft with lift fans;[247] and gyro-copters.[248] All of these concepts are exciting; however, they are likely

years, if not decades, away. The Marines and Army have yet to agree on the performance parameters of a future Joint Heavy Lift aircraft, and if the MV-22 is any indication, the costs of developing such a system will be high.[249] Moreover, no one is quite sure how big such a heavy-lift aircraft would be or what its potential impact on the sea base would be. The Marine Deputy Commandant for Aviation, Lieutenant General Michael Hough, has estimated that an aircraft capable of lifting twenty-five tons over four or five hundred miles at speeds of 350 knots—the general characteristics desired by the Defense Science Board—would weigh two hundred thousand pounds when fully loaded and require a flight deck 1,200 feet long—figures that current and planned sea-base ships cannot support.[250]

Rather than waiting for the Joint Heavy Lift aircraft to be defined and developed, the Marines have opted to purchase 154 new CH-53Xs, a follow-on to the CH-53E heavy-lift helicopter now in service. The CH-53E can carry a six-ton payload over a combat radius of 110 nautical miles or a sixteen-ton payload over a combat radius of fifty nautical miles. With its new engines, new rotors, and other improvements, designers hope, the CH-53X will be able to carry a payload of from 13.5 to sixteen tons over a 110 nm radius at half the operating cost of the CH-53E;[251] it has three times the load of a CH-53E over ranges of two hundred nautical miles.[252]

The Marines cannot get the CH-53X fast enough to suit them. The current CH-53E fleet continues to be heavily used in Afghanistan and Iraq, and the airframes are wearing out much faster than expected. Estimates are that in 2010 the Marine Corps will need to start removing about fifteen helicopters a year from service as they reach the end of their design lives. Even if the Marines were to start a crash program to develop CH-53X, it would likely not be ready before 2015. Further, a crash program is not likely.[253] With money tight, the assistant secretary of the navy for Research, Development, and Acquisition has refused to allow the program to go forward until $800 million for it is found within existing budgets.[254]

Given the CH-53X's superior personnel and cargo-hauling capability, freeing up DoN funds to procure the CH-53X appears to be an important step toward improving the fleet's sea-based maneuver capabilities. One option might be to truncate the MV/CV-22 buy at approximately 175–200 aircraft, with the aim of creating a Joint Tilt-Rotor Force of ten twelve-plane squadrons. The entire force would be upgraded to the CV-22 standard, with upgraded terrain-following radar, a suite of integrated radio-frequency countermeasures, and directed infrared countermeasures. These modifications would enable the joint CV-22 force to "go anywhere, anytime, and come back"—an enviable characteristic for a *national* deep raiding force.[255] The best home for the Joint Tilt-Rotor Force could likely be U.S. SoCom, the supported commander for the global war against terror.

The cost savings associated with the reduced MV/CV-22 buy could then be diverted into accelerating the CH-53X's development and pursuing it as the single primary surface-to-objective aerial connector.[256] Although it is about 20 percent larger than the MV-22, the CH-53X is capable of lifting many more troops and much more cargo over the operational ranges associated with an attack from the sea.[257] It is also capable of lifting more powerful vehicles ashore. An all-CH-53X force thus would likely require fewer total aircraft than a mixed MV-22/CH-53 fleet. The necking-down to a single primary sea-based aerial connector would also save O&S dollars.

A second option would be to pursue an alternative medium-lift/heavy-lift rotary-wing force with a less expensive medium helicopter in place of the MV-22. There are three likely potential candidates: the CH-60, CH-92, and EH-101.[258] However, given the much greater lifting capacity of the CH-53X, as well as the increased costs associated with introducing a new airframe into fleet service, an all-CH-53X force looks to be both more attractive and more flexible than any of these options.

A third alternative, of course, would be to continue to buy the MV-22 as planned but to replace CH-46s with MV-22s on less than a one-for-one basis. Indeed, because the transition to the MV-22 is much slower than originally planned and CH-46s are nearing the ends of their service lives, the Marines already intend to replace every four CH-46s with three MV-22s over the near to middle term, resulting in "interim" squadrons of nine aircraft.[259] By making this plan permanent, the DoN would both free up money for development of the CH-53X and reduce the deck-spotting factor for a 2.0-MEB forcible-entry operation by more than an LHD equivalent.[260] The strongest argument for this option is that further delay in replacing the tired CH-46 fleet is simply not prudent. Moreover, despite its operational limitations and high costs, the MV-22's speed and range improvements will undoubtedly create new operational opportunities, especially for the forward-deployed amphibious crisis-response forces.

Summary of Recommendations for the Sea-as-Base Expeditionary Maneuver Fleet

To recap, here are the recommendations for the design of a new Sea-as-Base Expeditionary Maneuver Fleet capable of playing a major role in the global war on terrorism, in joint forcible-entry operations, and in expeditionary campaigns against more traditional enemies.

- Consistent with the goal of taking Marine tactical aviation back to sea, the eleventh CVN in the current Navy shipbuilding plan should be replaced by four new *Commencement Bay* LHARs. The ships would be built in fiscal 2007, 2010, 2013, and 2016. These ships would normally be employed as escort carriers, supporting Marine, and possibly Air Force, STOVL JSFs.

- The 3.0-MEB requirement for amphibious lift should be reaffirmed and the Amphibious Landing Fleet equipped with eight LHDs and twenty-four LPD 17s. Fourteen additional LPD 17s above the ten now in the plan should be purchased at a rate of one per year, from FY 2009 to FY 2022. The first twelve LPD 17s would replace the eleven aging LPD-4s; the final twelve LPD 17s would replace the LSD 41/49s on a one-for-one basis.
- Current ESG formations should be reorganized into eight distributed expeditionary strike bases, each consisting of one LHD, one CG 52, three LPD 17s, three DDG 51/79s, and a two-ship LCS division. With one DESB homeported in Japan, the remaining seven would keep one DESB rotationally deployed in the Indian Ocean. The remainder of the force would be postured for rapid surge in support of a single major combat operation or a two-brigade JFEO.
- The DoN should support Army plans to reorganize its Combat Logistics Force into a three-squadron Army Strategic Flotilla. Each squadron is designed to deploy and support a "1 x 1" heavy unit of action through a prepared port. This reorganization, in turn, will open up the possibility of reorganizing the DoN's own Maritime Prepositioning Force (discussed below).
- The current Logistics Prepositioning Force should be expanded and reorganized into a joint offshore logistics support base. The mission of the support base would be to provide logistics support to joint forces ashore until an expeditionary theater infrastructure could be established. Notional planning requirements for ships in direct support of the fleet include six tankers, three T-AKE selective-offload cargo ships, and two six-hundred-TEU containerships. Requirements for the DLA afloat distribution center, Army supply support activity afloat, and Air Force support requirements would be established by the respective agencies and departments.
- To provide sea-based aviation support for joint aviation units, the Logistics Prepositioning Force would also receive three new aviation support ships—an LHAR and two T-JAVBs.
    - The additional LHAR should be purchased in FY 19 and transferred to the Military Sealift Command for operations as part of JOLSB. This recommendation is based on the assumption that the expected service lives of LHDs and LHARs can be extended to thirty-nine years. The cost of the extra ship would be absorbed within planned payments of a newly established capital account for aviation power-projection ships. The ship could be used in a variety of roles: as a rotary-wing aviation transport, as a joint aviation support base, as a special operations support base, or to support major forcible-entry operations.

  - The two small T-AVBs now in the LPF should be replaced by two larger T-JAVBs, based on the Maersk S-class hull. The possibility of a six-ship buy with the Army, which is looking into the possibility of sea-basing an air-assault BCT, should be explored. Because the hulls are foreign designed and built, procuring Maersk S-class ships would require congressional approval.

- The DoD and DoN should initiate a MULBERRY 21 program as part of the LPF to create the joint capability to create rapidly a protected harbor and theater logistics portal anywhere in the world.
- The leases for the three MPF squadrons should be bought out, and a total of ten of sixteen ships should be converted to irregular-warfare maritime support bases, similar to the modifications made to the USNS *Stockham*. These ten ships would be organized into five two-ship irregular-warfare squadrons, positioned at Ascension Island (assuming the approval of the government of Britain), Italy, Diego Garcia, Palau (assuming approval of the government of Palau), and Guam. The heavy combat equipment now stored on these ten ships would be positioned in northwestern Australia (assuming approval of the government of Australia); one equipment set would support combined-arms training between Marine Corps and Australian army units, and the other would represent prepositioned war reserve stocks.
- A single six-ship MPF squadron should remain anchored at Diego Garcia, earmarked to reinforce either a major stability operation or a major combat operation. This squadron would become the focus of sea-basing experimentation. The final selection for future MPF(F) ships would be dictated by the outcome of joint sea-basing experiments and be heavily influenced by the size of future high-speed connectors. In the interim, this squadron would be unit and combat loaded to the greatest extent practical and be augmented with additional cargo connectors to improve its in-stream cargo-offload capability.
- The eight FSSs should be replaced by an eight-ship class of thirty-six-to-thirty-nine-knot Austere Access High Speed Ships designed to transport the equipment and personnel of a modular Army division over transoceanic distances and insert them through austere ports or over beaches. The intent of the program would be to increase the number of heavy ground-combat brigades delivered in ready-to-fight combat condition.
- The Joint High Speed Vessel Program needs to be continued, with a goal of creating a family of intratheater connectors to augment both the Amphibious Landing Fleet and the Austere Access Shallow Draft Ship. Vessels that can discharge their cargo over a beach would be the most versatile. The final number of ships bought should be determined by further analysis.

- OSD and the DoN should accelerate plans to develop and procure the CH-53X force, by reducing the number of aircraft in planned MV-22 squadrons from twelve to nine and diverting the money saved to develop the CH-53X. The result would be a mixed MV-22/CH-53X aerial ship-to-objective connector force.

Exploiting the Sea as a Joint Base

The U.S. Navy enjoys a level of naval supremacy perhaps unmatched since Athens and the Delian League. As a result, in the early decades of the Joint Expeditionary Era, the United States can claim the sea as a vast base of operations—with all the attendant strategic, operational, and tactical benefits.

Unfortunately, the current conception of sea basing is focused primarily on landing and supporting one or two brigades from the sea within ten to fourteen days. While such a capability may be desirable, pursuing it is diverting attention and resources from the development of other, more important oceanic base characteristics. It is time to reassess the current direction of the joint sea base and to make the changes necessary to develop the sea as a joint base.

The Sea-as-Base Expeditionary Maneuver Fleet outlined herein is designed with this goal in mind. It is a fleet equally capable of supporting the global war on terrorism and projecting power through a littoral defended by a small number of nuclear weapons. It is based around improvements to the Amphibious Landing Fleet rather than to the Maritime Prepositioning Force. The amphibious fleet is designed to assemble and support a two-brigade JFEO from purpose-built amphibious warships. The Maritime Prepositioning Force is reshaped to provide direct support to the global war on terrorism and to reinforce either a JFEO or a major stability operation.

The Sea-as-Base Expeditionary Maneuver Fleet also better supports operational maneuver from strategic distances by replacing eight aging fast sealift ships with Austere Access Shallow Draft Ships capable of moving three intact Army units of action at high speeds across transoceanic distances. It also includes a much expanded and more capable Logistics Prepositioning Force, capable either of forming a joint offshore logistics support base for amphibious operations or of assembling a theater logistic portal for transshipping equipment, supplies, and personnel through an artificial harbor, a MULBERRY 21. It enables the joint force to operate in any of four littoral access conditions: unimpeded, guarded, defended, or contested.

This Sea-as-Base Expeditionary Maneuver Fleet will provide the joint force with improved global freedom of action, operational flexibility, and tactical options. As such, it will provide the nation with a truly asymmetrical advantage in the twenty-first century.

Notes

1. See, for example, Lorna S. Jaffe, *The Development of the Base Force 1989–1992* (Washington, D.C.: Joint History Office, Office of the Chairman of the Joint Chiefs of Staff, July 1993), p. 2.
2. National Defense Panel, *Transforming Defense: National Security in the 21st Century* (Washington, D.C.: December 1997). The panel's final report can be found at *Defense Strategy Review,* www.comw.org/qdr/97qdr.html.
3. See "Aerospace Expeditionary Force," www.globalsecurity.org/military/agency/usaf/aef-intro.htm.
4. For a good discussion on RMAs, see James R. FitzSimonds and Jan M. van Tol, "Revolutions in Military Affairs," *Joint Force Quarterly* (Spring 2004), pp. 24–31.
5. . . . *From the Sea* (Washington, D.C.: U.S. Navy Dept., September 1992), available at www.globalsecurity.org/military/library/policy/navy/fts.htm#INTRO [emphasis added].
6. As described in . . . *From the Sea*, "as a general concept, the littoral comprises two segments of the maritime battlespace; seaward—the area from the open ocean to the shore which must be controlled to support operations ashore; and landward—the area inland from shore that can be supported and defended directly from the sea." For a good discussion about the implications associated with operating in shallow, more crowded littoral waters, see Stephan Nitschke, "Littoral Warfare: A New Name for an Old Mission?" *Naval Forces,* no. 3 (2005), pp. 16–27.
7. Wayne P. Hughes [Capt., USN (Ret.)], *Fleet Tactics and Coastal Combat* (Annapolis, Md.: Naval Institute Press, 2000), p. 9.
8. The ships the DoN officially counts as part of its war fleet are collectively known as the "Total Ship Battle Force" (TSBF). However, the Navy operates many additional ships. The official TSBF numbers on these two dates were drawn from *U.S. Naval Historical Center,* "U.S. Navy Active Ship Force Levels," www.history.navy.mil/branches.
9. *Report of the Quadrennial Defense Review* (Washington, D.C.: Office of the Secretary of Defense, May 1977), available at www.comw.org/qdr/97qdr.html. The QDR did not explicitly say the TSBF target was 305 ships. This number came from the review's supporting documentation.
10. *Report of the Quadrennial Defense Review, sec. V, "Forces and Manpower."*
11. These figures are derived from Robert O. Work, *"To Take and Keep the Lead": A Naval Fleet Platform Architecture for Enduring Maritime Supremacy* (Washington, D.C.: Center for Strategic and Budgetary Assessments, 2006).
12. "Traditional Challenges" form one of the four quadrants of DoD's "Quad Chart," a graphic depiction of the types of challenges in the 2005 QDR security environment. See Ryan Henry, "Defense Transformation and the 2005 Quadrennial Defense Review," *Parameters* (Winter 2005–2006), p. 13. See also U.S. Army Dept., "Annex D, Changing Security Environment," *United States Army,* www.army.mil/references/ASPG-AnnexD.Doc.
13. "Irregular Challenges" describe a second of the four quadrants found in the new DoD "Quad Chart." See Henry, "Defense Transformation and the 2005 Quadrennial Defense Review," p. 13.
14. "Catastrophic Challenges" define the third of four quadrants found in the new DoD "Quad Chart." See Henry, "Defense Transformation and the 2005 Quadrennial Defense Review," p. 13.
15. "Disruptive Challenges" define the fourth quadrant in the DoD "Quad Chart." See Henry, "Defense Transformation and the 2005 Quadrennial Defense Review," p. 13.
16. See, for example, Loren B. Thompson, PhD, *The Hidden Dangers of Networked Warfare,* Lexington Institute Issue Brief (Arlington, Va.: 17 June 2005).
17. For one vision of unmanned robotic warfare, see Rowan Scarborough writing in the 8 May 2005 *Washington Times*.
18. Samuel Huntington, "National Policy and the Transoceanic Navy," U.S. Naval Institute *Proceedings* (May 1954). This superb short article, written nine years after the end of World War II, is in essence a call to naval leaders to think more broadly about the Navy's role in a new national-security policy era. Huntington's powerful thoughts inform my thinking and infuse this chapter.

19. For a good discussion of the requirement to operate and dominate in littoral waters, see Barry R. Posen, "Command of the Commons," *International Security* 28, no. 1 (Summer 2003), pp. 5–46.

20. Anti-access and area-denial threats include a number of actions that can be taken outside the environs of the littoral. For a good conceptual overview of A2/AD threats, see F. G. Hoffman, "Sailing in a Fog of Peace: Future Anti-Access Threats," a PowerPoint presentation given at the National Defense University on 9 July 2002.

21. Norman Friedman, "Globalization and Anti-Access Strategies?" in *Globalization and Maritime Power,* ed. Sam J. Tangredi (Washington, D.C.: National Defense Univ. Press, 2002), pp. 487–501.

22. Charles W. Moore, Jr. [VAdm., USN], and Edward Hanlon, Jr. [Lt. Gen., USMC], "Sea Basing: Operational Independence for a New Century," U.S. Naval Institute *Proceedings* (January 2003), p. 80.

23. Vern Clark [Adm., USN], "Sea Power 21: Projecting Decisive Joint Capabilities," U.S. Naval Institute *Proceedings* (October 2002).

24. Jack Murphy, *History of the U.S. Marines* (New York: Exeter Books, 1984), pp. 58–82. For a German "floating base" of the early years of World War II, see Kenneth P. Hansen, "Raeder versus Wegener: Conflict in German Naval Strategy," *Naval War College Review* 58, no. 4 (Autumn 2005), esp. pp. 98-99.

25. For a wonderful recap of battle force operations off Okinawa, see Thomas C. Hone, "Seabasing: Poised for Takeoff," in *Transformation Trends,* issued by the Office of Force Transformation on 15 February 2005.

26. See "Ships for Victory," *Seawaves Magazine,* www.seawaves.com/bookreviews/shipsforvictory.htm.

27. As part of the Fleet Response Plan (FRP), these six carriers would be joined by an additional two carriers within ninety days; "Making Big Waves," *U.S. News and World Report,* 30 August 2004. For a more detailed description of the FRP, see Michael D. Malone [VAdm., USN], James M. Zortman [RAdm., USN], and Samuel J. Papero [Cdr., USN], "Naval Aviation Raises the Readiness Bar," U.S. Naval Institute *Proceedings* (February 2004), pp. 39–41.

28. See "Afloat Prepositioning Force," *U.S. Navy's Military Sealift Command,* www.msc.navy.mil/factsheet/apf.asp.

29. See "Maritime Prepositioning Force," *U.S. Navy's Military Sealift Command,* www.msc.navy.mil/PM3/mpf.asp; Henry B. Cook [Maj., USANG], "Sea-Basing and the Maritime Pre-positioning Force (Future)," *Military Review* (July–August 2004), pp. 54–55.

30. This study is known as the Mobility Requirements Study Bottom Up Review Update. See U.S. Senate, *Statement of General Charles T. Robertson, U.S. Air Force, before the Senate Armed Services Sea Power Subcommittee on Strategic and Tactical Lift in the 21st Century,* 10 March 1999, available at armed-services.senate.gov/statemnt/1999/990310cr.pdf.

31. See "Combat Prepositioning Force"; "Army Prepositioned Stock (APS-3)," Globalsecurity.org, www.globalsecurity.org/military/agency/army/aps-3.htm; Robert A. Chilcoat and David S. Henderson, "Army Prepositioning Afloat," *Joint Force Quarterly,* Spring 1994, pp. 51–57.

32. See "Logistics Prepositioning Force," *U.S. Navy's Military Sealift Command,* www.msc.navy.mil/pm3/lps.asp.

33. Norman Polmar, *Ships and Aircraft of the U.S. Fleet,* 18th ed. (Annapolis, Md.: Naval Institute Press, 2005), pp. 305–306. For the purposes of this report, the eight FSSs are considered capable of transporting the equipment for three Army heavy units of action (UAs).

34. See "Surge Project Office," *U.S. Navy's Military Sealift Command,* www.msc.navy.mil/pm5/surge.asp. Each LMSR can carry an entire U.S. Army task force, including fifty-eight tanks and forty-eight other tracked vehicles, as well as more than nine hundred trucks and other wheeled vehicles. An Army armored UA has fifty-eight M1 tanks, eighty-two tracked Bradley fighting vehicles, and sixteen tracked self-propelled howitzers. This report will therefore assume that an LMSR can lift approximately 75 percent of a UA equivalent. See the "LMSR Fact Sheet," *U.S. Navy's Military Sealift Command,* www.msc.navy.mil/N00P/Savannah/fact-lmsr.htm. See also Andre Maraoui, "A New Dimension of Strength," *Sea Power* (May 2003), pp. 29–31.

35. After a decade of lessons learned and logistical innovations, during Operation Iraqi Freedom eleven MPF ships carrying two

Marine brigade equipment sets were completely off-loaded pierside between 16 January and 4 February 2003. The ships were off-loaded in an average of forty-eight hours—five days less than planned. Instream off-loads would take far longer; David Vergun, "Outfitting the Operating Force," *Sea Power* (May 2003), pp. 36–38.

36. RSOI encompasses "all of the activities needed to receive a unit's equipment and personnel at air and sea ports of debarkation; activities necessary to reorganize personnel and equipment into cohesive units following strategic airlift and sealift; their movement forward to marshaling, staging, and tactical assembly areas; and their integration into the Combatant Commander's command and control and logistics structures." Details can be found in *Joint Tactics Techniques, and Procedures for Joint Reception, Staging, Onward Movement, and Integration,* Joint Publication 4-01.8 (Washington, D.C.: Joint Staff, 13 June 2000), available at www.jdtc.transcom.mil. See also "RSOI" at *United States Joint Forces Command,* www.jdtc.jfcom.mil/DeploymentFAQ/faqpage11.htm.

37. See Polmar, *Ships and Aircraft of the U.S. Fleet,* pp. 182–89.

38. Polmar, *Ships and Aircraft of the U.S. Fleet,* pp. 194–98. Several officers interviewed for this chapter commented on the Navy's failure to budget adequately for LSD maintenance in the 1990s. One interviewee referred to the ships as the "amphibious *Spru-can,*" a reference to the *Spruance*-class destroyers, of which thirty-one were commissioned between 1975 and 1983. With planned thirty-five-year service lives, the ships were expected to be in the fleet through 2017. But the ships were "ridden hard" and not properly maintained; all but three have been retired, and those three will soon be gone.

39. See Polmar, *Ships and Aircraft of the U.S. Fleet,* pp. 190–93.

40. Howard Petrea [Capt., USN (Ret.)] et al., "Expeditionary Strike Group Becomes Reality," U.S. Naval Institute *Proceedings* (October 2003), pp. 44–47; Greg Tyler, "ESG Touted as Future of the Navy," *Pacific Stars and Stripes,* 23 April 2004; Jason Ma, "Admiral Touts ESG's Quick-Response Capability for War on Terror," *Inside the Navy,* 11 October 2004, p. 1.

41. Congressional Budget Office [hereafter CBO], *The Future of the Navy's Amphibious and Maritime Prepositioning Forces* (Washington, D.C.: November 2004), pp. 7–9.

42. Ibid.

43. See "Ready Reserve Force Ships," *U.S. Navy's Military Sealift Command,* www.msc.navy.mil/inventory/inventory.asp?var=RRF.

44. Frank Randall, "Military Sealift Command Maintains an Accelerated Pace," *Seapower* (July 2004), p. 32.

45. A fourth step, *reconstitution* of forces, occurs after the power-projection operation has been completed.

46. See *U.S. Army Center of Military History,* www.army.mil/cmh/lineage/cc/inf.htm.

47. "Ship Force Levels, 8/14/45," at *U.S. Naval Historical Center,* www.history.navy.mil/branches/org9-4.htm#1945.

48. John P. Higgins [LCdr., USN], "Gators: An Endangered Species?" Globalsecurity.org, www.Globalsecurity.org/military/library/report/1995/HJP.htm.

49. The Army modular reorganization aimed to create forty-three to forty-eight brigade UAs; it appears the plan has settled on forty-three. See Joshua Kucera, "The U.S. Army Aims to Upgrade Entire Bradley Fleet," *Jane's Defense Weekly,* 20 July 2005, p. 8.

50. "Mobile Offshore Bases," Globalsecurity.org, www.globalsecurity.org/military/systems/ship/mob.htm; Christopher J. Castelli, "DoD Panel Mulls Seabasing Ideas, including Mobile Offshore Bases," *Inside the Navy*, 18 November 2002, p. 1.

51. See Pat Towell, "'Mobile Offshore Base' Proposal Has Slew of Powerful Opponents," *Congressional Quarterly Weekly*, 15 February 2003, p. 382.

52. These two concept papers can be found at *Office of the Chief of Naval Operations for Expeditionary Warfare* (the website of N75 of the Naval Staff), www.exwar.org/Htm/ConceptDocs/NADPGR/navyusmc.htm.

53. For a good synopsis of how Marines now view amphibious operations, see Christian Lowe, "Beyond the Beach," *Armed Forces Journal* (January 2005), pp. 20–25.

54. National Defense Panel, *Transforming Defense: National Security in the 21st Century* (Washington, D.C.: U.S. Defense Dept., 1997), p. 12.

55. Williamson Murray, "The Operational Issues of Sea Basing in the Twenty-first Century," in *Defense Science Task Force on Sea Basing* (Washington, D.C.: Office of the Secretary of Defense, August 2003), app. E, p. 137, available at www.acq.osd.mil/dsb/reports/seabasing.pdf.

56. Headquarters, U.S. Marine Corps [hereafter HQMC], *Maritime Prepositioning Force 2010 and Beyond* (Washington, D.C.: 30 December 1997), available at www.fas.org/man/dod-101/sys/ship/docs/mpf-2010.htm.

57. For an overview of this planning, see Charles M. Herndon [Maj., USMC], "Amphibious Forces: The Gulf War (A Study in Quick Response and the Versatility of Amphibious Forces)," U.S. Marine Corps Command and Staff College, 1992, available at Globalsecurity.org, www.globalsecurity.org/military/library/report/1992/HCM.htm.

58. HQMC, *Maritime Prepositioning Force 2010 and Beyond.*

59. This is a key point, driven home by all those interviewed who took part in the development of *2010 and Beyond*.

60. The World Wide Web is a rich source of materials on the Army after Next project. For a summary overview of the project, see "Army after Next," Sourcewatch.org, www.sourcewatch.org/index.php?title=Army_After_Next.

61. "The purpose of operational maneuver from strategic distance is to achieve a deployment momentum that not only permits rapid seizure of the initiative but also never relinquishes it." It is often defined by Army officers as the direct injection of combat forces into a JOA from outside the theater. Huba Wass de Czege [Brig. Gen., USA] and Zbigniew M. Majchrzak [Lt. Col., USA (Ret.)], "Operational Maneuver From Strategic Distances," *Military Review* (May–June 2002).

62. Ibid. [emphasis added].

63. Ibid.

64. Towell, "'Mobile Offshore Base' Proposal Has Slew of Powerful Opponents," p. 382; Andrew Koch, "Boost for Sea-Basing Concept," *Jane's Defense Weekly,* 13 August 2003.

65. Andrew Koch, "USA Looks to Enhance Sea-Basing Capabilities," *Jane's Defense Weekly,* 22 May 2002.

66. See "Operation Enduring Freedom: Deployments," Globalsecurity.org, www.globalsecurity.org/military/ops/enduring-freedom_deploy.htm.

67. For a good synopsis of initial Marine operations in Afghanistan, see Jay M. Holtermann [Capt., USMC], "The 15th Marine Expeditionary Unit's Seizure of Camp Rhino," *Marine Corps Gazette* (June 2002), pp. 41–43.

68. For a thorough discussion on the impact of Turkey's refusal to allow the 4th Infantry Division to launch attacks from its soil, see *On Point: The United States Army in Operation Iraqi Freedom,* Globalsecurity.org, globalsecurity.org/military/library/report/2004/onpoint/index.html.

69. For example, in 1986, the French and Spanish governments denied aircraft overflight rights for the punitive U.S. raids against Libya. See "Operation El Dorado Canyon," Globalsecurity.org, www.globalsecurity.org/military/ops/el_dorado_canyon.htm.

70. Ironically, it is the spread of democracy that ensures this. In any event, access approval was by no means automatic in the Garrison Era.

71. *Defense Science Task Force on Sea Basing* (Washington, D.C.: Office of the Secretary of Defense, August 2003), pp. iii–iv.

72. Ibid., pp. 14–18 [emphasis added].

73. Ibid., p. 29.

74. This assumption was made explicit in a presentation by Dr. William Howard, member of the DSB Task Force on Seabasing, entitled "The Seabasing Dirty Dozen: Issues to Be Addressed to Enable Seabasing," given at a sea-basing conference sponsored by Raytheon Corporation, 16–18 February 2005 [hereafter Raytheon conference].

75. *Defense Science Task Force on Sea Basing,* p. iii.

76. See *Department of Defense Dictionary of Military and Associated Terms,* Joint Publication 1-02 (Washington, D.C.: Joint Staff, 12 April 2001, amended), available at www.dtic.mil/doctrine/jel/doddict.

77. See "Amphibious Warfare: Cold War Era," *Office of the Chief of Naval Operations for Expeditionary Warfare,* www.exwar.org/Htm/8000PopE7.htm, and Norman Freidman, *U.S. Amphibious Ships and Craft* (Annapolis, Md.: Naval Institute Press, 2002), chap. 12.

78. *Defense Science Task Force on Sea Basing,* p. 21 [emphasis added].

79. Ibid., pp. 29–32.

80. Sea states describe ocean and environmental conditions. They are measured by the Pierson-Moskowitz Sea Spectrum Table or the Beaufort Scale, which define nine sea-state levels (0 to 8). The higher the sea state, the more extreme the ocean conditions: "Heavy weather is any weather condition that results in high winds, extreme sea states, and heavy rain, snow and/or hail. Obviously, weather of this type results in extremely uncomfortable conditions on board ship. Excessive rolls, yaws, pitches, coupled with taking on water make work and living dangerous. There are a multitude of hazards that occur in heavy weather. Objects can slide or fall on personnel, causing injury. Personnel can fall into machinery or equipment. Personnel working exposed to the weather can be washed overboard or against fixed objects. Heavy weather is as dangerous now as it was during the days of sail, and all personnel must be aware of potential hazards and safety requirements." Sea state 4, in the middle of the scale, is described as a "fresh breeze," with many whitecaps and a chance of sea spray, winds speeds of 17–21 knots, and average wave heights of 3.8 to five feet. See "Military Weather," Globalsecurity.org, www.globalsecurity.org/military/systems/ship/weather.htm. The DSB believed that the current amphibious landing force was capable of operations only in sea states 1 and 2.

81. Comment by Maj. Gen. J. B. Dutton, CBE, commander of United Kingdom Amphibious Forces, Royal Marines, Raytheon conference.

82. *Defense Science Task Force on Sea Basing,* pp. ix–x.

83. Murray, "The Operational Issues of Sea Basing in the Twenty-First Century."

84. This and the following paragraphs are based upon a series of interviews conducted by the author with participants of OA 2003.

85. See Greg Jaffe, "Battle Lines: Rumsfeld's Push for Speed Fuels Pentagon Dissent," *Wall Street Journal,* 16 May 2005.

86. See Moore and Hanlon, "Sea Basing."

87. "Dawson: OSD to Create New Joint Seabasing Concept Office," *Inside the Navy,* 19 January 2004. For a good overview of how sea basing fits into the JCIDS process, see Col. Greg Cook, USAF, "Joint Seabasing and the JCIDS Process," PowerPoint presentation, available at www.dtic.mil/ndia/2004expwarfare/cook.ppt#1.

88. "JROC Green Lights Effort to Integrate Joint Seabasing Concepts," *Inside the Pentagon*, 29 July 2004, p. 3; John T. Bennett, "Fusing Concepts Will Culminate in Joint Seabasing Capability Plan," *Inside the Pentagon,* 12 August 2004, p. 1.

89. Edward Hanlon, Jr. [Lt. Gen., USMC], and R. A. Route [RAdm., USN], "Enhanced Networked Seabasing," Marine Corps Combat Development Command and the Navy Warfare Development Command concept paper, n.d., available at www.nwdc.navy.mil/Concepts/Sea_Basing/ENSeabasing.aspx; Henry B. Cook, "Sea-Basing and the Maritime Pre-Positioning Force (Future)"; Major John M. Curatola, USMC, and Lieutenant Commander Robert Bovey, Jr., USN (ret), "The Future Maritime Prepositioning Force," U.S. Naval Institute *Proceedings* November 2001.

90. Hone, "Seabasing: Poised for Takeoff."

91. Colonel Vince Goulding, U.S. Marine Corps, as cited in Malina Brown, "Navy Marine Officials Argue Iraq War Validates Need for Seabasing," *Inside the Navy,* April 14, 2003, p. 1.

92. Marine Corps Combat Development Command, "Power Projection From the Seabase: Issues, Challenges, Opportunities," an undated PowerPoint briefing presentation; Andrew Koch, "Seabases Key to Speed," *Jane's Defense Weekly,* June 11, 2004.

93. Andrew Koch, "USA Looks to Enhanced Sea-Basing Capabilities"; Henry B. Cook, "Sea-Basing and the Maritime Pre-Positioning Force (Future)"; John M. Curatola [Maj., USMC] and Robert Bovey, Jr. [LCdr., USN (Ret.)], "The Future Maritime Prepositioning Force," U.S. Naval Institute *Proceedings* (November 2001).

94. Art Corbett [Col., USMC] and Vince Goulding [Col., USMC (Ret.)], "Sea Basing: What's New," U.S. Naval Institute *Proceedings* (November 2002) [emphasis added].

95. "JROC Green Lights Effort to Integrate Joint Seabasing Concepts"; "Sea Basing Would Speed U.S. Marines to Trouble Spots," DefenseNews.com (August 2004).

96. "Kelly: Sea Basing Presents 'Infinite Number of Problems' for the Enemy," *Sea Power* (June 2004), p. 22.

97. Christopher P. Cavas, "New Missions Will Rely on Sea Basing," *Defense News,* 17 January 2005, p. 4.
98. Jason Sherman, "A Cargo Ship with a JSF Runway?" *Defense News,* 15 March 2004, p. 8.
99. Donna Miles, "Seabasing to Transform Marine Deployments, Commandant Says," American Forces Press Service, 9 June 2005.
100. Sherman, "A Cargo Ship with a JSF Runway?"
101. Squadron costs are found in Sherman, "A Cargo Ship with a JSF Runway?" Ship estimates are found in Jason Ma, "Navy Aims to Balance Industrial Base Needs in New Seabasing Plan," *Inside the Navy,* 2 May 2005.
102. "Washington Report," *Seapower* (June 2005), p. 8.
103. For one critic's analysis of sea basing, see John P. Patch [Cdr., USN], "Chasing the Dream," U.S. Naval Institute *Proceedings* (May 2005).
104. Christopher J. Castelli, "Meeting of Top Navy Officials Sheds Light on Prepositioning Ships," *Inside the Navy,* 6 September 2004, p. 1.
105. CBO, *The Future of the Navy's Amphibious and Maritime Prepositioning Forces;* for a concise summary of the report, see John T. Bennett, "CBO Study: Navy Amphibious Ship, MPF(F) Plans May Prove Too Costly," *Inside the Pentagon,* 11 November 2004, pp. 3–4.
106. Andrew Koch, "U.S. Considers Overhaul of Amphibious Forces," *Jane's Defense Weekly,* 5 May 2004.
107. Trading amphibious ships for the MPF(F) has been a constant Navy position. See Christopher J. Castelli, "Navy Wants to Cut the Number of Strike Groups, Slash LPD-17 Shipbuilding," *Inside the Navy,* 26 April 2004, p. 1; Christopher J. Castelli, "ESG Cut Would Be Gradual; Carrier Group Cut Possible, But Harder," *Inside the Navy,* 3 May 2004, p. 1; John T. Bennett, "Navy May Cut Number of Expeditionary Strike Groups to Fund MPF(F)," *Inside the Pentagon,* 12 July 2004, p. 1; Roxana Tiron, "Ships' Costs Could Sink Plans for Floating Military Bases," *National Defense* (January 2005).
108. This is evident in a PowerPoint presentation entitled "MPF(F) Concept of Employment," in which Marine planners argue for a thirty-six-ship amphibious landing fleet *plus* two MPF(F) squadrons.
109. Castelli, "Navy May Cut Number of Expeditionary Strike Groups to Fund MPF(F)," p. 1.
110. Christopher J. Castelli, "Admiral Sees Need for More Dialogue between Services on Seabasing," *Inside the Navy,* 18 April 2005.
111. *Seabasing Joint Integrating Concept* (Washington, D.C.: Joint Staff, 1 August 2005).
112. Information on the MPF(F) squadron is found in John J. Young, Assistant Secretary of the Navy for Research, Development, and Acquisition, *Report to Congress, Maritime Prepositioning Force, Future, MPF(F),* prepared by Program Executive Officer for Ships (Washington, D.C., June 2005). See also "Naval Leaders Finalize Plan for Maritime Prepositioning Ships," *Inside the Navy,* 7 June 2005; and Christopher P. Cavas, "Big Changes for Sea Base: Large-Deck Amphibious Ships Added to Pre-Positioning Squadron," *Navy Times,* 1 August 2005. Squadron costs are found "Maritime Prepositioning Force (Future) Shipbuilding Requirements" of June 2005, a PowerPoint presentation to Capitol Hill staffers by the Marine Corps Combat Development Center.
113. Andrew Koch, "U.S. Navy Explores Joint High-Speed Cargo Ship," *Jane's Defense Weekly,* 10 August 2005. This ship will be discussed below in the section on intertheater connectors.
114. Andrew Koch, "U.S. Navy Shipbuilding Plan Takes On Water," *Jane's Defense Weekly,* 29 June 2005.
115. For a thorough treatment of the Pentomic Division and Army thinking on battlefield nuclear operations in the 1950s, see A. J. Bacevich, *The Pentomic Era* (Washington, D.C.: National Defense Univ. Press, 1986), and John J. Midgley, Jr., *Deadly Illusions: Army Policy for the Nuclear Battlefield,* Special Studies in National Security and Defense Policy (Boulder, Colo.: Westview, 1986). For a more detailed and particularly fascinating look at the Pentomic Division, see John H. Cushman [Maj., USA], "Pentomic Infantry Division in Combat," *Military Review* (January 1958), pp. 19–30.
116. See "Tactical Nuclear Warfare on Land," strategic studies lecture notes from Political Science 419 (lecture 16, 4 March 2004), Concordia University, available at artsandscience .concordia.ca/poli419n/. These notes are a fascinating discussion of the use of tactical nuclear weapons in Europe.

117. The Davy Crockett missile was designed for direct-fire nuclear warfare *at the battalion level*. It was a stubby, 150-pound rocket that looked like a large mortar. See Bacevich, *Pentomic Era,* pp. 95–96.

118. Edward L. Rowny [Col., USA], "Ground Tactics in an Atomic War," *Army Combat Forces* (August 1954), p. 19.

119. Bacevich, *Pentomic Era,* pp. 103–108.

120. Vergun, "Outfitting the Operating Force," p. 37 [emphasis added].

121. Huntington, "National Policy and the Transoceanic Navy," p. 491 [emphasis added].

122. J. W. Hammond, Jr. [Lt. Col., USMC], "Seabase: The True Amphibious Operation," *Marine Corps Gazette* (April 1971).

123. Huntington, "National Policy and the Transoceanic Navy," p. 491 [emphasis added].

124. This is quite clear in joint doctrine, which defines a forcible-entry operation as "seizing and holding a military lodgment in the face of armed opposition. A lodgment is a designated area in a hostile or potentially hostile territory that, when seized and held, *makes the continuous landing of troops and material possible and provides maneuver space for subsequent operations* (a lodgment may be an airhead, a beachhead, or a combination thereof). A lodgment may have established facilities and infrastructure (such as those found at international air and sea ports) or may simply have an undeveloped landing strip, an austere drop zone, or an obscure assault beach" [emphasis added]. *Joint Forcible Entry Operations,* Joint Publication 3-18 (Washington, D.C.: Joint Staff, 16 July 2001), p. I-1.

125. A good real-world example of the problem created by moving large amounts of ammunition and supplies ashore is discussed in Adam S. Siegel, "Scuds against Al-Jubayl?" U.S. Naval Institute *Proceedings* (December 2002). For a more detailed explanation of the event see Siegel's "Missile Defense at the Waterfront: Implications of the Scud Missile Attack on Al Jubayl Port, February 15–16, 1991," *Defense and Security Analysis* 19, no. 1 (2003), pp. 15–33.

126. Operation OVERLORD—the Allied invasion of mainland Europe—provides the model. Allied planners decided not to try to seize the French port of Calais, opting instead to seize a combined lodgment and build two artificial harbors at Normandy that would serve as the primary means for injecting reinforcements and supplies until better ports could be seized. The creation of two MULBERRY artificial harbors was a huge undertaking, but despite the loss of one of them to a Channel storm soon after the invasion, it was successful. See "Mulberry Harbours," *Combined Operations,* www.combinedops.com/Mulberry%20Harbours.htm.

127. See J. E. Rhodes [Lt. Gen., USMC], and G. S. Holder [RAdm., USN], "Seabased Logistics," Marine Corps Concept Paper, available at *Federation of American Scientists,* www.fas.org/man/dod-101/sys/ship/docs/sbl.htm.

128. Moore and Hanlon, "Sea Basing" [emphasis added].

129. Admiral Vern Clark, as cited in Dr. Scott C. Truver, "Transformation: A Bridge Too Far?" *Jane's Navy International* (March 2005), p. 31.

130. Miles, "Seabasing to Transform Marine Deployments, Commandant Says."

131. See, for example, comments by Admiral Joseph Sestak, in Sharon Weinberger, "Navy Officials Outline Changing QDR Focus," *Defense Daily,* 12 January 2005, and comments made by Ryan Henry, Principal Deputy Undersecretary of Defense for Policy, in Greg Jaffe, "Battle Lines." The ideas of "rapidly changing initial conditions" and "lockout" of enemy strategies are central to network-centric warfare theory. See, for example, Arthur K. Cebrowski [VAdm., USN] and John J. Garstka, "Network-Centric Warfare: Its Origins and Future," U.S. Naval Institute *Proceedings* (January 1998).

132. As just one contemporary example, see Arthur P. Brill, Jr., "Corps Combat Assessment Team Cites Need for Speed in Iraq," *Seapower* (February 2004), pp. 22–26.

133. Thomas Hughes, "The Cult of the Quick," *Aerospace Power Journal* (Winter 2001).

134. Wass de Czege and Majchrzak, "Operational Maneuver from Strategic Distances" [emphasis added].

135. Greg Jaffe, "Battle Lines."

136. Hughes, "The Cult of the Quick."

137. Ma, "Navy Aims to Balance Industrial Base Needs in New Seabasing Plan."

138. Vergun, "Outfitting the Operating Force," p. 37.

139. Polmar, *Ships and Aircraft of the U.S. Fleet,* p. 190; see also Freidman, *U.S. Amphibious Ships and Craft.*

140. "Helicopters at War," *U.S. Centennial of Flight Commission: Born of Dreams—Inspired by Freedom,* www.centennialofflight.gov/essay/AirPower/HeliatWar/AP42.

141. One estimate for losses was 5,086 helicopters; see "Helicopter Losses during the Vietnam War," *Vietnam Helicopter Pilots Association,* www.vhpa.org/heliloss.pdf. Another source puts the losses at 4,869. See "Helicopters at War."

142. Peter A. Wilson, John Gordon IV, and David E. Johnson, "An Alternative Future Force: Building a Better Army," *Parameters* (Winter 2003–2004), p. 25.

143. See the sections entitled "V-22 History: HXM," and "V-22 History: JVX," Globalsecurity.org, www.global security.org/military/systems/aircraft/v-22.htm.

144. See "AH-64 Apache," *Federation of American Scientists,* www.fas.org/man/dod-101/sys/ac/ah-64.htm.

145. Wilson et al., "An Alternative Future Force," p. 25. See also Maj. Gen. Robert H. Scales, Jr., "Operational Maneuver in 2015," PowerPoint presentation, n.d.

146. Koch, "Boost for Sea-Basing Concept."

147. Helicopters are especially vulnerable near the ground. The book (subsequently a movie) *Blackhawk Down* tells of the harrowing aftermath of a "snatch and grab" operation in downtown Mogadishu, Somalia, after several helicopters were shot down. See Mark Bowden, *Blackhawk Down: A Story of Modern War* (New York: Grove Atlantic, 1999). During Operation ANACONDA in Afghanistan, Army helicopters inserting Special Operations and Army combat units were ambushed in their landing zones. One helicopter was shot down and another forced to land. Enemy units surrounding the landing zone kept American units pinned down for some time and inflicted numerous casualties. For a gripping account, see Sean Naylor, *Not a Good Day to Die* (New York: Penguin, 2005). In Operation IRAQI FREEDOM, all air-assault operations were canceled because the risks were judged greater than the expected benefits; *Iraq: Translating Lessons into Future DoD Policies,* RAND Corp. analysis transmitted to Secretary of Defense Donald Rumsfeld via letter dated 7 February 2005.

148. *Iraq: Translating Lessons into Future DoD Policies.*

149. Wilson et al., "An Alternative Future Force," p. 24.

150. Cynthia Dion-Schwarz et al., *Future Combat System (FCS) Vehicle Transportability, Survivability, and Reliability Analysis* (Alexandria, Va.: Institute for Defense Analysis, April 2005). This study was made before the Army concluded that the weight of the Future Combat System would need to climb to 22,000 kg—about 5,000 kg more than can be lifted by the C-130—to meet all survivability requirements. See Joshua Kucera, "FCS Planners Opt for Heavier Vehicles," *Jane's Defense Weekly,* 29 June 2005, p. 4.

151. See "Expeditionary Fighting Vehicle," *DRPM AAA,* www.efv.usmc.mil; Hunter C. Keeter, "EFV Brings Improved Range, Lethality to Marines," *Sea Power* (November 2003), p. 20.

152. Williamson Murray, "Flawed Triumph," *Military History Quarterly* (Summer 2004), pp. 6–15.

153. German airborne drops on Crete and the Allied air drops associated with Operation MARKET-GARDEN during World War II, and Army air cavalry experiences in the Ia Drang Valley in Vietnam in 1965, provide some excellent examples. Operation MERCURY, the German invasion of Crete, relied heavily on airborne troops, and MARKET-GARDEN involved a major Allied airborne drop behind German lines in 1944; both proved costly for the air-landed forces. Of twenty-two thousand Germans in the Crete assault force, 5,500 became casualties; of the ten thousand men of the British 1st Airborne Division dropped at the deepest point behind German lines, only 2,300 returned. See "Operation MERCURY: The German Invasion of Crete, 20 May–1 June 1941," *Military History Encyclopedia on the Web,* www.historyofwar.org/articles/battles_crete.html; and "Operation MARKET-GARDEN, September 1944," *World War II Multimedia Database,* www.worldwar2database.com/html/arnhem.htm. In 1965, the U.S. Army 1st Battalion of the 7th Cavalry Regiment landed by helicopter in an landing zone called "X-ray." In the battle that ensued the U.S. force was nearly overwhelmed by North Vietnamese troops, although supporting helicopter and fire support bases were relatively close. This battle was described by General Harold G. "Hal" Moore and photographer Joseph L. Galloway in the superb book *We Were Soldiers, Once . . . and Young* (New York: Random House, 1992).

154. During the Falklands campaign, two Argentine *Exocet* missiles struck the British merchant ship *Atlantic Conveyor,* which had been taken up from trade. The missiles sent the ship to the bottom, and a good portion of the British troop-lift helicopters went with it. Salvage was impossible. The loss meant that the British force had to march across the Falklands to attack the Argentine troop concentration at Port Stanley. Under different circumstances, the loss might have had a major impact on the outcome of the British invasion. See "Atlantic Conveyor," Answers.com, www.answers.com/topic/atlantic-conveyor.

155. See, for example, William M. Arkin, "The Nuclear Arms Race at Sea," Neptune Paper 1 (Washington, D.C.: Institute for Policy Studies, October 1987), p. 25.

156. Mike Bucchi [VAdm., USN] and Mike Mullen [VAdm., USN], "Sea Shield: Projecting Global Defensive Assurance," U.S. Naval Institute *Proceedings* (November 2002), available at www.usni.org/Proceedings/Articles02/PRObucchi11.htm.

157. Ann Roosevelt, "Army, Navy Collaborating on Sea Basing Concept," *Defense Daily,* 30 June 2004.

158. Castelli, "Admiral Sees Need for More Dialogue between Services on Seabasing."

159. The *Charleston*-class LKAs were the first assault cargo ships purpose-built for the rapid unloading of cargo via both surface and air connectors. With thirty-three thousand square feet of vehicle space, seventy thousand cubic feet of cargo space, five high-speed elevators, two cranes, and ten booms, these ships were invaluable in moving bulk munitions, supplies, and provisions ashore. Today they remain in Category B reserve, suitable for reactivation in 180 days. Note that the LKAs did not double as troop transports; they have accommodations for only roughly two hundred Marines—those required to drive the vehicles off and run supply operations. For more about this class, see Norman Polmar, *Ships and Aircraft of the U.S. Fleet,* 14th ed. (Annapolis, Md.: Naval Institute Press, 1987), pp. 195–96.

160. Commenting on the significance of the MULBERRY artificial harbor for the Allied invasion of Europe, one historian says: "The importance of MULBERRY [harbors] goes far beyond the operational issue of how efficacious they were. Until their invention it was axiomatic that invading armies would need to capture a major functioning port soon after landing, to replenish those forces already ashore and to sustain the build-up. . . . Meanwhile, having persuaded themselves (wisely or not) that their logistical needs would be met, for an extended time after the landings, by transportable [harbors], the Allied planners freed themselves to think in a rather different geographical box from the German staff officers whose job was to second guess their plans. Its highest purpose, indeed, was to enable an exercise in maneuverism of a scale unsurpassed since Hannibal." Jane Penrose, ed., *The D-Day Companion* (New Orleans: National D-Day Museum, 2004), pp. 134–35.

161. John J. Klein [LCdr., USN] and Rich Morales [Maj., USA], "Sea Basing Isn't Just about the Sea," U.S. Naval Institute *Proceedings* (January 2004), p. 33.

162. Castelli, "Navy May Cut Number of Expeditionary Strike Groups to Fund MPF(F)," p. 1.

163. Christopher P. Cavas, "Small Sea Swap Works for U.S.," *Defense News* (November 2004).

164. Ma, "Navy Aims to Balance Industrial Base Needs in New Seabasing Plan."

165. Stephen Saunders [Commo., RN], ed., *Jane's Fighting Ships, 2004–2005*, 107th ed. (Surray, U.K.: Jane's Information Group, 2004); Eric Wertheim, ed., *Combat Fleets of the World 2005–2006* (Annapolis, Md.: Naval Institute Press, 2005), CD-ROM version; E. R. Hooton, "Send an Amphib, the Future Cry," *Armada International,* no. 1 (2005), supplement.

166. For a thorough overview of these LHD programs, see Ian Bostock, Scott Gourley, and Kathryn Shaw, "Advanced LHDs Lead the Way," *Jane's Navy International* (May 2005), pp. 13–18.

167. Saunders, ed., *Jane's Fighting Ships, 2004–2005;* Wertheim, ed., *Combat Fleets of the World, 2005–2006;* Hooton, "Send an Amphib, the Future Cry," p. 11; Bostock et al., "Advanced LHDs Lead the Way"; Jacobs, "South Korean Navy: Transformation to Provide New Capabilities," p. 46. The South Korean LP-X, the *Dokdo Ham* class, is classified as an LPD but is more a "mini-LHD." It will be able to carry a battalion of troops, up to seventy amphibious assault vehicles or two hundred smaller vehicles, fifteen UH-60 helicopters, and two LCACs.

168. Richard Scott, "Italian Navy Studies Design Options for New LHDs," *Jane's Navy International* (August 2005), p. 11.

169. Saunders, ed., *Jane's Fighting Ships, 2004–2005;* Wertheim, ed., *Combat Fleets of the World, 2005–2006;* Hooton, "Send an Amphib, the Future Cry," p. 11.

170. Sharon Hobson, "Canada Proceeds with Joint Support Ship Project," *Jane's Navy International* (January/February 2005), p. 4. The Canadian decision to pursue this ship is not without controversy. See Dr. Paul T. Mitchell, "Joint Support Ship: Transformation or White Elephant?" U.S. Naval Institute *Proceedings* (March 2004), pp. 64–66.

171. Hooton, "Send an Amphib, the Future Cry," p. 11.

172. Ibid., p. 10.

173. "Denmark's FSS Vessels: Versatility in Motion," *Jane's Navy International* (August 2005), p. 34; Saunders, ed., *Jane's Fighting Ships, 2004–2005;* Wertheim, ed., *Combat Fleets of the World, 2005–2006;* Hooton, "Send an Amphib, the Future Cry," pp. 11–12.

174. Cavas, "New Missions Will Rely on Sea Basing," p. 4.

175. The typical deck-spotting factor for aircraft on a big-deck amphibious assault ship like the LHA or LHD is based on the CH-46 medium helicopter, which has a spotting factor of 1.0 with its blades folded. The MV-22, with its blades folded, has a spotting factor of 2.22. The AV-8B has a spotting factor of 1.53; the JSF has a spotting factor of 2.05.

176. Robert Sherrod, *History of Marine Corps Aviation in World War II* (Washington, D.C.: Combat Forces, 1952), pp. 324–33. See also "History of Marine Aviation, Central Pacific Operations," www.acepilots.com/usmc/hist10.html, and "History of Marine Aviation, the Philippines," www.acepilots.com/usmc/hist11.html, both *American Aces of WWII.*

177. "Plug-plus" meant that the LHD hull would be lengthened by a seventy-seven-foot "plug" and widened by ten feet. Dale Eisman, "Navy Tilting toward Enlargement of *Wasp*-Class Ships for Sea Bases," *Norfolk Virginian-Pilot,* 4 December 2002. See Donald G. Gellar, Jr., "LPD-17 and LHAR," PowerPoint presentation, 23 June 2005, available at 64.233.167.104/search?q=cache:qDHsNQjLGlYJ:hqinet001.hqmc.usmc.mil/AVN/ASL/Ordnance/Documents/LPD17_LHAR_Aviation_Ordnance_Overview.ppt+lpd-17+and+LHAR&hl=en.

178. In essence, the new ship would extend the LHD's hangar bay forward; the displaced shops and spaces, along with expanded cargo and ammunition magazines, would be relocated to space freed up by closing the well deck.

179. Gellar, "LPD-17 and LHAR."

180. Sharon Weinberger, "LHAR to Be More Aviation Capable, Official Says," *Defense Daily,* 7 April 2004, p. 8.

181. Gellar, "LPD-17 and LHAR."

182. The DoN Lift II Study is formally known as the *Integrated Amphibious Operations and USMC Air Support Requirements* (Washington, D.C.: U.S. Navy Dept., January 1990).

183. LHD-8 introduces many other changes besides gas-turbine propulsion (the first seven LHDs were steam powered), including all electric auxiliaries, an advanced machinery control system, water-mist fire-protection systems, and the Navy's most advanced command-and-control and combat systems equipment. See PEO Ships, "LHD-8 to Begin Transformation of 'Big Deck' Amphibious Force," Globalsecurity.org, www.globalsecurity.org/military/library/news/2003/05/mil-030512-navsea06.htm.

184. When built, the LHD was credited with a spotting-factor rating of forty-five (i.e., CH-46 equivalents). To account for the MH-60 helicopters normally carried as well as flight deck gear, the current spotting factor used for LHDs is forty-two.

185. These figures come from Deputy Commandant for Aviation (APP) message to NavAirWarCenAcDiv, date-time group 061759Z May 2005, subject "L-Class Ship ACE Support Meeting after Action."

186. For an interesting view of the LPD 17 before its problems came to light, see Stephen Surko [LCdr., USN], "LPD-17 . . . Arriving," U.S. Naval Institute *Proceedings* (January 1995), pp. 43–44. For a prescient warning that "over-specing" the LPD 17 would lead to problems, see John E. O'Neil, Jr. [Capt., USN], "Be Careful with the LPD-17," U.S. Naval Institute *Proceedings* (January 1995), p. 45.

187. Jack Dorsey and Dale Eisman, "Report Spotlights Ship's Problems," *Norfolk Virginian-Pilot,* 13 July 2005.

188. Cost problems with the first ship, LPD 17, caused some radar-defeating measures to be eliminated, leading to several suspected radar "hot spots"; ibid. Representatives from Northrop Grumman expect these problems to be corrected in later ship of the class.

189. Polmar, *Ships and Aircraft of the U.S. Fleet,* 18th ed., p. 190; Surko, "LPD-17 . . . Arriving," p. 43; Roth, "LPD-17 Leads to Dramatic Changes in Design, Systems Integration," p. 19; "LPD-17 Systems," PowerPoint briefing, provided to the author by Northrop Grumman Ship Systems.

190. See "Specifications, LPD-17 (*San Antonio* class) Landing Platform Dock, USA," available at Naval-technology.com, www.naval-technology.com/projects/lpd17/specs.html; Gary L. Pickens and L. F. Picotte [RAdm., USN (Ret.)], "LPD-17: A Ship Built by and for the Expeditionary Warrior," San Antonio *Class: 21st Century Amphibious Assault Ships,* https://www.pms317.navy.mil/news/lpd17ashipbuiltbyandfor.asp; Surko, "LPD-17 . . . Arriving," p. 43.

191. Admiral Clark put the cost of an LPD 17 in FY 05 dollars as $1.125 billion. See U.S. Senate, Statement of Admiral Vern Clark, U.S. Navy, Chief of Naval Operations, before the Armed Service Committee, 12 April 2005, available at www.navy.mil/navydata/cno/testimony/clark050412.pdf.

192. Forward-deployed naval forces (FDNF) have different rules for the time crews can be deployed from home station. In essence, the ships can be at sea approximately 50 percent of the year. As a result, on average, two of four two-ship groups found in the DESB would be available.

193. A four-day loadout of the DESB stationed in Japan, followed by fourteen days steaming from Japan to the Persian Gulf, would combine the two DESBs in the Persian Gulf in eighteen days. In a crisis in Northeast Asia, the DESB would be loaded and awaiting the arrival of the DESB sailing from the Persian Gulf, a trip of fourteen days.

194. Conceivably, a ninth LHD might be built instead of the fifth LHAR recommended elsewhere in this chapter.

195. Maj. Gen. Brian I. Geehan and Brig. Gen. Kathleen M. Gainey, "Seabasing: Building the Army Contribution," PowerPoint presentation and remarks, Joint Seabasing Conference, Washington, D.C., 16–17 February 2005 [hereafter Joint Seabasing Conference]. Jim Rafferty [Brig. Gen., USA], "Army Field Support Command (AFSC) Command Overview Briefing," Munitions Executive Summit, 10 February 2005, available at *National Defense Industrial Association,* proceedings.ndia.org/5650/Rafferty.pdf; *Army Regional Flotillas (ARF) and Afloat Forward Staging Base (AFSB),* U.S. Army Information Paper (Washington, D.C.: DAMO-SSW, 22 July 2003), available at hqinet001.hqmc.usmc.mil/pp&o/POE/POE-60/. See also Roosevelt, "Army, Navy Collaborating on Sea Basing Concept."

196. Including a smaller, shallower-draft RO/RO in the ASF squadron mix addresses a key problem with the larger ships found in the Maritime Prepositioning and Surge Sealift fleets. In 2002, a Illinois Institute of Technology Research Institute survey of all ports in the Central and Pacific Command areas of responsibility found that a vessel longer than 152 meters could enter only 36 percent of them. At 290 meters, the larger LMSRs and RO/RO ships in the ASF (and in the Surge Fleet) can berth at relatively few ports around the world. A smaller RO/RO will be able to access considerably more ports in austere locations, a key consideration for humanitarian, disaster relief, and special-operations-support missions. John H. Williams and William K. Thomas, *Worldwide Port Survey "Quick Look"* (Chicago: Illinois Institute of Technology Research Institute, 10 December 2002).

197. Geehan and Gainey, "Seabasing: Building the Army Contribution."

198. Ibid.

199. Ibid.; "Army Regional Flotillas (ARF) and Afloat Forward Staging Base (AFSB)."

200. Fred Baille, Executive Director, Distribution and Reutilization Policy, Defense Logistics Agency, PowerPoint presentation, Surface Deployment and Distribution Command (SDDC) Conference, 26 April 2005, available at www.sddc.army.mil/; Fred Baille, "DLA and the Seabasing Concept," PowerPoint presentation, Joint Seabasing Conference.

201. In "supply-speak," these are Class III, IV, and IX supplies, respectively. There are eleven different classes of supplies. See "Logistics," Globalsecurity.org, www.globalsecurity.org/military/library/policy/army/fm/90-31/Ch9.htm.

202. Geehan and Gainey, "Seabasing: Building the Army Contribution"; Rafferty, "Army Field Support Command (AFSC) Command Overview Briefing"; Brig. Gen. Mike Worden, USAF, "Joint Services Perspectives on Seabasing Logistics," comments, Joint Seabasing Conference.

203. Gary S. McKissock [Lt. Gen., USMC], "Seabasing: The Maritime Intermediate Support Base," *Marine Corps Gazette* (June 2002), pp. 12–15. For ideas how the DLA, Army, and sea-basing logistics requirements might be met, see Jonathan Kaskin, Director of Strategic Mobility and Combat Logistics, "The Challenge of Joint Seabasing Logistics," PowerPoint presentation, Joint Seabasing Conference.

204. Kaskin, "The Challenge of Joint Seabasing Logistics."

205. See M. Scott Ballard [Maj., USMCR], "Maritime Prepositioning Force Future: The Future of Seabased Aviation Logistics," *Marine Corps Gazette* (May 2002), pp. 31–33.

206. Norman Polmar, "Sea Base Ships for the Future," U.S. Naval Institute *Proceedings* (March 2005); Stephen M. Carmel, "A Commercial Approach to Sea Basing—Afloat Forward Staging Bases," U.S. Naval Institute *Proceedings* (January 2004); and Maersk Line, *Afloat Forward Staging Base Transformation,* brochure.

207. Another advantage of the Maersk T-JAVB option is that the Army is considering the same ship for its Air Assault BCT Afloat program. Should the Army pursue this capability, a common ship would lower the average acquisition costs for both the Army and Navy. Interviews with Maersk representatives indicate that the ships might be bought and modified for less than $400 million a ship based on a six-ship buy (two T-JAVBs and four Army Afloat Forward Staging Bases). These were estimated costs; final costs would depend on Navy and Army specifications as well as other contractual agreements.

208. Penrose, ed., *D-Day Companion,* pp. 134–35.

209. Geehan and Gainey, "Seabasing: Building the Army Contribution."

210. Richard R. Burgess, "Keys to the Future," *Sea Power* (May 2005), p. 31.

211. Assuming approval by the government of Australia, the heavy ground combat equipment from MPF Squadrons 2 and 3 might be restaged at the logistics and training bases located in northwestern Australia. One squadron could be used to provide an equipment training pool for combined-arms training for Marines and the Australian army, and the other could represent prepositioned wartime stocks. In the event of a major combat operation, the Irregular Warfare Squadrons could sail to Australia, trade their lighter equipment for tanks, artillery, and other heavy equipment, and then deliver them to the fight as part of the assault follow-on echelon. The idea for using Australia for a staging base for U.S. prepositioned wartime stocks came from interviews with members of the Marine Forces Pacific staff.

212. The first four LMSRs were conversions of Danish-built RO/ROs. Two were completed in 1996, and an additional two in 1997. The *Bob Hope*– and *Watson*-class LMSRs were completed between 1998 and 2003; an additional ship was completed in 2004. See Polmar, *Ships and Aircraft of the U.S. Fleet,* 18th ed., pp. 292, 300–302.

213. Vice Admiral Cebrowski, as director of the Office of Force Transformation, cited in Richard Barnard, "Iraq Conflict Brings Increased Interest in Military Airships," *Sea Power* (July 2003), p. 1.

214. Barnard, "Iraq Conflict Brings Increased Interest in Military Airships"; Michael Sirak, "U.S. Navy Floats Lighter-than-Air Transport Concept," *Jane's Defense Weekly,* 7 May 2003.

215. Rear Adm. Mark Fitzgerald, USN, and Lt. Gen. Edward Hanlon, Jr., USMC, "High Speed Connectors," Navy and Marine Corps concept document, n.d., p. 4.

216. Ibid., p. 5.

217. Koch, "U.S. Navy Explores Joint High-Speed Cargo Ship."

218. For a good overview of intratheater sealift, see Scott Gourley and Richard Scott, "Speed at Sea Is the key For Intra-Theater Lift," *Jane's Navy International* (March 2005), pp. 11–16.

219. Freidman, *U.S. Amphibious Ships and Craft,* pp. 115–27, 203–205.

220. See "Landing Ships and Craft," *iBiblio,* www.ibiblio.org/hyperwar/USN/ships/ships-ls.html.

221. Freidman, *U.S. Amphibious Ships and Craft,* pp. 347–45.

222. Polmar, *Ships and Aircraft of the U.S. Fleet,* 14th ed., pp. 206–11.

223. Polmar, *Ships and Aircraft of the U.S. Fleet,* 18th ed., pp. 627–29.

224. One conceptual version of a TSV was a high-speed trimaran with seats for 970 troops and 1,900 square meters of vehicle stowage space. The ship could deliver a payload of five hundred tons a range of 750 nautical miles at speeds of thirty-eight knots; by dropping both its speed (to twenty-three knots) and payload (to 355 tons) the ship could extend its range to 3,000 nm. Ian Bostock, "Austral Details High-Speed Sealift Trimaran Designs," *Jane's Defense Weekly,* 8 December 2004, p. 30.

225. See "High Speed Vessel (HSV)," *Navy Warfare Development Command,* www.nwdc.navy.mil/Concepts/Sea_Basing/ConceptsHSV.aspx.

226. For a description of the different TSVs and HSVs, see Polmar, *Ships and Aircraft of the U.S. Fleet,* 18th ed., pp. 626–27. See also William Cole, "Navy Shows Off Speedy New Vessel at RIMPAC," *Honolulu Advertiser,* 13 July 2004; Lorenzo Cortes, "High-Speed Catamaran Performing the Lift Mission Well, Marine General Says," *Defense Daily,* 9 July 2004, p. 3; and "High Speed Vessel (HSV)."

227. Lawrence S. Ryder [Lt. Col., USMC], "Joint High-Speed Vessel," *Marine Corps Gazette* (March 2005), pp. 22–25.

228. See "Army RDT&E Budget Item Justification (R2 Exhibit)," February 2005, available at www.dtic.mil/descriptivesum/Y2006/Army/0208058A.pdf [emphasis added].

229. Polmar, *Ships and Aircraft of the U.S. Fleet,* 18th ed., pp. 212–13.

230. Freidman, *U.S. Amphibious Ships and Craft,* chaps. 4, 7, 10.

231. Benjamin W. Labaree et al., *America and the Sea: A Maritime History* (Mystic, Conn.: Museum of America and the Sea, 1998), p. 599.

232. These ship-to-shore surface connectors are augmented by small "Landing Craft Personnel, Light," which carry seventeen passengers or two tons of cargo. Polmar, *Ships and Aircraft of the U.S. Fleet,* 18th ed., pp. 201–208.

233. Ibid., p. 202.

234. Andrew Koch, "Navy Considers Seabase Transport Options," *Jane's Defense Weekly,* 23 February 2005, p. 8; Kaskin, "The Challenge of Joint Seabasing Logistics."

235. Polmar, *Ships and Aircraft of the U.S. Fleet,* 18th ed., pp. 210–11.

236. Ibid., p. 209.

237. Lt. Col. Carl J. Fosnaugh III, "How We Provide for the Common Defense: A Review of the Interactive Decision-Making Process of the V-22 Osprey Program from 1981–1992," available at *National Defense University,* www.ndu.edu/library/n4/n035603c.pdf.

238. The MV-22 is now doing well in its operational testing. See Amy Butler, "Spreading Its Wings," *Aviation Week and Space Technology,* 18 July 2005, pp. 24–25; C. Mark Brinkley, "Osprey Works to Shed Its Troubled Past," *Defense News,* 25 July 2005, p. 54.

239. M. Thomas Hayden, "The MV-22 Osprey," available at Military.com, www.military.com/Opinions/0,,Hayden_ 101304,00.html.

240. The MV-22 has had many supporters and detractors since its inception. For the opposing views on the aircraft, see the statements of Dr. L. Dean Simmons, Institute of Defense Analysis, and Dr. David S. C. Chu, Office of the Secretary of Defense, before the Senate Appropriations Committee, Defense Subcommittee, 19 July 1990, available at *Maxwell-Gunter AFB,* www.au.af.mil/au/awc/awcgate/navy/edm/exc-dma3.pdf. For a more recent recapitulation of the arguments for and against the MV-22, see Christopher Bolkcom, *V-22 Osprey Tilt-Rotor Aircraft* (Washington, D.C.: Congressional Research Service, 7 January 2005).

241. C. Mark Brinkley, "Tilt-Rotor Impresses U.S. Marines with Speed, Other Improvements," *Defense News,* 25 July 2005, p. 54.

242. Butler, "Spreading Its Wings," p. 25.

243. The MV-22 is incapable of lifting an up-armored Humvee (High Mobility Multi-Wheeled Vehicle), now in use in Iraq; Butler, "Spreading Its Wings," p. 25.

244. Current plans are for SoCom to procure from fifty to fifty-five CV-22 variants specially optimized for these missions; Scott A. Shaeffler [Maj., USAF], "Getting It Right with the CV-22," *Air & Space Power Chronicles,* www.airpower.maxwell.af.mil/airchronicles/cc/schaeffler.html.

245. Richard L. Phillips [MGen., USMC (Ret.)] and Mark J. Gibson [Lt. Col., USMC (Ret.)], "The Missing Piece to the OMFTS Puzzle: The Quad Tiltrotor," *Marine Corps Gazette* (November 2000), pp. 70–73; David A.

Fulghum and Robert Wall, "Military Envisions Family of Tiltrotors," *Aviation Week and Space Technology,* 23 December 2002.

246. Dave Ahearn, "Hagee Sees Need for Huge Ship-Based Tilt-Rotor or Blimp," *Defense Today,* 21 April 2004.

247. Andrew Koch, "Ship-to-Objective Lift Still a Key Issue, Says U.S. Study," *Jane's Defense Weekly,* 27 August 2003.

248. "Iraq Operations Accelerating Transformation, Cebrowski Says," *Aerospace Daily and Defense Report,* 4 August 2004; Dave Ahearn, "Cebrowski Sees New Aircraft, Movable Maritime Airfield," *Defense Today,* 4 August 2004, p. 1.

249. Joshua Kucera, "Services Divided over U.S. Joint Heavy Lift Aircraft," *Jane's Defense Weekly,* 17 November 2004, p. 5.

250. John T. Bennett, "Army-Led Team Mulling Possible Heavy-Lift Aircraft for Seabasing," *Inside the Pentagon,* 28 October 2004, p. 1.

251. Robert Wall, "Weighty Decisions," *Aviation Week and Space Technology,* 25 October 2004, p. 38; Lisa Troshinsky, "New CH-53 Helo Will Double Lift and Range, Expert Says," *Aerospace Daily and Defense Report,* 20 July 2004.

252. "New Build CH-53X Performance," *AHS International: The Vertical Flight Society,* www.vtol.org/news/issues604.htm#ch53; "CH-53X Super Stallion," Globalsecurity.org, www.globalsecurity.org/military/systems/aircraft/ch-53x.htm.

253. Jay Price, "Copters Recalled from Boneyard," News&Observer.com, 21 August 2005.

254. Dave Ahearn, "Young Says $800 Million Needed for New-Build CH-53X Helicopter," *Defense Today*, 20 April 2005.

255. Fulghum and Wall, "Military Envisions Family of Tiltrotors."

256. The Marine Corps has long envisioned rotary-wing support in terms of "medium lift," like the CH-46 and the MV-22, and "heavy lift," like the CH-53E. It is not clear that these terms now make much sense in connection with sea-based maneuver operations. As the DSB has made clear, the key requirement for effective sea-based maneuver operations is an aircraft with heavy lift capability. It is perhaps best, then, just to think of the future rotary-wing requirement in terms of a single sea-base aerial connector. This is a view found in a 1993 Marine Corps Command and Staff paper by Maj. G. Kevin Wilcutt, USMC, entitled "Medium Lift Replacement," available at Globalsecurity.com, www.globalsecurity.org/militarylibrary/report/1993/WGK.htm.

257. As explained in note 175 above, the deck-spotting factor for an MV-22 is 2.22 (i.e., 2.22 times that of a CH-46); for a CH-53 it is 2.68.

258. See "EH-101," *Federation of American Scientists,* www.fas.org/man/dod-101/sys/ac/row/eh101.htm; "DoD Special Briefing on the Award of the Presidential Helicopter Contract," available at *United States Department of Defense,* www.dod.mil/transcripts/2005/tr20050128-2044.html; "Personnel Recovery Vehicle (PRV)/Combat Search and Rescue CSAR Replacement Aircraft Program," Globalsecurity.org, www.globalsecurity.org/military/systems/aircraft/prv.htm.

259. Based on interviews with Marine Corps officials.

260. Twenty-four aircraft and a spotting factor of 2.22 give a 53.28 spotting factor. As described earlier, depending on the spotting factor used, an LHD equivalent ranges between forty-two and fifty-eight deck spots.

List of Abbreviations

A

A2/AD	anti-access/area-denial
AABCT	air assault brigade combat team
AAHSS	Austere Access High Speed Ship
AAV	amphibious assault vehicle
ACE	air combat element
AEF	Aerospace Expeditionary Force
AFB	Air Force base
AFSB	afloat forward staging base
AOE	fast combat support ship
APOD	air point of debarkation
APS-3	Army Prepositioned Stock 3
ARF	Army Regional Flotilla
ARG	amphibious ready group
AS	submarine tender
ASCM	antiship cruise missile
ASF	Army Strategic Flotilla
AUTOVON/ AUTODIN	Automatic Voice Network/Automatic Digital Network

B

BCT	brigade combat team
BLT	battalion landing team
BMEWS	Ballistic Missile Early Warning System
BRAC	Base Closure and Realignment [*sic*]

C

C2	command and control
CBA	capabilities-based assessment
CFE	Conventional Forces Europe
CLF	Combat Logistics Force
CNO	Chief of Naval Operations
CONUS	continental United States
CPF	Combat Prepositioning Force
CSG	carrier strike group
CSL	cooperative security location
CV	aircraft (fleet) carrier
CVE	escort aircraft carrier
CVN	nuclear-powered aircraft carrier
CVV	STOVL [qv] aircraft carrier

D

DADC	DLA [qv] afloat distribution centers
DDG	destroyer, guided-missile
DESB	distributed expeditionary sea base
DEW	distant early warning; directed-energy weapon
DLA	Defense Logistics Agency
DoD	Department of Defense
DoN	Department of the Navy
DPRI	Defense Posture Review Initiative
DPRK	Democratic People's Republic of Korea
DSB	Defense Science Board
DSP	Defense Satellite Program

E	**EFV**	Expeditionary Fighting Vehicle
	ESG	expeditionary strike group
	EU	European Union
F	**FCS**	Future Combat System
	FDNF	forward-deployed naval forces
	FMP	foreign military presence
	FOS	forward operating station
	FRP	Fleet Response Plan
	FSS	fast sealift ship
	FY	fiscal year
G	**GDPR**	Global Defense Posture Review
	GPS	Global Positioning System
H	**HSV**	high-speed vessel
	HULA	hybrid ultra-large aircraft
I	**IDA**	Institute for Defense Analyses
	IMA	intermediate maintenance activity
	IMET	International Military Education and Training
	ISB	intermediate staging base
	ISR	intelligence, surveillance, and reconnaissance
J	**JCIDS**	Joint Capabilities and Integration and Development System
	JETA-SPOD	Joint Enable Theater Access–Sea Points of Debarkation
	JFEO	joint forcible-entry operations
	JHSV	Joint High Speed Vessel
	JIC	joint integrating concept
	JOA	joint operations area

JOLSB	joint offshore logistics support base
JROC	Joint Requirements Oversight Council
JSF	Joint Strike Fighter
JTF	joint task force
L	
LCAC	landing craft air-cushion
LCM	landing craft medium
LCS	Littoral Combat Ship
LCU	landing craft utility
LHA	amphibious assault ship (*Tarawa* class)
LHAR	LHA [qv] replacement
LHD	amphibious assault ship (*Wasp* class)
LKA	assault cargo ship
LMSR	large, medium-speed roll-on/roll-off ship
LPD	landing platform dock
LPF	Logistics Prepositioning Force
LPH	landing platform helicopter
LSD	dock landing ship
LSM	landing ship medium
LST	landing ship tank
LSV	landing ship vehicle
M	
MCO	major combat operation
MEB	Marine expeditionary brigade
MEU(SOC)	Marine expeditionary unit (special operations capable)
MLP	mobile landing platform
mm	millimeter
MOB	main operating base; mobile offshore base

MPF	Maritime Prepositioning Force
MPF(F)	Maritime Prepositioning Force (Future)
MRV	Multi-Role Vessel
MSC	Military Sealift Command
N	
NAS	naval air station
NATO	North Atlantic Treaty Organization
NDP	National Defense Panel
NEO	noncombatant evacuation operation
nm	nautical mile
NPT	Nuclear Non-Proliferation Treaty
NSS	National Security Strategy (of the United States)
NUDETS	Nuclear Detonation Detection and Reporting System
O	
O&S	Operation and Support [funding account]
OA 2003	Operational Availability 2003
OFT	Office of Force Transformation
OIF	Operation IRAQI FREEDOM
OMFTS	Operational Maneuver from the Sea
OSD	Office of the Secretary of Defense
P	
PRC	People's Republic of China
Q	
QDR	Quadrennial Defense Review
R	
RAM	rolling-airframe missile
RAND	The RAND Corporation
RMA	revolution in military affairs
RO/RO	roll-on/roll-off
RRF	Ready Reserve Fleet

RSLS	Rapid Strategic Lift Ship
RSOI	reception, staging, onward movement, and integration
S	
SDHSS	Shallow-Draft High-Speed Ship
SIGINT	signals intelligence
SLEP	service-life extension program
SMART	Strategic Multirole Aid and Replenishment Transport
SoCom	Special Operations Command
SOSUS	Sound Surveillance System
SPOD	sea point of debarkation
SSAA	supply support activity afloat
SSBN	nuclear-powered ballistic-missile submarine
SSF	Surge Sealift Fleet
SSGN	nuclear-powered guided-missile [cruise-missile] submarine
SSN	nuclear-powered attack submarine
STOL	short takeoff and landing
STOM	Ship-to-Objective Maneuver
STOVL	short takeoff and vertical landing [see V/STOL]
T	
T-AKE	cargo/ammunition ship [MSC (qv) manned]
T-AVB	aviation logistics ship [MSC (qv) manned]
T-AO	oiler [MSC (qv) manned]
T-JAVB	aviation logistics support ship [joint, MSC (qv) manned]
TEU	twenty-foot equivalent unit
TMD	theater missile defense
TSV	Theater Support Vessel

U	**UA**	unit of action
	UN	United Nations
	USSR	Union of Soviet Socialist Republics
V	**V/STOL**	vertical/short takeoff and landing [see STOVL]
	VLS	vertical-launch system
	VTOL	vertical takeoff and landing
W	**WMD**	weapon of mass destruction

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The Newport Papers

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Theater Ballistic Missile Defense from the Sea: Issues for the Maritime Component Commander, by Commander Charles C. Swicker, U.S. Navy (no. 14, August 1998).

Sailing New Seas, by Admiral J. Paul Reason, U.S. Navy, with David G. Freymann (no. 13, March 1998).

What Color Helmet? Reforming Security Council Peacekeeping Mandates, by Myron H. Nordquist (no. 12, August 1997).

The International Legal Ramifications of United States Counter-Proliferation Strategy: Problems and Prospects, by Frank Gibson Goldman (no. 11, April 1997).

Chaos Theory: The Essentials for Military Applications, by Major Glenn E. James, U.S. Air Force (no. 10, October 1996).

A Doctrine Reader: The Navies of the United States, Great Britain, France, Italy, and Spain, by James J. Tritten and Vice Admiral Luigi Donolo, Italian Navy (Retired) (no. 9, December 1995).

Physics and Metaphysics of Deterrence: The British Approach, by Myron A. Greenberg (no. 8, December 1994).

Mission in the East: The Building of an Army in a Democracy in the New German States, by Colonel Mark E. Victorson, U.S. Army (no. 7, June 1994).

The Burden of Trafalgar: Decisive Battle and Naval Strategic Expectations on the Eve of the First World War, by Jan S. Breemer (no. 6, October 1993).

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The "New" Law of the Sea and the Law of Armed Conflict at Sea, by Horace B. Robertson, Jr. (no. 3, October 1992).

Toward a Pax Universalis: A Historical Critique of the National Military Strategy for the 1990s, by Lieutenant Colonel Gary W. Anderson, U.S. Marine Corps (no. 2, April 1992).

"Are We Beasts?" Churchill and the Moral Question of World War II "Area Bombing," by Christopher C. Harmon (no. 1, December 1991).

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