A NEW GLOBAL DEFENSE POSTURE FOR THE SECOND TRANSOCEANIC ERA

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2007

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ACKNOWLEDGEMENTS

While this work draws from many sources, two in particular bear mentioning. Much of the history and contextual arguments included in this work are derived from *Seabasing: All Ahead, Slow,* a CSBA report commissioned by the Office of Force Transformation (OFT), Office of the Secretary of Defense (OSD), and published in March 2006.[1] Terry Pudas, Acting Director of OFT, graciously agreed for us to incorporate much of the original research conducted for the seabasing report into this paper, particularly the parts that bear directly on the historical development of US global postures. Readers will therefore find much in common with the historical discussions found in both works.

The second source is a manuscript by Elliott V. Converse III entitled *Circling the Earth: United States Plans for a Postwar Overseas Military Base System, 1942-1948.*[2] This remarkable little work gathers into one place a wealth of information about the thinking behind and evolution of the US global defense posture during and immediately after World War II. This source was used extensively in Chapters V and VI to explain the evolution of the US global defense posture during the turbulent transition between two distinct national security eras. Any misinterpretation of the information presented in this fine study is the fault of the authors alone.

[1] Robert O. Work, *Seabasing: All Ahead, Slow* (Washington, DC: Center for Strategic and Budgetary Assessments, March 2006).

[2] Elliott V. Converse III, *Circling the Earth: United States Plans for a Postwar Overseas Military Base System, 1942-1948* (Maxwell AFB, AL: Air University Press, August 2005).

EXECUTIVE SUMMARY

If national strategy defines US *intent* in its approach toward global affairs and provides focus for American foreign policy, then the US global defense (military) posture reflects the US *capability* to project military power beyond its borders and across transoceanic ranges in support of US national security policy objectives. The United States thus adopts and maintains a global military posture as an indispensable means of securing its national interests.

While national strategy can change from administration to administration, making major adjustments to the US global defense posture is much more difficult and time-consuming process. As a result, once made, adjustments to US defense postures have proven to be quite durable, enduring for tens of decades. Indeed, between 1783 and 1989, the United States assumed only three distinctly different global defense postures, each one tailored to a unique national security era:

- In the *Continental Era*, which extended from the birth of the Republic to about 1890, the United States adopted what might be best called a *Naval Expeditionary Posture*.

- In the *Oceanic Era*, which spanned nearly six turbulent decades between 1890 and 1946, the US assumed a *Service Expeditionary Posture*, which included for the first time several exterior bases, almost all sovereign bases located on US-controlled territory in either the Pacific or Caribbean Basins.

- The *Transoceanic Era*, marked by the long Cold War with the Soviet empire, stretched from 1947 through the fall of the Berlin Wall. During this period, the United States adopted a *Garrison Posture* which saw the basing of large numbers of combat troops on foreign soil.

Since 1989, the US has been slowly transitioning to a new global defense posture tailored to the unique demands of the post-Cold War world, which might best be viewed as the *Second Transoceanic Era.* The relatively slow development of this new global defense reflects, in large measure, the great uncertainty and lack of defined threats that characterized the decade immediately following the implosion of the Soviet Union. Now, however, as the national security challenges facing the United States have become more fully formed and understood, the shift toward a new global defense posture is beginning to accelerate.

Whenever the nation contemplates making a major shift in its global defense posture, planned changes should be seriously and broadly debated, because these changes will shape and constrain US strategic options for some time. In this regard, while the broad outlines for the ongoing shift in the US defense posture appear to be headed in the right direction, the changes have generally been made without much public or even internal governmental debate. Several important questions remain to be fully answered, and further changes will likely be required to address several existing or looming 21st century strategic challenges.

GLOBAL DEFENSE POSTURE DEFINED

The 2001 Quadrennial Defense Review (QDR) announced a major reorientation of the US global *military* posture. In truth, the reorientation of the US military posture had been going on since the fall of the Berlin Wall in 1989, albeit without any clear central idea about the desired end state. The reorientation in posture promised by the QDR was thus more accurately the first formal attempt by the Department of Defense (DoD) since the end of the Cold War to define the expected 21st century steady-state military posture.

Interestingly, despite the import of the effort, the 2001 QDR failed to explicitly define what it meant by the term "global military posture." For the purposes of this report, the terms global military posture and global defense posture are used interchangeably, and are defined as:

> *The deliberate apportionment and global positioning of forward-based and forward-deployed forces, and the development of supporting global attack, global mobility and logistics, forcible entry, global command, control, communications and intelligence forces, and supporting security relationships and legal agreements, in order to facilitate the rapid concentration of forces in time and space across transoceanic distances, to support and sustain US military presence and operations in distant theater, and to establish a favorable global strategic balance.*

In other words, the US global military posture can thus be envisioned as an interconnected set of components: *forward-based forces* and the permanent and temporary overseas bases and facilities that house them; *forward-deployed forces* and the permanent and temporary overseas bases and facilities that support them; *global attack forces* based on US territory or in space that are capable of immediate employment over intercontinental ranges; a *strategic mobility and logistics* infrastructure that links together and supports all US forward-based, forward-deployed, global attack, and surge forces; those *forcible entry and rapid base construction forces* consistent with the overall strategic access environment; and a *global command, control, communications and intelligence (C3I) network.*

These six physical components rest on a seventh—*supporting security relationships and legal arrangements,* such as bi-lateral or multi-lateral agreements and treaties and status of forces agreements (SOFAs). These diplomatic and legal instruments allow the basing or positioning of US forces on foreign soil and establish rights of global transit for strategic mobility and other military forces. Moreover, the posture's "connective tissue" comes in the form of *strategic and operational concepts* that link the overall posture with existing or emerging contemporary national security challenges and the military capabilities needed to address them. As should be evident from this discussion, it is impossible to change any one of a posture's six key components, or the associated legal framework and concepts that support them, without affecting the other contributing parts of the posture.

The ultimate aim of any global military posture is to achieve advantages in global strategic reaction time, geographic positioning of forces, and force concentration and support, and thereby contribute to a favorable strategic balance in both peace and war. An effective US global defense posture will help to assure US allies, dissuade potential future competitors, deter current potential adversaries, and, if necessary, to defeat US foes.

THE AMERICAN "LEASEHOLD EMPIRE": A PREFERENCE FOR EXPEDITIONARY POSTURES

Importantly, while the United States has been compared to some of the great empires in history, this comparison fails when applied to its global military posture. For example, during its time as an active world power, the US global military posture has often been marked by exterior bases located on the sovereign territory of America's trading partners, friends, and allies, especially since the end of World War II. Consequently, unlike Imperial Britain or Rome, the United States has traditionally enjoyed far less unfettered operational access to many of its exterior bases, or complete freedom of action for the forces stationed at them. However, despite the constraints on its operational freedom of action—a circumstance that would not have been tolerated by earlier empires—the US legally negotiated "leasehold" overseas basing structure has proven to be one of the most remarkably effective, flexible, and durable in history.

The unique leasehold character of the US external basing network may help to explain the clear US preference for expeditionary, as opposed to garrison, basing postures. Expeditionary postures find the preponderance of US combat forces based inside the continental United States or on US-controlled territory, ready to deploy to meet emerging threats wherever they might form. In contrast, garrison postures emphasize strong forward defenses, with substantial forces located along the trace of America's extended defensive perimeter, and in theaters of operations where they expect to fight. During the long Cold War, when its allies shared a common desire to block a clear threat in the form of the Soviet Union, the United States adopted a garrison posture. But, as has been discussed, this posture was a historical anomaly. Between 1783 and 1989, the United States had adopted some sort of expeditionary posture for 164 years—or eight out of every ten years.

Transitioning to a New Joint Expeditionary Posture

Not surprisingly, then, following the end of the Cold War, as the ideological coalition against communism began to break down and the US national security strategy began to exhibit a truly global focus, the United States began to once again revert to an expeditionary posture, albeit one uniquely tailored to the post-Cold War strategic era. Since 1989, the United States has dramatically reduced the number of combat forces based overseas (not counting the forces engaged in combat operations in Afghanistan and Iraq). At the same time, the US global basing network has been both dramatically reduced and changed in character. Washington is shifting emphasis away from exterior main operating bases (MOBs) on foreign territory and toward exterior MOBs on US territory. In foreign countries, it is emphasizing less intrusive forward operating sites (FOSs) and cooperative security locations (CSLs) with smaller caretaker forces that support expeditionary forces on rotational tours. Supporting this shift toward a new global expeditionary posture is a legal framework based on negotiated status of forces agreements (SOFAs) and transit right agreements with allies and friendly states across the globe

The key difference between this new expeditionary posture and earlier ones is the degree to which interdependent joint operations now characterize US plans and execution. As the US armed forces assume this new *Joint Expeditionary Posture*, designed first and foremost to afford US joint expeditionary forces global freedom of action, the entire US military is restructuring its forces and operating patterns to better support rotational forward deployments and surge operations from the United States and its territories. The Navy and Marine Corps are

experimenting with new types of distributed forward deployments and organizing their forces to conduct rapid surge operations. They are also pursuing a new seabasing concept, designed to give the US military freedom of action in theaters with little or no basing infrastructure. The Air Force has organized its forces into ten Air and Space Expeditionary Forces, with two on call for rotational deployments and the rest ready for surge operations. Finally, the Army is adopting a new modular force structure of 70 brigade combat teams, designed to sustain indefinitely the forward or rotational deployments of approximately 20 combat brigades.

As more US forces are relocated to the United States, and as the number of overseas bases is reduced, global attack forces—those forces capable of conducting strikes over intercontinental ranges with minimal forward basing support—are becoming more important. Shifting from their Cold War focus on strategic strike operations against the Soviet Union, US global attack forces—primarily US bomber forces—are now centered on delivering sustained, long-range conventional strikes using guided weapons. Global attack forces give the United States enormous freedom of action.

Just as the global attack forces have shifted focus from nuclear warfighting to delivering long-range conventional strikes, the US global command, control, communications and intelligence (C3I) network is shifting its focus away from supporting the national leadership and strategic operations toward supporting deployed forces across multiple theaters. Space-based C3I forces are the engine for this momentous shift.

America's strategic mobility and logistics forces underpin the emerging US expeditionary posture. The United States is slowly recreating an updated version of the World War II Global Expeditionary Maneuver and Movement System, designed to deliver intact combat units *and* disaggregated personnel, vehicles, equipment, and cargo rapidly to distant theaters, and to support them once there—although America's ability to conduct operational maneuver from the strategic distances and from the sea need much improvement.

Adjusting to New Defense Challenges

Any military posture must ultimately be evaluated in terms of its ability to address threats to the nation's security. Accordingly, the Joint Expeditionary Posture must be able to address several major national security challenges, both existing and prospective. They include: the ongoing global counterinsurgency against radical Islam; the need to address the threat of nuclear-armed rogue states; and the need to preserve a favorable military balance with respect to a rising China. Given the range and potential severity of these threats, the posture must also be evaluated in its ability to support preventive actions.

A Long War Against Radical Islamist Extremists

The threat to the United States, its allies, and their interests from radical Islamist extremists is global in scope. A highly distributed but highly networked enemy argues for a distributed network of global bases. The current de-emphasis on main operating bases and the pursuit of large numbers of smaller, less intrusive, "warm" and "cold" FOLs and CSLs is consistent with a global counterinsurgency strategy.

Radical Islamist forces have recently waged guerrilla warfare on a sizeable scale in Afghanistan, Iraq and Lebanon, and substantial numbers of US forces likely will be required to support local efforts to defeat them. Major, extended US troop deployments may be required, along with a more robust basing structure, to include larger FOLs and MOBs. However, the 2006 QDR is painfully thin in its discussion of how the United States might accomplish this or, alternatively, minimize its own direct role in counterinsurgency operations.

Nuclear-armed Rogue or Unstable States

Another major, enduring challenge to US security is the specter of a proliferated world—a world marked by the spread of nuclear weapons in general, and to unstable and/or hostile states in particular. North Korea apparently has nuclear weapons and is producing the fissile material necessary to fabricate more of these devices. Iran, no doubt aware of the very different treatment accorded North Korea by the United States relative to a non-nuclear Iraq, is pressing forward vigorously with its nuclear weapons program. It is conceivable that, before the decade is out, a solid front of nuclear-armed states will stretch from the Persian Gulf to the Sea of Japan, running from Iran, through Pakistan, India, China, and to North Korea.

In addition to giving a rogue state a powerful tool for regional coercion, nuclear weapons are the ultimate "anti-access/area-denial" weapon. Threatened use of nuclear weapons would likely give any regional US ally great pause before agreeing to the presence of US combat forces on their own territory. Even if they did, US commanders would likely be reluctant to establish large main operating bases within an enemy's nuclear "beaten zone." This might even extend to US maritime forces operating in the highly restrictive waters, like those of the Persian Gulf. For this challenge, then, global attack forces or forces capable of operating over long ranges from and sea bases outside the range of most enemy missile forces, and a strategic mobility and logistics infrastructure designed to provide "just in time" maneuver and logistics support to large numbers of widely dispersed forces operating inside the adversary's nuclear strike envelope may be especially useful. Similarly, US battle networks, to the extent they facilitate the effective operations of highly distributed forces, may prove valuable against an enemy with relatively limited C3I capabilities and a small nuclear arsenal.

The Rise of China

The early 21st century seems certain to be indelibly shaped by the rise of China as a global power. An important goal of the US military's global posture is to help dissuade China from resorting to coercion or aggression either inside or outside of Asia, and to encourage the Chinese government to achieve its security objectives within established international norms of behavior.

In any event, while Beijing's future *intentions* remain unclear, there is little doubt that the United States may confront a *potentially* large-scale challenge to its security based on China's ongoing build-up of its military *capabilities*. As a result, the future US posture must be designed with potential Chinese military capabilities firmly in mind. In this regard, a key element of the People's Liberation Army's (PLA's) military transformation is directed on fielding "Assassin's Mace" forces, which comprise advanced air defenses, information warfare, ballistic and cruise missiles (to include anti-ship cruise missiles), advanced fighter aircraft, attack submarines, and counter-space capabilities. If the PLA succeeds, China will pose a formidable challenge to its

neighbors and to US interests in the region, both because of its ability to project power and to contest any US regional military response.

Indeed, China's apparent determination to erect a formidable anti-access/area-denial network composed of layered guided weapon battle networks will pose many of the same problems to US planners as regional adversaries armed with nuclear weapons. For example, China's rapidly growing ballistic missile forces, combined with its ever-expanding access to improved targeting capabilities, and the fact that most land bases can be pre-registered for missile strike, will likely find US external main operating bases located along China's periphery progressively more vulnerable to attack over time. Thus, the components of the global posture aimed at deterring and dissuading reckless Chinese behavior should be increasingly located only on US sovereign territory, such as Guam, or on the soil of very close military allies, like Japan. Even then, the bases will need to be hardened against conventional guided weapon attacks and covered by active defenses.

Viewed in this light, the Defense Department's decision to reduce the US military profile in South Korea—an increasingly wobbly ally whose territory is within range of North Korean missiles as well as those of China—has merit, as do its plans to strengthen its military alliance to Japan; to transfer missile defense units to exclusive and shared Japanese bases; to collaborate on missile defense technologies; and to relocate some Marine forces to Guam. However, much more can, and should, be done. For example, the US forward base complex in the western Pacific could be expanded and hardened, and Pacific Rim bases whose usefulness declined over the Cold War could be refurbished and expanded. In addition, the shortfall of US global reconnaissance and attack capabilities has profound implications for the Pacific basing competition. If this is not remedied, US combat units might find themselves operating at far greater distances from China than is currently the case, lest they be subjected to unacceptably high risk of destruction. This could have profound consequences for Washington's ability to reassure key East Asian allies and partners.

If this were not daunting enough, unlike the United States' immediate post-Cold War rivals, such as Iraq, Iran and North Korea, China possesses great strategic depth. Several Assassin's Mace assets (e.g., ballistic missiles; ground-based ASATs; command and control centers; leadership facilities) can exploit China's strategic depth to advantage. Specifically, by positioning these assets deep in the country's interior Beijing can either drive up the cost to hold them at risk, or create a quasi-sanctuary for them, or both. For these reasons, platforms capable of operating persistently over long-range, and inside China's A2/AD network, will be especially valuable.

Supporting Preemptive and Preventive Action

The demands on the new Joint Expeditionary Posture are more acute because it must be capable of supporting US preemptive and preventive action operations. Here the ability to employ US military forces quickly and stealthily—without seeking the approval of states hosting US bases—becomes important. By extension, the need to minimize positioning US military capabilities required for preemptive operations on foreign soil becomes important as well. This favors sovereign basing, multiple CSLs (in an effort to secure at least some forward-base assets), maritime forces, and global attack forces.

Global Defense Posture and Strategic and Operational Concepts: a Growing Linkage

The requirement for the Joint Expeditionary Posture to support prompt preemptive and preventive global action suggests the increasingly important role that strategic and operational concepts will play in the Second Transoceanic Era. These concepts link the overall posture with existing or emerging contemporary national security challenges and the military capabilities needed to address them, forming the posture's "connective tissue." However, the linkage between operational concepts and posture has been a slowly developing one. It was quite weak during the Continental Era, when America's military posture was focused on threats on the North American continent and US operations "overseas" were restricted to relatively small naval expeditionary operations. As soon as US strategists began contemplating operations beyond the Western Hemisphere, however, the linkage grew much stronger, as evidenced by the inextricable ties between the operational concepts developed during the interwar period of the Oceanic Era and the ultimate Service Expeditionary Posture adopted during World War II. The linkage grew stronger still in the First Transoceanic Era, when the strategic and operational concepts of containment and rapid garrison reinforcement made a defining impact on the Cold War's Garrison Posture.

In a like way, the strategic concepts of global freedom of action and preemptive and preventive action are already having a dramatic impact on the shape and character of the evolving global defense posture. New operational concepts to address the emerging national security challenges will as well. For example, the Pacific basing posture might best be optimized to support a gradual roll-back of any future China's A2/AD shield, much as the United States did against Japan in World War II. There are, of course, other options, including a hardened basing posture designed to weather any potential Chinese attack and to support the immediate transition to offensive operations. Whichever concept the United States may choose however, one thing should be readily apparent: if the operational concepts and the posture are disconnected, the results would not be pretty.

Unfortunately, the process to develop such operation concepts—the Joint Capabilities and Integration Development System (JCIDS)—is so unwieldy as to make it ineffective in its intended purpose of focusing intensely on key challenges faced by warfighters and developing integrated Joint concepts. Fixing the JCIDS and developing concepts that can help guide the further refinement of the evolving Joint Expeditionary Posture in the Second Transoceanic Era.

An Encouraging Start

The aforementioned problems aside, the Defense Department's general shift in emphasis away from non-sovereign, external MOBs in favor of increased emphasis on sovereign MOBs (e.g., Guam) or MOBs located on the territory of close, long standing allies (e.g., Britain's Diego Garcia; Kadena Air Base in Japan) makes great sense. The same is true for the move toward a global "coaling station" network of unobtrusive Forward Operating Sites and Cooperative Security Locations, and the development of new global attack capabilities, mobile maritime bases, new strategic mobility and logistics capabilities, rapidly erectable Joint Multidimensional Battle Networks, and a global C3I network based around space-based capabilities.

As for relying on expeditionary forces, the US military successfully navigated two earlier expeditionary eras that saw it emerge victorious in two global conflicts. Thus there is good reason to believe that the United States military's global posture can evolve into an effective combination of forward-based and forward-deployed forces, supported by expeditionary forces as needed. The moves by all four services to develop and field rapidly deployable expeditionary forces, such as the Army's effort to shift to a modular brigade force structure, thus makes perfect sense also. The development of expeditionary forces capable of conducting widely dispersed, networked operations is made even more critical should global A2/AD capabilities continue to evolve, which will require the injection of ready-to-fight combat forces directly into theaters, and will make operations from large, fixed forward bases far less attractive. Said another way, in addition to the traditional airlift and sealift forces that supported the reinforcement of forward garrisons in the Cold War, the United States must be prepared to seize and defend access when needed, to rapidly build austere campaign bases where none exist, to operate from mobile sea bases—and to protect all of them from guided weapons attack.

Thus far, then, the Defense Department's moves to reorient its global military posture to meet the demands of the Second Transoceanic Era appear to be on the right track. However, if this paper shows anything, it is that while the basic global defense posture is relatively fixed, its individual components are constantly being adjusted to accommodate changes in the national security environment, national policy and military requirements, and technologies. Therefore, just as the foregoing discussion suggests, there are many more wrinkles to be ironed out. Among the more pressing questions to be resolved are:

- How will foreign states react to this posture over time? As the United States' global defense posture becomes more expeditionary in character, global in orientation, and focused on a global counterinsurgency against radical Islamist extremists, nuclear-armed rogue states, a rising China, and supporting preventive action, forces at an external base in one region may be needed to meet a crisis in another region, as occurred recently with the shift of a US Army brigade from Korea to the Persian Gulf. Thus, US forward-based forces may be far less tied to the defense of the country hosting them then was the case during the Cold War. It remains uncertain how nations hosting these forces will ultimately view a posture focused first on US national security needs. Will the US continue to be able to negotiate the requisite SOFAs and transit agreements to permit US global freedom of action? Being able to do so will likely test the best State Department and Pentagon strategists and planners to their fullest.

- Will the US be able to maintain bases in one nation for one purpose (e.g., waging the Long War) if they are viewed by another state as accomplishing an entirely different purpose? For example, China may view Long War bases in Central Asia as part of a US strategy to encircle them. They may thus exert pressure on the host nation to eject US forces.

- Does the posture, focused as it is on supporting offensive actions and expeditionary operations in distant theaters, pay enough attention to the question of how the US homeland will be defended in depth? If not, how will the posture need to be adjusted?

- Are current plans for global attack and extended-range stealthy intelligence, surveillance, and reconnaissance capabilities sufficient for an evolving environment where range provides a great deal of operational freedom of action and a hedge against nuclear-armed rogue states or a hostile China?

- Are the components of the evolving Strategic Military Transportation System well balanced for an era characterized by uncertain access? Should the US develop a 21st century Global Expeditionary Maneuver and Movement System that better supports the delivery of intact, ready-to-fight combat forces without the need for a lengthy reception, staging, onward movement and integration process? Are the moves toward seabasing and new means to deliver cargo the last tactical mile, such as the Joint Cargo Aircraft, well considered?

- Can the global C3I network really support all users—strategic, operational, and tactical—or will it need to be optimized as it has been in the past to serve a particular group of decision makers?

- Can the Defense Department improve the Joint Capabilities Integration and Development System (JCIDS) so it can develop coherent operational concepts that can be used to more closely link the global defense posture with the capabilities needed to address evolving national security problems?

By developing satisfactory answers to lingering questions, and by addressing some of the weaknesses in the current plans, the result should be a Joint Expeditionary Posture well suited for the Second Transoceanic Era, and one that assures US allies that they will be well supported; dissuades potential future competitors from pursuing destructive capabilities; deters current adversaries from resorting to bad behavior, and, if necessary, hastens the defeat of any foe that confronts the United States.

I. INTRODUCTION

A NEW GLOBAL MILITARY POSTURE REVIEW

On September 30, 2001, the new Bush Administration published its first Quadrennial Defense Review (QDR)—the second in a continuing series of QDRs.[3] Written largely before the horrific attacks of September 11, the 2001 QDR outlined a blueprint for a "transition to a new era," in which the senior leaders of DoD aimed to "establish a new strategy for America's defense" that would "embrace uncertainty and contend with surprise."[4]

This new QDR strategy was built around four key objectives that would "guide the development of US forces and capabilities, their deployment and use." These four objectives were to:

- *Assure allies and friends* of the United States' steadiness of purpose and its capability to fulfill its security commitments;
- *Dissuade adversaries* from undertaking programs or operations that could threaten US interests or those of our allies and friends;
- *Deter aggression and coercion* by deploying forward the capacity to swiftly defeat attacks and impose severe penalties for aggression on an adversary's military capability and supporting infrastructure; and
- *Decisively defeat any adversary* if deterrence fails.[5]

To better support the achievement of these four new strategic objectives, the QDR announced that the US military would begin to adjust its global military posture. While the 2001 QDR never explicitly defined what a "global military posture" is, it made plain how important it was that the US global military posture be changed. As outlined in "Reorienting the US Global Military Posture," one of seven main chapters found in the QDR:

> During the latter half of the 20th century, the United States developed a global system of overseas military bases primarily to contain aggression

[3] The Fiscal Year 1994 (FY 1994) Defense Authorization Act established a Commission on Roles and Missions to evaluate the assignment of military roles and responsibilities in the post-Cold War world. In its final report, the Commission suggested a need to conduct a review of DoD strategy every four years, coinciding with the transition between administrations. Congress concurred in this suggestion, mandating in the National Defense Authorization Act of 1997 that each new administration conduct a thorough strategic and defense program review. The first so-called "Quadrennial Defense Review" was conducted by the second Clinton Administration in 1997. The second QDR represented the strategic thinking of the first George W. Bush Administration. See the "Military Force Structure Review Act," accessed on the web at http://www.comw.org/qdr/backgrd.html on May 15, 2006.

[4] Secretary of Defense Donald Rumsfeld, *Quadrennial Defense Review Report* (Washington, DC: Office of the Secretary of Defense, September 30, 2001), p. iii, hereafter referred to as the *2001 QDR*.

[5] Rumsfeld, *2001 QDR*, pp. iii-iv.

> by the Soviet Union. US overseas presence aligned closely with US interests and likely threats to those interests. However, this overseas presence posture, concentrated in Western Europe and Northeast Asia, is inadequate for the new strategic environment, in which US interests are global and potential threats in other areas of the world are emerging.[6]

The report went on to say that this global posture reorientation would encompass "new combinations of immediately employable forward stationed and deployed forces; expeditionary and forcible entry capabilities; globally available reconnaissance, strike, and command and control assets; information operations; special operations forces; and rapidly deployable, highly lethal and sustainable forces that may come from outside a theater of operations."[7]

"Global Military (Defense) Posture" Defined

Three years later, on September 17, 2004, the Department of Defense (DoD) delivered a report to the Congress entitled, *Strengthening US Global Defense Posture*.[8] The lack of definitional clarity in the 2001 QDR was partly corrected in this report, which described the US global defense posture as "*the size, location, types and capabilities of its forward military forces*. It constitutes a fundamental element of our ability to project power and undertake military actions beyond our borders" (emphasis added). [9]

Based on the guidance found in the 2001 QDR, however, this definition is clearly incomplete. As indicated above, the global stance the US military assumes to project power and to undertake military actions beyond its borders includes at least four additional components as important as "forward military forces." These components are:

- *Forces based in the United States (or in space) that can conduct attacks over intercontinental ranges.* As highlighted in the text of the 2001 QDR, "Capabilities and forces located in the continental United States and space are a critical element of this new global posture. Long-range strike aircraft and special operations forces provide an immediately employable supplement to forward forces to achieve a deterrent effect in peacetime."[10]

- *Forces capable of creating forward access where none exists, even in contested theaters.* Forces capable of operating over intercontinental ranges require no or few external bases for support. In contrast, those forces capable of seizing and holding a military lodgment in the face of armed opposition—better known as forcible entry forces—underwrite an

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[6] Rumsfeld, *2001 QDR*, p. 25.

[7] Rumsfeld, *2001 QDR*, p. 26.

[8] Department of Defense, *Strengthening US Global Defense Posture* (Washington, DC: Department of Defense, September 2004), p. 10.

[9] DoD, *Strengthening US Global Defense Posture*, p. 10.

[10] Rumsfeld, *2001 QDR*, p. 25.

ability to seize and hold bases in a theater where none exist.[11] Rapid base construction forces help to consolidate the efforts of the forcible entry forces.

- *Forces that can move, reposition, and logistically support forces over transoceanic ranges.* As an insular power, where and how the US positions its forces overseas is inextricably linked to its ability to move, reposition, reinforce, and logistically support those forces. In other words, the size and capabilities of US strategic mobility and logistics forces are as critical a component of America's global defense posture as forward-based and forward-deployed forces.[12]

- *Global command, control, communications and intelligence (C3I) forces*. As the 2001 QDR said, "Globally available reconnaissance…and command and control assets"[13] help to cement a collection of units and platforms dispersed in and across regions into a cohesive global operating force.

As should be evident, then, when discussing global defense postures, "the size, location, types and capabilities of **forward** military forces" is only a partial definition. It is one most apt for the often-used terms *forward presence* and *overseas presence*. This limited definition reflects the priority placed in the Defense Department's Integrated Global Posture and Basing Study (IGPBS), the study which formed the basis for *Strengthening US Global Defense Posture,* on identifying the numbers, types, and locations of planned US overseas bases. In the process of doing so, the IGPBS identified those oversea bases to be closed or consolidated and the number of US troops that would be returning to the United States. This information was needed to inform the domestic Base Realignment and Closure (BRAC) review, which was ultimately delivered to President Bush in September 2005 and approved by the Congress in November.[14] To meet its own reporting timelines, the BRAC panel set the deadline for DoD's input on overseas base plans and closures for May 2004. Weighing both the scope of its own efforts as well as the BRAC deadline, the Defense Department rightly focused its initial efforts on the number and location of US forces maintained overseas—which form the skeleton of the US posture. The 2006 QDR recently expanded DoD's efforts to examine and improve the remaining posture components.[15]

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[11] See "Forcible Entry Operations," found online at http://www.globalsecurity.org/military/ops/forcible-entry.htm.

[12] Rumsfeld, *2001 QDR*, p. 25.

[13] Rumsfeld, *2001 QDR*, p. 25.

[14] Robert D. Critchlow, "US Military Overseas Basing: New Developments and Oversight Issues for Congress," Congressional Research Service Report RL33148, dated October 31, 2005, pp. CRS-1-CRS-3; DoD, Strengthening US Global Defense Posture, p. 16. For a discussion on the BRAC, see "Base Realignment and Closure Website," found at http://www.dod.mil/brac.

[15] From interviews with participants in the Global Defense Posture Review; Critchlow, "US Military Overseas Basing: New Developments and Oversight Issues for Congress;" and Lincoln P. Bloomfield, Jr., "Politics and Diplomacy of the Global Defense Posture Review," in *Reposturing the Force: US Overseas Presence in the Twenty-first Century*, Carnes Lord, editor (Newport, RI: Naval War College Newport Paper 26, February 2006), p. 53.

As any discussion about the US global military posture or global defense posture would be incomplete without considering the contributions of all posture components, this report proposes the following working definition for the terms, which hereafter are used interchangeably:

> *The deliberate apportionment and global positioning of forward-based and forward-deployed forces, and the development of supporting global attack, global mobility and logistics, forcible entry, global command, control, communications and intelligence forces, and supporting security relationships and legal agreements, in order to facilitate the rapid concentration of forces in time and space across transoceanic distances, to support and sustain US military presence and operations in distant theater, and to establish a favorable global strategic balance.*

In other words, a global military posture can be envisioned as an interconnected set of components: *forward-based forces* and the permanent and temporary overseas bases and facilities that house them; *forward-deployed forces* and the permanent and temporary overseas bases and facilities that support them; *global attack forces* based in the continental United States or in space that are capable of immediate employment over intercontinental ranges; a *strategic mobility and logistics* infrastructure that links together and supports all global attack, forward-based, forward-deployed, and surge forces; those *forcible entry and rapid base construction forces* consistent with the overall strategic access environment; and a *global command, control, communications and intelligence (C3I) network.*

These six physical components are supported by a seventh—*supporting security relationships and legal arrangements,* such as bi-lateral or multi-lateral agreements and treaties and status of forces agreements (SOFAs). These diplomatic and legal instruments allow the basing or positioning of US forces on foreign soil and establish rights of global transit for strategic mobility and other military forces.[16] Moreover, the posture's "connective tissue" comes in the form of *operational concepts* that link the overall posture with existing or emerging contemporary national security challenges and the military capabilities needed to address them. As should be evident from this discussion, it is impossible to change any one of a posture's six key components, or the associated legal framework and operational concepts that supports them, without affecting the other contributing parts of the posture.

The ultimate aim of any global military posture is to achieve advantages in global strategic reaction time, geographic positioning of forces, and force concentration and support, and thereby contribute to a favorable strategic balance for the US in both peace and war. As suggested in the 2001 QDR, an effective global posture helps to assure US allies, dissuade potential competitors, deter potential adversaries, and, if necessary, to defeat US foes.

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[16] Robert E. Harkavy, "Thinking About Basing," *Reposturing the Force: US Overseas Presence in the Twenty-first Century* (Newport, RI: Naval War College Newport Paper No. 26, February 2006), p. 10.

WHY REORIENTING THE US GLOBAL MILITARY POSTURE IS AN IMPORTANT TOPIC FOR DEBATE

Throughout history, every great continental or maritime power has typically worked to expand its defensive perimeter. However, even the most powerful of great states finds it impossible to be equally strong everywhere along the trace of its defensive frontier. To provide for and preserve its own security a great power must therefore judiciously position its forces and develop the means to reinforce or reposition these forces rapidly to meet emerging threats. Ultimately, an effective military posture—whether it be regional or global in scope—aims to optimize both the initial positioning of a great power's military forces as well as its ability to surge and concentrate all of its forces along or beyond the defensive perimeter and to dominate any potential opponent in time and space.

Consistent with this line of thinking, Imperial Rome built a string of permanent garrison bases around the periphery of its expanding (regional) empire. Legions and forward naval squadrons were positioned along the empire's frontier in locations designed to either consolidate a recent imperial expansion or to deter enemy incursions into Roman-controlled territory. These permanent facilities were augmented by a series of smaller, more temporary frontier forts. The Roman road network, and later Rome's command of the Mediterranean Sea, helped to both tie its permanent and temporary bases together into a cohesive network and to give the empire a tremendous strategic mobility advantage over its potential adversaries thanks to its interior lines of communication.[17] Although Rome's leaders never described their imperial military bases and strategic mobility assets in terms of a *military posture,* they would undoubtedly have agreed that developing such a posture is of vital importance to a great power, and endorsed the general posture components outlined above.

Accordingly, fashioning an appropriate military posture has been an important and enduring strategic requirement for every great power before and after the Roman Empire. A study of history reveals four key factors that help to shape these postures. These are:

- The structure of the international system (uni-polarity, bi-polarity, or multi-polarity) and the presence or absence of an ideological rivalry between contending major powers;

- The predominate contemporary means for gaining basing access (conquest, colonization, annexation, formal alliances, or negotiated *quid pro quos*);

- The relationship between the security and economic functions of the great power's bases; and

[17] Nicholas Malinak, "All Roads Lead to Rome," found online at http://fubini.swarthmore.edu/~ENVS2 nmalina1/romanroads.html.

- The impact of technological change on basing requirements and strategic mobility forces.[18]

Another key lesson of history is that military postures are anything but fixed; they must be periodically adjusted to reflect changes in the factors outlined above, as well as changes to the great power's national security policy and the emergence of new threats or allies; to include their number and location. That said, major reorientations of global defense postures are relatively rare; once established, they often endure for decades, if not centuries. For example, the Integrated Global Posture and Basing Study conducted after the 2001 QDR was just the second time the US defense establishment conducted a *formal* review of its global footprint and posture, and the changes it triggers will mark only the fourth major shift in the US global military posture since the Revolutionary War. The infrequency of these major posture shifts makes thinking about and debating them all the more important.

Unfortunately, the Defense Department has neither welcomed nor encouraged the scrutiny of, or debate over, the ongoing Global Defense Posture Review. It reacted quite negatively to the first outside critique, conducted by the Commission on Review of the Overseas Military Facility Structure. In their interim report published in May 2005, the Commission concluded that in its "zeal and aggressiveness" to change the US global defense posture, the Defense Department was "doing too much too fast" and that "a reordering of the steps" leading to the new posture needed to be considered.[19] The Defense Department vehemently disagreed with the Commission's findings. Indeed, it forced the Commission to pull its initial report off of its website because of classification concerns and publicly denigrated its work.[20] Other critics also voiced concerns over the review, owing to its potential negative effects on US alliances and the quality-of-life of US service members. However, the press of other issues—the aftermath of Katrina, the furor over the Dubai Ports deal, the national debate over immigration reform, and, of course, the ongoing war in Iraq—has overshadowed and dampened any substantive discussion about these or other concerns.

The lack of an open debate about the evolving US military posture is troubling. In terms of its potential impact on the ability of the United States to project power overseas, there is no more important issue facing US strategists and military planners than the shape and character of America's future global defense posture. The more informed scrutiny of DoD's assumptions and plans, and the more these assumptions and plans survive such scrutiny, the more likely it will be that the posture will be well suited for the 21st century national security environment.

With this in mind, the purpose of this paper is to spur and widen further debate over the proper direction for the US global military posture. Essentially, the paper asks and offers answers to

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[18] Harkavy, "Thinking About Basing," pp. 10-11. Harkavy includes a fifth factor—the preference for "heartland" and "rimland" basing networks.

[19] Commission on Review of the Overseas Military Facility Basing Structure of the United States, "Interim Report to the President and the Congress," May 9, 2005, p. vii. The final report can be found at http://obc.gov/documents.

[20] Critchlow, "US Military Overseas Basing: New Developments and Oversight Issues for Congress," pp. CRS-5-CRS-8.

three simple questions: What exactly is a global military posture and how do its components work together to help a great state project military power? How did the United States come to assume its current posture? Finally, are the impending changes to the US global military posture appropriate for the expected 21st century national security environment and adequate in light of expected national security threats?

A WORD ON ORGANIZATION

In line with these questions, this paper is organized into eight remaining chapters.

Chapter II establishes a conceptual framework for thinking about military postures and develops common terms to help facilitate an informed debate about them.

Up through the end of the Cold War, the United States had adopted three distinctly different peacetime postures and had erected the most expansive wartime campaign posture in history. Chapters III, IV, V, and VI review these past postures in order to put the current posture review into proper context and to help illuminate recurring themes in the US global defense postures.

- Chapter III reviews the two American global military postures prior to the start of the Second World War;

- Chapter IV describes the global campaign posture the US military adopted to fight the Axis Powers in World War II;

- Chapter V details the results of the first formal US Global Posture Review, conducted during and immediately after World War II; and

- Chapter VI discusses the US global military posture adopted during the Cold War.

Having discussed America's three previous postures, Chapters VII and VIII cover the events and decisions since the fall of the Berlin Wall that have shaped and continue to shape the character of the new US global footprint and stance.

- Chapter VII describes the initial "post-Cold War posture" adopted during the 1990s;

- Chapter VII discusses how this posture began to change after the 9/11 attacks the 2001 QDR and, and outlines the initial results of the still-ongoing Global Defense Posture Review, including its assumptions, goals, and plans.

Based on this historical review and assessment, Chapter IX critiques the ongoing Global Posture Review, assessing its strengths and weaknesses in light of the evolving national security environment and likely future 21st century threats. Finally, Chapter X offers an overall assessment of the ongoing posture review, and identifies some of the outstanding issues that must be resolved.

II. THINKING ABOUT GLOBAL MILITARY POSTURES

Developing a global military posture requires a great power to first consider the nature of the national security environment and the most likely national security threats that it will face. Based on this assessment, it must then fashion the most effective posture—that is, the most effective mix of forward-based forces; forward-deployed forces; global attack forces; forcible entry forces; strategic mobility and logistics forces; and global-C3I forces. It must then construct the necessary supporting framework of security and legal agreements, and develop operational concepts that take into account the posture's basic nature.

Constructing an effective military posture is easier said than done. Doing so requires a great power to make hard choices—choices that are constrained or facilitated by geography, enemies, allies, technology, and resources. The purpose of this chapter is to help illuminate these choices and options and to build a conceptual framework for the discussion that follows.

FORWARD-BASED FORCES

Among the most important components of any global military posture are the number, type, and location of a great power's *forward-based* forces. Forward-based forces are certainly the most visible posture component to potential allies and opponents, as they are the forces stationed permanently at military bases located beyond a great power's contiguous borders or natural defensive perimeter, either on foreign soil or sovereign-controlled territory. This helps to explain the emphasis placed on bases in the aforementioned Integrated Global Posture and Basing Study.

Seizing or negotiating military bases is a particularly tough job for a basing power, especially in the post-colonial era. *Military bases* are settlements, reservations, or installations that shelter military personnel and/or equipment, and which may also contain large concentrations of military supplies in order to support military logistics.[21] During the latter part of the Cold War, the term "facilities" was frequently substituted for the word "bases" to soften the negative political overtones normally associated with the basing of foreign troops in a sovereign country. In line with this thinking, the Stockholm International Peace Research Institute uses the term *foreign military presence* (FMP) to describe bases/facilities that house foreign troops in a sovereign state.[22] In this report, foreign military bases and foreign military facilities are used interchangeably.

Joint Publication 1-02, *DoD Dictionary of Military and Associated Terms*, defines a base in terms of its operational role—that is, as a locality from which (military) operations are projected or supported, or an area or locality containing installations which provide logistic or other support. The *DoD Dictionary* also defines a *base of operations* as an area or facility from which

[21] See "Military Bases," at Answer.com, found at http://www.answers.com/topic/military-base?method=22.

[22] Harkavy, "Thinking About Basing," p. 10.

a military force begins its offensive operations, to which it falls back in case of reverse, and in which supply facilities are organized.[23] These definitions are especially helpful when discussing global military postures, because they highlight the critical role that bases play in facilitating the projection of military power along or beyond a great power's extended defensive perimeter.

As these definitions make clear, the term *base* is an inclusive one, encompassing land bases for ground combat forces; naval bases, including ports and fleet anchorages, for naval forces; and air bases and air fields for air forces. Moreover, if a base is thought of as a locality from which military operations are projected or supported, in certain circumstances a collection of ships, platforms, or facilities afloat from which forces "are projected or supported" can be properly thought of as a base *at sea*. For example, in early 1945, the US Navy assembled some 1,200 ships to launch and support the invasion of Okinawa—the prelude to the final invasion of Japan. These ships remained on station off of Okinawa for the duration of the campaign, in effect substituting for and performing the same functions as a nearby land base.[24]

Bases may also be located *under the sea*. Early in the Cold War, Russia and the United States experimented with the idea of basing ballistic missiles at sea. After some delay—due mainly to cultural and budgetary reluctance—the United States opted to base the missiles on a special-purpose nuclear submarine force. The resulting 41 strategic ballistic missile submarines (SSBNs) were designed from the very beginning to form a distributed, covert undersea strike base. By manning each of the 41 boats with two complete crews, and designing the SSBNs for rapid logistical and maintenance turn-around times, the Navy could maintain nearly 70 percent of the force on rotational patrol at any given time, providing the United States with a stealthy and survivable undersea "second strike" base that underwrote the US nuclear deterrent. Russia, Britain, France, and China eventually copied the US undersea strike base model to varying degrees.[25]

A similar rotational basing scheme allowed the United States to form a virtual base *in the air*. During the Cold War, the Strategic Air Command (SAC) established the Looking Glass program to provide command and control of US bomber and missile units should ground-based command centers be destroyed or disabled following a nuclear attack. Between February 3, 1961 and July 24, 1990, three widely dispersed aircraft squadrons based in CONUS maintained at least one airborne command post continuously aloft, 24 hours a day, 365 days a year. In effect, then, SAC assembled and manned an enduring atmospheric base in the skies above America.[26] In a similar way, constellations of high-altitude, long-endurance unmanned aerial systems may someday

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[23] JCS Pub 1-02, *DoD Dictionary of Military and Associated Terms*, found online at http://www.dtic.mil/doctrine/jel/doddict.

[24] Thomas Hone, "Seabasing: Poised For Takeoff." *Transformation Trends*, Office of Force Transformation, February 15, 2006.

[25] Norman Polmar, "Polaris: A True Revolution," *Proceedings*, June 2006, pp. 30-34; Norman Polmar, "Strike From the Sea," *Proceedings*, June 2006, pp. 86-87.

[26] See "EC-135 Looking Glass," found online at. http://www.scalecraft.com/browseproducts/EC-135-Looking-Glass.html; and "War Through the Looking Glass," found online at http://www.aliciapatterson.org/APF0406/Zuckerman/Zuckerman.html.

form bases of operation in the upper atmosphere over a geographical area for extended periods of time.

Man's successful development of both manned and unmanned spacecraft opened new options for extra-terrestrial bases *in space*. While all current military space systems are robotic craft devoid of personnel, they house equipment for long periods of time and perform military support jobs that would otherwise require bases located on land, on the sea, or in the air. For example, constellations of military communications satellite form a virtual, enduring extra-terrestrial communications base, and reduce the total number of land-based communications sites positioned around the world. In the future, more extensive bases may be assembled in space, housing personnel and offensive weapons. In the meantime, however, space constellations can be properly thought of as distributed facilities, settlements, reservations, or installations that shelter military personnel and/or equipment from which terrestrial military operations are supported.

As the previous discussion suggests, not all bases are created equal; they can be categorized in a number of ways. The first and most obvious way to do so is to describe them as being either land, sea, undersea, atmospheric or space bases. When talking about military postures, however, there are other helpful ways to categorize them, as will be discussed in the following sections.

Interior or Exterior Bases

The first critical distinction between bases is whether or not they are located inside or outside a country's contiguous borders or natural defensive perimeter. As their names imply, interior bases are those located inside the country's borders or perimeter; exterior or extra-territorial bases are located outside the borders or perimeter.

The distinction between interior and exterior land bases was not entirely clear in the period leading up to the Treaty of Westphalia, as the natural defensive borders of early empires were marked by great swaths of conquered, colonized, or annexed territory under the direct control of the empire's "center." In these cases, exterior land bases might be more properly referred to as *frontier bases*—those bases located on the outer boundaries of the territory claimed by the empire. However, with the rise of the nation-state and the international recognition of national boundaries, the distinction between interior and exterior bases is now much clearer. Any base established by a great power beyond its contiguous national boundaries qualifies as an exterior base—regardless of whether or not it is located on territory controlled by that power.

For the purposes of this assessment, then, when talking about the former British Empire, those land bases located on Crown territory beyond the British Isles—for example, the bases at Gibraltar and Singapore—would be considered to be exterior bases. Similarly, bases located beyond the confines of the continental United States are considered to be an exterior base. Thus, bases located outside the contiguous borders of the "lower 48" are exterior bases, such as Andersen Air Force Base on Guam; Pearl Harbor, Hawaii; and Elmendorf Air Force Base, Alaska.

In keeping with this line of thinking, all sea bases are considered to be exterior bases unless erected on a body of water located inside a great power's contiguous borders. For example, an

undersea strike base located in the Great Lakes would be an interior US base. The same holds true for undersea and atmospheric bases. All space bases—including those located in a geostationary position above the basing power—are exterior bases.

As suggested by the output of the IGPBS, *global* military postures are focused primarily on the location and positioning of *exterior* bases. The one key exception to this rule is the interior bases that house global attack forces. Exterior bases pose special problems for a great power, especially in terms of force protection and logistics support. As they are often located on the fringes of a great power's extended defensive perimeter, exterior bases themselves are more isolated and more difficult to defend. Moreover, they are often supported by long land, sea, and air lines of communication that can be more easily interdicted than those located inside a nation's own borders.

Sovereign or Foreign Bases

Exterior bases can be further distinguished by the degree of control the basing power enjoys over the forces housed on the base and the ease with which it can deploy and employ forces to or from it. Naturally, a basing power enjoys the greatest degree of control over and access to exterior bases located on sovereign soil or sovereign-controlled territory—territory subject to the autonomous, independent direction of the state. In these cases, the basing power has unfettered access to the bases, and can deploy and employ forces to and from them free of any outside political or operational constraints.

Unless they are located in a vassal state that always acquiesces to the external basing power's wishes, the same is not true of an exterior base located on foreign territory. In these cases, access to and use of the facilities always come with political and operational strings attached. For example, an allied country might prohibit the use of a base on its territory as a launching point for a great power's offensive operations against another nation's territory.

As great powers abhor any such constraints on their exercise of their power, they generally prefer to locate exterior bases on sovereign-controlled territory. As Sir Julian Corbett wrote when talking about Great Britain's early desire to seek a *sovereign* port in the Mediterranean, "Cromwell had seen that the possession of a [sovereign] port would *enormously improve England's position by making her independent of uncertain neutrals and doubtful allies* (emphasis added).[27]

The desire for unfettered access to and control over exterior bases—and the forces housed on them—helps to explain the preference that empires long demonstrated for constructing sovereign exterior bases on conquered, colonized, or annexed territory. In the post-colonial era, however, international norms generally preclude this option. Modern great powers therefore often try to augment their own exterior sovereign bases with bases located on territory leased from or controlled by their most trusted allies, especially those to which they are tied by treaty. Fairford

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[27] Julian S. Corbett, "Review of England in the Mediterranean: A Study of the Rise and Influence of British Power Within the Straits 1603-1713," *The Quarterly Review*, no. 408, July 1906, p. 15.

Air Force Base in England, the leased facilities on the British-controlled island of Diego Garcia in the Indian Ocean, and Yokosuka Naval Base in Japan are examples of exterior US bases located on the territory of close allies with long-standing security relationships and treaties with the United States.

In regions of strategic import lacking either sovereign bases or treaty allies, a great power will try to locate or lease its bases on the soil of reliable friends or partners. In these cases, the great power relies on treaties, common interests, and economic aid to maximize access to the bases and their own freedom of action. An example of such a base is the Manama Naval Base in Bahrain.

With no allies in a region of interest, a great power is reduced to negotiating access with new non-treaty partners or friendly powers. In these cases, the great power hopes that by citing common interests or using diplomatic pressure, financial inducements, or other tangible offers of aid it might overcome any hesitation the host nation might have in authorizing access to the bases, or any thoughts it might entertain on placing operational restrictions on the use of forces located on the bases. An example of this approach was the pure economically-based agreement arranged the United States and the government of Uzbekistan to gain access to the Karshi-Khanabad air base during Operation *Enduring Freedom*—the campaign to topple the Taliban government in Afghanistan and to deny al Qaeda a state-sponsored operational sanctuary. However, such economically-based agreements are often unreliable, as the United States subsequently found out in 2005 when the Uzbek government revoked continued US access to Karshi-Khanabad to protest US condemnation over its treatment of political protestors.[28]

Even when a great power negotiates foreign exterior basing rights with a close ally or friend, however, it is forced to accept some measure of risk that full access to or even use the base may be denied under certain circumstances. For example, in 1956, the British government denied the US the right to fly U-2 spy plane missions over Russia from bases on its territory.[29] In 1986, France, Italy, Spain and Germany denied the US the use of their exterior bases (and airspace) to mount strikes against Libya.[30] In 1991, the Philippine Senate government voted not to renew US basing privileges, ending a nearly century-long permanent US military presence in that country. More recently, in 2003, Turkey denied the use of its territory as a jump-off point for US combat forces into Iraq.[31]

In extremis, a great power could choose to ignore a host nation's restrictions or even seize the base, and then conduct operations from the base as it sees fit. However, this is not a step the great power would take lightly, as it would likely cause irrevocable harm to its relationship with the host nation. The point, then, is clear: the price a great power pays to locate exterior bases on foreign soil is a loss of *assured* freedom of action.

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[28] Alexander Cooley, "Base Politics," *Foreign Affairs*, November/December 2005, p. 79.

[29] See "Lockheed U-2," at http://www.spyflight.co.uk/u2.htm.

[30] Walter J. Boyne, "El Dorado Canyon," *Air Force Magazine*, March 1999.

[31] Cooley, "Base Politics," pp. 80-81.

Exclusive, Shared, and Participating Bases

In keeping with this thought, all foreign exterior bases can be further divided into exclusive, shared, and participating bases, whose titles connote the degree of base access and control granted by the host nation. Exclusive bases are bases that house or support only forces of the external basing power. Base operations may be facilitated by workers supplied by the host nation, but the operations themselves are commanded and directed by the external power. Consequently, exclusive basing rights provide the external basing power with a high degree of autonomy in organizing and operating the base—like the US enjoys at the sprawling Kadena Air Base on Okinawa. Normal operations on exclusive exterior bases often are indistinguishable from operations on sovereign exterior bases. During the Cold War, for example, Cuban forces were denied access to the Soviet naval base located at Cienfuegos and had no knowledge or control over Soviet activities occurring on the base.[32]

A shared base is one where the external basing power is a tenant on a host nation operating base. It shares the base's facilities with the host nation's armed forces and it abides by the general rules established by the host nation (e.g., flight hours, etc). However, the on-base activities and operations of the external power are generally separate and autonomous from the operations of host nation forces co-located on the base. An example of a shared base is the air base at Misawa, Japan, home to the Japanese Air Self Defense Force and 3d Japanese Air Wing as well as the US 35th Fighter Wing, 301st Intelligence Squadron, Naval Air Facility, and Naval Security Group Activity.[33]

Participating bases are bases operated by a foreign power to which the external basing power has access to some facilities and services. Forces of the external basing power may temporarily reside at a participating base for a number of reasons, such as refueling their ships or aircraft; repairing their equipment; or conducting training and exercises with host nation forces As these examples suggest, participating bases generally support forces of an external basing power that are temporarily forward-deployed from another of its interior or exterior bases. Representatives or small service units from the external basing power may reside on or near the base in order to coordinate the visits and needs of its visiting forces. Good examples of participating US bases are African airfields located in Ghana, Senegal, Gabon, Namibia, Uganda, and Zambia, where American aircraft are allowed to land and refuel.[34]

Campaign and Expeditionary Bases

When discussing global military postures, one must separate those exterior bases that are part of a great power's *enduring* overseas basing structure from those that are temporarily constructed to support a specific campaign or overseas military expedition. The former are the subject of

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[32] See Christopher Whalen, "The Soviet Military Buildup in Cuba," *Backgrounder #189*, The Heritage Foundation, June 11, 1982.

[33] See "Misawa Air Base," found online at http://www.globalsecurity.org/military/facility/misawa.htm.

[34] See "US Military Programs in Sub-Saharan Africa, 2005-2007," found online at http://www.prairienet.org/acas/military/military06.html.

national strategy and are legitimate topics when discussing global military postures; the latter are the subject of campaign planning and warfighting operations, and are not.

Of course, important campaign bases are often later absorbed into a great power's steady-state global basing structure. This is especially true for US exterior bases, which include numerous former campaign bases erected to fight and win the Spanish-American War, World War II, and the first and second Persian Gulf Wars. Former campaign bases that become a permanent exterior base are a legitimate subject for this assessment.

BASING NETWORKS

As the foregoing implies, exterior bases normally do not exist in isolation; they exist as part of a larger basing structure. This thought is well captured by the DoD definition for a *base cluster*—a collection of bases, geographically grouped for mutual protection and ease of command and control.[35] It is therefore most useful when thinking about military postures to take a holistic view and consider a great power's aggregate basing structure—that is, its entire exterior *basing network*—and to conceive of all exterior bases as being nodes within that network.

As discussed earlier, earlier territorial empires—the Persian, Roman, and Soviet Empires among them—developed and expanded their basing networks by conquering, occupying, or annexing foreign territory and then building sovereign or exclusive exterior bases where they desired. Other great continental and maritime powers have similarly acquired exterior basing networks by conquest, colonization, annexation, coercive treaty, purchase, or economic inducements. For example, the Mongol Empire acquired bases entirely by conquest, while the Chinese Ming Dynasty's basing structure was achieved through a mix of intimidation, coercion, and basing agreements with minor powers whose interest was principally in trade. During Spain's period of predominance, its external basing structure was derived from conquest and colonization, while one of its maritime rivals, Portugal, supplemented the external bases it acquired by conquest with a substantial alliance building effort. The two great trading nations of the pre-Napoleonic era, Holland and Great Britain, acquired their basing networks almost entirely through conquest. In contrast, modern great powers have assembled networks less by conquest and more through alliances or by tangible *quid pro quos.* This is especially true of the United States, which after an early period of constructing bases on annexed and colonized territories built an extensive exterior basing network through a combination of treaties, security arrangements, and economic agreements.[36]

Once a great power assembles a coherent exterior basing network, its individual bases can continue to be separated into the various categories previously described: interior or exterior bases; sovereign or foreign bases; exclusive, shared, or participating bases; and land, sea, undersea, atmospheric, and space bases; campaign or enduring bases. However, the individual

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[35] JCS Pub 1-02, *DoD Dictionary of Military and Associated Terms*.

[36] Harkavy, "Thinking About Basing," pp. 11-12.

bases can also be further separated into categories that describe their roles within a broader network of bases. The following sections highlight some of them.

Forward, Peripheral, Intermediate, Remote, and Sanctuary Bases

Forward, peripheral, remote, and sanctuary bases help to define a base's relative geospatial location within the exterior network, especially in their relation to a basing power's potential rivals or adversaries. These descriptions also help assign the degree of potential risk associated with a base's location.

A *forward base* is an exterior base in close proximity to an existing or potential threat to the great power's interests, and the most distant from the basing power's home territory (or in the case of a territorial empire, from the empire's center). Such bases are the modern equivalent of an empire's frontier bases. Forward bases are established in peacetime to deter a perceived or emerging local threat, to keep tabs on potential adversaries, and to support forward-based and forward-deployed forces. For example, during the interwar period, the United States established forward exterior bases in the Philippines and on Guam, at the very westward edge of America's Pacific defensive perimeter.

As was demonstrated in first months of World War II, when Imperial Japanese forces seized both the Philippines and Guam, such forward bases are subject to preemptive attack and capture during the opening phases of any conflict. In other words, whether they are erected in peacetime or wartime, forward bases share a common denominator: they are the network bases most at risk, as they are generally located within easy range of enemy attacks. Depending on the severity of the threat, they may therefore require special force protection measures, such as dispersal or hardening of key assets; extensive camouflage, cover, and concealment of important operating systems; and dense active defenses.

A *peripheral base* is a base located beyond the reach of the bulk of an adversary's or potential adversary's strike forces. As a result, they are therefore considered relatively immune from attack. However, as the range and accuracy associated with a potential adversary's strike forces steadily increases, peripheral bases may be defined less by their relative immunity from attack and more by the percentage of enemy operating forces capable of striking them. In any event, peripheral bases often serve as logistics support bases that push reinforcements, equipment and supplies toward the forward bases or as bases where combat forces can reconstitute themselves. US peripheral bases also support high-value long-range strike and intelligence, surveillance, and reconnaissance (ISR) forces, as well as strategic mobility forces like aerial refuelers and transports.

Intermediate operations bases are those bases located between the forward and peripheral bases. These bases are sometimes referred to as intermediate staging bases. They are more secure than forward bases, but less secure than peripheral bases. These bases often form the backbone of global mobility and logistics infrastructures, in that they facilitate the rapid repositioning of forces to and from forward bases and operating areas.

Remote bases are bases located beyond the reach of virtually all of a would-be rival's military power. Examples of such bases include the aforementioned distributed undersea ballistic missile bases composed of groups of patrolling SSBNs, as well as distributed space bases composed of constellations of robotic space systems. Both are out of range and invulnerable to attack from most potential adversaries. Those few countries capable of threatening them can do so only by expending much time, effort, and resources.

A special category of remote base is a *sanctuary base*—a base placed off limits to attack by one power or another primarily for political-military reasons. Sanctuary bases may become more common with the spread of weapons of mass destruction (WMD). In a proliferated world, wars may become highly limited due to mutual concerns over the consequences of escalation. For example, one high-ranking Chinese military officer recently suggested that US use of guided conventional weapons inside Chinese territory might provoke a nuclear attack on the continental United States.[37] Under these conditions, would a US President order attacks on the Chinese mainland to stop a Chinese invasion of Taiwan? Perhaps not. As a consequence, future conflicts may more resemble the Korean War, in which the homelands of the powers supporting the war (China, Japan, the Soviet Union and the United States) were all accorded sanctuary status.

Chokepoint Bases

Since military postures seek to give a great power an advantage in concentrating its forces in time and space, some great powers—especially maritime powers—have sought to base their forces at or near key global "chokepoints." By reason of geography or trade flows, these chokepoints naturally canalize, concentrate, or constrain the free flow of commercial or military sea traffic. For example, there are approximately 200 straits (narrow bodies of water connecting two larger bodies of water) or canals around the world. The most important of these—including the straits of Hormuz, Gibraltar, Magellan, and Malacca, the Bosporus/Dardanelles, the Bab el Mandeb, and the Panama and Suez Canals—have played prominently in past great power competitions, and they remain important strategic locations today. [38]

Chokepoint bases can enhance a great power's global mobility; decrease the global mobility of its adversaries (primarily by forcing them to take a more time-consuming and costly route when deploying their forces); or force a potential enemy to do battle under unfavorable circumstances. For example, a century ago, Great Britain's control of the Strait of Gibraltar and the Suez Canal greatly enhanced the Royal Navy's ability to move forces rapidly from Europe to Asia via the Mediterranean Sea, while forcing its potential European adversaries to take a much longer trip around Africa. US control of the Panama Canal enabled it to concentrate its Atlantic and Pacific Fleets in either ocean to face an advancing threat. More recently, NATO's control of the strategic

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[37] Jonathan Watts, "Chinese General Warns of Nuclear Risk to the US," *The Guardian*, July 16, 2005, found online on June 18, 2006, at http://www.guardian.co.uk/china/story/0,7369,1529754,00.html.

[38] "Chokepoints!" found online at http://geography.about.com/library/weekly/aa052597.htm.

Greenland-Iceland-United Kingdom (GIUK) gap during the Cold War was thought to give it an important edge over the Soviet Navy should a third Battle of the Atlantic break out.[39]

In other words, chokepoint bases provide the power that holds them with a *relative* mobility advantage, thereby allowing that power to economize the use of its own military forces. This may allow a power to accomplish its strategic objectives with a far smaller exterior basing network or military force structure than might otherwise be expected.[40]

Main Operating Bases, Forward Operating Sites, and Cooperative Security Locations

Another way to the categorize bases that make up an exterior basing network is to describe them as combat, combat support, or combat service support bases.[41] More often than not, however, as localities from which military operations are projected or supported, exterior bases perform all three of these warfighting functions at the same time. Therefore, a more helpful categorization is one that describes exterior network bases in terms of their relative size and ability to support military operations. This was the tack taken in the *Strengthening US Global Defense Posture*, which identified three basic types of basing nodes in the future US exterior basing network. These nodes are:

- *Main Operating Bases, or MOBs*. MOBs are large facilities with "permanently stationed combat forces and robust infrastructure…characterized by command and control structures, family support facilities, and strengthened force protection measures." As such, they are the most expensive exterior bases to construct and maintain. These might also be referred to as network "hub" bases, since other, lesser bases typically rely on regional MOBs for support. Because of their relative importance within the network and the higher costs to build and maintain them—and to limit any potential operational constraints upon them—MOBs are generally located only on sovereign territory, or are exclusive or shared bases on the territory of the most trusted allies. Examples of US MOBs are Ramstein Air Base in Germany and Kadena Air Base in Japan.[42]

- *Forward Operating Sites, or FOSs*. FOSs are "expandable 'warm facilities' maintained with a limited US military support presence and possibly prepositioned equipment…to

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[39] See for example Owen R. Cote, Jr., *The Third Battle: Innovation and the U.S. Navy's Silent Cold War Struggle with Soviet Submarines*, Newport Paper 16 (Newport, RI: Naval War College, 2004).

[40] An economy of force can be achieved by forcing an adversary to contest the chokepoint to achieve his goal, minimizing the friendly forces that must be diverted to scout for the enemy. An example of this is the Royal Navy's control over Suez and Gibraltar during the late 19th and early 20th centuries. Any nation with a fleet based in the Mediterranean or Black Sea had to contest British control of Suez or Gibraltar to gain access to the open oceans.

[41] JCS Pub 1-02, *DoD Dictionary of Military and Associated Terms* defines combat forces as "Those forces whose primary missions are to participate in combat"; combat support forces as "Those units or organizations whose primary mission is to furnish operational assistance for the combat elements"; and "Combat service support encompasses those activities at all levels of war that produce sustainment to all operating forces on the battlefield."

[42] DoD, *Strengthening US Global Defense Posture*, p. 10.

support rotational rather than permanently stationed forces and…bilateral and regional training." In other words, FOSs generally are participating bases that support *forward-deployed* as opposed to *forward-based* forces. US FOSs are located around the globe, can support forces both small and large, and can be readily expanded to serve as expeditionary or campaign bases should a crisis erupt nearby. An example is the Sembawang port facility in Singapore.[43]

- *Cooperative Security Locations, or CSLs.* These are austere participating bases with little or no permanent US presence. They provide the basing power with a "foot in the door" in order to "provide contingency access and be a focal point for security cooperation activities." In other words, the basing access agreements associated with the CSLs are often more important than the sites themselves. These participating facilities are maintained with periodic service, contractor, or host-nation support. Examples include the aforementioned airfields in Africa.[44]

This assessment adopts these definitions, as they are now in common DoD usage and help to give one an immediate sense of the relative permanence and importance of an installation within the broader US exterior basing network, as well as the size of their relative footprint. For example, a main operating base is more important and has more services than a FOS, but its footprint is normally larger and more far more intrusive for the host country. In contrast, FOSs and CSLs have far smaller footprints, but offer fewer on-base facilities and offer fewer services.

The relative number of each type base within a basing network helps to determine the primary focus of the exterior basing posture, as well as many of the characteristics required of the basing power's combat forces. For example, a posture that emphasizes FOSs and CSLs demand forces especially organized and structured for expeditionary operations across multiple theaters; a posture that emphasizes MOBs will likely see heavier combat units that are much more difficult to deploy from one theater to another.

FORWARD-DEPLOYED FORCES

Great powers often augment the forces they station permanently at exterior bases with forces they deploy forward for shorter periods of time. These *forward-deployed forces* might be used to assure allies; coerce, dissuade, or deter potential rivals or adversaries; perform reconnaissance and intelligence gathering; train an ally's armed forces or participate in combined exercises; mount or participate in peace-keeping or peace-making operations; respond to minor crises; or to conduct a punitive raid. Whatever their purpose, as they work to protect a great power's enduring regional and global interests, forward-deployed forces simultaneously demonstrate the great power's latent power-projection capabilities to allies and potential adversaries alike.

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[43] DoD, *Strengthening US Global Defense Posture*, p. 10.

[44] DoD, *Strengthening US Global Defense Posture*, pp. 10-11.

When talking about the total number of forces a great power maintains beyond its own territory or borders, the term forward-*deployed* forces often is used to subsume forward-*based* forces. However, when talking about a great power's global military posture, it is helpful to maintain the distinction between these two categories. For the purposes of this assessment, then, forward-based forces are forces that are permanently stationed at an exterior base. As such, forward-based personnel are often accompanied by their families. In contrast, forward-deployed forces are temporarily deployed away from their permanent home bases—which can be ether interior or exterior bases—to accomplish an assigned mission or tasking, usually of limited duration.[45] While deployed, these forces are not accompanied by their families. In this era of volunteer forces, in order to maintain some semblance of family stability, actual peacetime deployments generally last no longer than a year, and normally far less.

During posture discussions, it is also helpful to classify separately those forces a great power maintains forward-based and forward-deployed on a more or less continuous basis from those it forward-deploys for a major combat operation or foreign military expedition. The former describes a power's *steady-state* or *baseline military posture*, whereas the latter describes *temporary* or *surge postures*. This assessment concerns itself primarily with the US steady-state military posture.

Mobile Bases

Some great naval powers conduct what might be best thought of as extended *naval patrols*. This is especially true of the United States, which since the late 1940s has organized its forces keep two to three carrier battle groups and two to three small amphibious task forces continuously deployed along the periphery of Eurasian supercontinent. These forces have served and continue to serve as immediate crisis response forces, covering an area until reinforcements can be surged to a threatened region.

When responding to crises, naval patrol forces can be thought of as distributed mobile bases, a thought well captured by Admiral Chester Nimitz when he stated that fast carrier task forces:

> …are able, without resorting to diplomatic channels, to establish off-shore, anywhere in the world, airfields completely equipped with machine shops, ammunition dumps, tank farms, warehouses, together with quarters and all types of accommodations for personnel. Such task forces are virtually as complete as any air base ever established. They constitute the only air bases that can be made available near enemy territory without assault or conquest, and furthermore, they are mobile offensive bases that can be employed with the unique attribute of secrecy and surprise, which contributes equally to their defensive as well as offensive effectiveness.[46]

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[45] Forward-deployed units can come from exterior bases. US Army units home based in Germany were routinely deployed to Bosnia throughout the 1990s. The fact that a unit operates away from its home base determines whether or not it is considered forward-deployed, not where the base is located.

[46] Samuel P. Huntington, "National Policy and the Transoceanic Navy," *Proceedings*, May 1954, p. 491.

However, mobile sea bases are not limited to aircraft carriers. As was mentioned earlier, amphibious task forces can serve as mobile assault sea bases; and as will be discussed, the US Navy assembled a vast logistics sea base to support its wide-ranging fleet operations in the Pacific in World War II. In addition, the aforementioned distributed undersea strategic strike base is a true mobile base which can be constantly moved and reconfigured to cover its global target set—although the range of the missiles now carried on nuclear ballistic missile submarines minimizes the number of times they must be moved.

In the mid-1990s, the idea of mobile sea bases was dramatically expanded by Admiral William Owens, then Vice Chairman of the Joint Chiefs of Staff, when he argued for the development of huge mobile offshore bases (MOBs, not to be confused with main operating bases). As described by Admiral Owens, these mobile offshore bases would be "moveable American islands," built and assembled by combining large, modular ocean mega-structures that could move under their own power to a Joint Operations Area (JOA). His original thinking foresaw a structure big enough to support 100 tactical aircraft and to support a full Army division.[47]

Later mobile offshore base concepts were only slightly less ambitious, with some proposed variants being two kilometers long and 120 to 170 meters wide, and capable of storing three million square feet of storage, ten million gallons of fuel, and long-term billeting for a full combat brigade.[48] In the end, however, due to both cost and technical problems, these huge monolithic mobile sea bases have largely lost favor to more practical solutions, such as *distributed sea bases* consisting of families of ships capable of supporting and sustaining brigade size units engaged in combat ashore for weeks at a time.

As should be evident by this discussion, the distinction between forward-deployed naval forces and mobile sea bases is a thin one, and the differences between them is often in the eyes of the beholder. For the purposes of this assessment, forward-deployed naval forces conducting global patrols can coalesce in a region to form virtual bases at sea that can temporarily substitute for land bases. These mobile sea bases can be erected to establish a temporary overseas presence, reinforce threatened portions of a great power's extended defensive perimeter, or serve as the initial bridge to geographic areas not covered by an existing exterior basing network.

In the future, technology may provide great powers with additional mobile basing options. For example, mobile constellations of high-altitude, extremely long endurance unmanned aerial systems may form enduring virtual ISR/strike bases over different regions of the world. In the meantime, however, the idea of mobile bases is generally synonymous with sea bases.

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[47] James R. Blaker and Robert A. Manning, ed., *Understanding the American Revolution in Military Affairs: A Guide to America's 21st Century Defense* (Washington, DC: Progressive Policy Institute, January 1997), p. 19.

[48] "Mobile Offshore Bases," at http://www.globalsecurity.org/military/systems/ship/mob.htm; and Christopher J. Castelli, "DoD Panel Mulls Seabasing Ideas, Including Mobile Offshore Bases," *Inside the Navy*, November 18, 2002, p. 1.

GLOBAL ATTACK FORCES

Global attack forces make up the third major component of a global military posture. Before the advent of the airplane and ballistic missiles, naval forces constituted the only type of global attack force. However, with the invention, development, and maturation of aerospace platforms, global attack forces can now be defined as: those forces capable of conducting prompt strikes *over transoceanic or intercontinental ranges*. As such, they are distinct from forward-deployed forces capable of conducting prompt strikes in a specific theater or region. These forces thus include long-range bombers and missiles and small special operations and special-purpose ground units (e.g., parachutists) that can be assembled, transported, and delivered rapidly over long ranges by transport aircraft. In the future, global attack forces may also include space-based attack forces.

Attack forces with transoceanic range allow a great power to project power unilaterally across the globe from its own territory. The first global attack forces concentrated on delivering nuclear attacks. The United States developed long-range bombers with unrefueled ranges of 8,000 or more miles, enabling them to strike deep into the Soviet Union by flying over the North Pole. Nuclear-armed intercontinental ballistic missiles (ICBMs) located in launch silos in the United States could strike targets as far as 8,000 miles away in little more than 30 minutes.[49] However, since the collapse of the Soviet Union, US global attack forces have increasingly focused on delivering conventional strikes over intercontinental ranges. For example, during Operation *Desert Storm,* the combined campaign to eject Iraqi forces from Kuwait, several B-52H long-range bombers flew a nonstop round-trip strike mission from Barksdale Air Force Base in Louisiana to designated launch points near Iraq. From these points, the airplanes launched 35 conventional air-launched cruise missiles against high-priority targets inside Iraqi territory. These missions, which initiated the beginning of the coalition air campaign, were at the time the longest combat air sorties in history, covering more than 14,000 miles in 35 hours of flight; the strikes themselves were delivered little more than 17 hours after take-off.[50]

The development of long-range transport aircraft also gives a great power the option to conduct prompt long-range attacks with small ground combat units. In 1998, for example, eight C-17 strategic air transports completed the longest airdrop mission in history, flying more than 8,000 nautical miles (nm) from the United States to Central Asia, and then dropping 500 troops and their equipment after more than 19 hours in the air.[51] While such global attacks are normally limited to small special operations detachments and parachute units, they give a great power an ability to conduct prompt, independent special-purpose raids and other attacks against high-value targets across intercontinental ranges.

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[49] See "Minuteman Missile," found online at http://www.strategic-air-command.com/missiles/Minuteman/Minuteman_Missile_History.htm.

[50] See "AGM-86C/D Conventional Air-Launched Cruise Missiles," at http://www.fas.org/man/dod-101/sys/smart/agm-86c.htm.

[51] See "Boeing C-17 Globemaster III," at http://www.theaviationzone.com/factsheets/c17.asp.

As these examples demonstrate, global attack forces afford a great power with enormous freedom of action, primarily because they allow it to conduct strikes against any target on the planet without reliance on an extensive overseas basing network. Indeed, these type forces help to reduce the required number of exterior support bases. For example, the aforementioned US initial covert undersea strategic missile base, armed with variants of the *Polaris* and *Poseidon* submarine-launched ballistic missiles (SLBMs) with operational ranges between 1,200 and 2,500 nm, required three forward exterior bases in Holy Loch, Scotland; Rota, Spain; and Guam. Note that only one of the three bases was located on sovereign soil. By later shifting to 4,000-nm range *Trident* SLBMs, the forward bases for the undersea strike base could be re-located to Bangor, Washington, and King's Bay, Georgia—much more secure, interior, sovereign bases—with no loss in global strike coverage.[52]

Similarly, in the late 1950s, the United States deployed intermediate-range *Thor* and *Jupiter* nuclear-armed intermediate range ballistic missiles (IRBMs) to Great Britain, Italy, and Turkey. Great Britain and Italy insisted that the missiles be operated by members of their own armed forces—a telling example of how a great power must often compromise its own freedom of action in order to gain access to foreign bases. However, after the Air Force successfully developed intercontinental range ballistic missiles, US strategic missile forces were gradually based exclusively at interior bases in continental United States, and all forward-based missile units were deactivated and dismantled.[53]

Of course, some global attack forces require overseas bases for support. For example, long-range bombers are particularly dependent on forward-based aerial refueling aircraft. However, tanker aircraft are often considered less threatening and not subject to the same operational restrictions that host nations sometimes place on attack aircraft operating from bases located on their soil.

STRATEGIC MOBILITY AND LOGISTICS FORCES

The fourth component of a global military posture—strategic mobility and logistics forces—have long played an important role in determining a great power's basing structure as well as the effectiveness of its overall military posture. In its broadest sense, *strategic mobility* can be defined in terms of the range or geographical area over which a military force can project and sustain itself, and the time required to do so. The faster a force can project power over a given range, and the greater the area over which a military force is able to conduct sustained military operations, the greater its degree of strategic mobility.[54] All great powers have sought an advantage in strategic mobility, for two major reasons: such an advantage allows them to concentrate forces for defense or offense more quickly than their opponents; and it allows the great power to maintain smaller armed forces that might otherwise be necessary to defend its interests.

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[52] Polmar, "Polaris: A True Revolution," pp. 86-87.

[53] See the entries for Thor and Jupiter at "SAC Missiles," found online at http://www.strategic-air-command.com/missiles/00-missile-home.htm.

[54] "Strategic and Tactical Mobility," found online at http://www.au.af.mil/au/awc/awcgate/gabrmetz/ gabr000b.htm.

The typical Bronze Age Army, like those of Sumer and Akkad and the armies of Egypt up through 1400 B.C., were primarily infantry forces that could deploy as fast as they could walk cross-country. They sustained themselves largely off the land. Their strategic mobility was defined in terms of operational areas measuring approximately 350 by 150 miles. Later, the Assyrian Army boasted strategic ranges of 1,250 by 300 miles—an area seven times greater than that of the aforementioned Bronze Age armies. This major advance in strategic mobility was made possible by a number of things: the invention of the leather jackboot, which improved the all weather traction and durability of an army's primary means of mobility—its feet; the invention of large cavalry formations and their integration with chariots; the invention of engineer units capable of erecting the first pontoon bridges; and the development of a dedicated logistics branch called the *musarkius*.[55]

The next big step in strategic mobility came with the armies of Persia, Alexander, and Rome, which could project and sustain forces over ranges better than some modern regional armies—2,500-3,000 miles by 1,000 to 1,500 miles. In the case of Persia and Rome, this dramatic advance in strategic mobility came about through the construction of road networks and reliance on sea transport. The roads were a particularly effective means of facilitating both long-range power projection and rapid communications. Persia, for example, built a network of unpaved, hard-packed dirt-tracks wide enough to support the movement of the large Persian siege towers drawn by oxen. The longest of these roads ran a distance of 1,500 miles. In addition to speeding forces outward toward the empire's frontiers, these roads also helped to speed information back to its center. A messenger could travel 1,500 miles in 15 days using a series of horse relay stations; without the roads and stations, the trip could take as long as three months.[56]

The Romans copied the Persian example on a wider, more technologically sophisticated scale. Altogether, the Romans built over 240,000 miles of roads. The most important lines of communication were paved, and many of these superb avenues survive to this day. In addition to improving intra-empire trade and communications, the roads were a key strategic mobility asset, especially the paved roads. A legion of 6,000 men could travel eight miles a day on dry, unpaved roadways, and much less in wet weather. Over paved military roads, however, a legion had an all-weather sustained speed of 25-30 miles a day.[57]

Far faster speeds and intercontinental strategic ranges were made possible with the combination of reliable ocean transport. Indeed, during the centuries separating the Roman Empire and the creation of the British Empire and the *Pax Britannica* of the 19th century, the dominant technological factors related to improved strategic mobility were linked to maritime technology. The creation of wind-powered ocean-going ships that could move large quantities of troops and provisions—what today would be referred to as strategic sealift—enabled successive great powers to efficiently transport large combat units and to project military power over transoceanic

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[55] "Strategic and Tactical Mobility," and "Tactical Flexibility," found online at http://www.au.af.mil/au/awc/awcgate/gabrmetz/ gabr000c.htm.

[56] "Strategic and Tactical Mobility."

[57] Malinak, "All Roads Lead to Rome;" "Strategic and Tactical Mobility."

ranges, and spurred the great wave of European conquest and colonization that resulted in the first "overseas" military basing networks.

Later, strategic mobility made another major advance with the advent of coal-powered steam engines. At first, the new technology changed the character of power projection by freeing ships from relying on the motive power of wind and sail. Mobility was enhanced through a ship's increased speed and the reliability of stored fuel as opposed to the vagaries of the wind. However, demonstrating the inextricable link between strategic mobility forces and the exterior basing structure, coal-fired ships required the establishment of forward coaling stations to sustain their operations while away from their home ports. Great Britain's success in establishing a globe-spanning network of coaling stations and bases was critical to its maintaining a dominant advantage over its rivals in terms of both naval power and strategic mobility.

Indeed, Great Britain's strategic mobility advantage underwrote the stability of *Pax Britannia*, a period of reduced great power competition. Between 1820 and 1900, Britain carried out some 235 overseas military expeditions that ranged the entire globe—from North America to Africa to the Far East and New Zealand. As one historian put it, "All depended on the Royal Navy for sea power first of all, but also for transport, gunfire support, supplies, and (just occasionally) refuge."[58]

Steam propulsion, however, could be exploited on land as well. Toward the end of the 19th century, the development of railroad networks began to alter significantly the relative mobility of sea and land forces in the latter's favor. The development of rail networks offered a way to move goods and military forces quickly and cheaply across great distances. Continental powers were increasingly able to employ rail networks as a means to offset substantially the maritime forces' traditional strategic mobility advantage. This could not help but influence thinking about the basing systems of the world's great powers.

For example, railroad networks had the effect of exposing previously relatively secure parts of the British global basing network to attack. It was not long before the defense of India, the crown jewel of the British Empire, became a growing source of concern in London. Toward the end of the 19th century, Russia's construction of the Trans-Siberian Railroad led to fears that the Tsar would soon be able to transport large armies more rapidly to the Indian frontier than could the British Naval Transport Service.[59] Similarly, the emerging friction at this time between Britain and Germany was due, in part, to Germany's desire to build a "Berlin-to-Baghdad" rail line. By dramatically enhancing the mobility of its land forces, such a rail network could enable Germany to pose a greater threat to Britain's interests in the Persian Gulf.[60]

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[58] Andrew Gordon, "Military Transformation in Long Periods of Peace: the Victorian Royal Navy," in *The Past as Prologue: The Importance of History to the Military Profession*, Williamson Murray and Richard Hart Sinnreich, editors (New York, NY: Cambridge University Press, 2006), pp. 154-55.

[59] Aaron L. Friedberg, *The Weary Titan* (Princeton, NJ: Princeton University Press, 1988), pp. 215-17, 224-26.

[60] The Berlin-to-Baghdad railroad was centered on building a major rail line connecting Istanbul with the Persian Gulf region. Work on the first phase of the railway was begun in 1888 by the Ottoman Empire with German

For an insular power with global interests like Great Britain (and like the United States in the present time), offsetting this relative decline in strategic mobility meant that more forces would have to be based forward (to redress the unfavorable mobility trends) or that other forces—such as those provided by allies—would have to be found to make up the difference. Simply stated, the cost of defending the British Empire increased significantly owing to the relative shift in strategic mobility brought about by advances in technology.[61]

Throughout the 20th century, new technological advances continued to alter the strategic mobility equation and to influence the global basing requirements of great powers. The introduction of oil-fired propulsion in naval systems in the early years of the century enabled warships to travel both faster and farther, since oil provided more energy per unit of weight relative to coal. Oil had another advantage as well: it was far easier to store, transport, and transfer *at sea*, and opened the way for "underway replenishment" operations that obviated a ship having to stop at a forward coaling station before continuing operations.[62]

Paradoxically, while the shift to oil boosted the Royal Navy's mobility, it also diminished the advantage of their exterior basing network, for it would potentially allow future naval competitors freedom of action to conduct operations in distant theaters without forward bases. Moreover, it forced important changes to Great Britain's global military posture. For example, while coal was mined in Britain, the country had no ready source of oil. Moreover, Britain had already incurred substantial sunk costs in developing the world's best network of coaling stations.[63] As the utility of these forward stations steadily declined, the Royal Navy was forced to seek bases at points around the globe where sources of oil could be found, such as in the Persian Gulf region.[64]

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financial assistance. In 1902 the Ottoman government granted a German firm the concession to lay new track eastward from Ankara to Baghdad. Because of its potential strategic importance, work on the line was accelerated after the Ottomans entered World War I on the side of Germany and the other Central Powers. By the end of the war in 1918 the line had been extended from the Bosporus to Nusaybin, several hundred miles short of Baghdad. This remaining stretch and a subsequent extension to the port of Basra near the Persian Gulf were eventually completed by Syria and Iraq, which had been formed after the dismemberment of the Ottoman Empire. Cite found at http://www.naqshbandi.org/ottomans/khalifa/ baghdad_railway.htm

[61] During this period Great Britain emerged from its "splendid isolation" and entered into several alliances in order to meet the rising challenges to its global supremacy. An éntente was formed with France, and an alliance with Japan. The Indian Army assumed an increasingly important role as a large, frontier force that might arrest a Russian advance through Afghanistan. The shift from coal-fired boilers to oil as the Royal Navy's fuel only marginally redressed the fleet's strategic mobility problem.

[62] CDR Erik Dahl, "The Limits of Technological Innovation: The Change from Coal to Oil under Churchill" (Unpublished Paper, 2002), pp. 2-3.

[63] Dahl, "The Limits of Technological Innovation: The Change from Coal to Oil under Churchill," pp. 2-3.

[64] The British Government acquired 51 per cent of the Anglo-Persian oil company's stock, giving it two directors on the company's board, and negotiated a separate, secret contract that provided the Admiralty with a 20-year supply of fuel oil under attractive terms. (Dahl, "Limits of Innovation," pp. 8-9.) In Britain at that time, government ownership of a private company was highly unusual, but was sanctioned in rare instances in order to secure a strategic advantage. For example, the Government had purchased shares in the Suez Canal in the mid-nineteenth century—another key base in Britain's global basing posture.

The development of the airplane and aerial transport had similar profound effects on the basing requirements of great powers. By the late 1930s, militaries around the world were experimenting with the first air transports, all derivatives of commercial airliners. Although these early aerial transports had limited unrefueled ranges, logisticians quickly learned that by assembling strings of bases along strategic air routes they move men and cargo far faster than either ships or railroads. However, air transports could not carry nearly the same volumes as these modes of transport, especially over long distances. Therefore, for transoceanic expeditionary operations, military air transports began to specialize in the prompt delivery of high-value cargo and personnel, while sealift remained the primary means to transport heavy equipment and large combat units.

Toward the second half of the 20th century, as the range and payload of jet aircraft increased and as air-to-air refueling became safer and more common, some nations—particularly the United States—began to augment their early *tactical* airlift fleets with special purpose *strategic* airlift fleets capable of moving considerable amounts of people and cargo across transoceanic distances. Moreover, with the steady expansion of commercial air carriers, dedicated strategic airlift fleets can be augmented with leased commercial aircraft in times of crises, increasing the great power's overall military air transport capacity further still. This increase in air transport capacity has been offset, to some degree, by the steadily increasing size and weight of modern ground combat systems. As a result, despite dramatic increases in the payloads of modern air transports, they still cannot match the payload capability of ground transportation (rail and truck) or sealift, especially over transcontinental and transoceanic distances. Nevertheless, the development of large, long-range strategic airlift fleets have given military planners a potent means to move and reposition forces and to rush reinforcements over global ranges. In addition, they have diminished the number of forward air bases needed to support an intercontinental "air bridge."

Indeed, the development of strategic airlift forces in the late 20th century spurred strategic mobility experts to experiment with a new strategic mobility program that combined the rapid air transport of troops with staging of heavy combat equipment in forward theaters. In these theaters, heavy equipment sets were prepositioned in either above or underground logistics sites on land or on specially configured cargo ships. In times of crisis, the personnel who operated the equipment were quickly flown to their equipment, where they removed it from storage and prepared for combat. The net result of these land- and sea-based *prepositioning programs* was a dramatic improvement in both strategic reaction times and strategic mobility. As will be discussed, the United States has been especially innovative in developing and exploiting both land- and sea-based global positioning forces.

Both at-sea and aerial refueling highlights two other important strategic mobility assets—*naval combat logistics and aerial tanker forces*. As these assets increase the endurance and operating radii of naval and air forces, respectively, they help to enhance the great power's strategic mobility. One might think that because they work to increase the operational ranges of naval and air forces, combat logistics and aerial tanker forces help to reduce a great power's reliance on exterior bases during power projection operations. However, they themselves trigger demand signals for bases. Indeed, absent forward tanker bases and locations to replenish the combat logistics forces, many US power-projection operations would be significantly hampered. That

said, these forces can help to project forces into distant theaters that have few forward bases, and to sustain their operations until suitable forward campaign bases can be erected.

In contemporary terms, then, today a great power's strategic mobility relies on a combination of six different elements—sealift; airlift; land-based prepositioning programs; sea-based prepositioning program; naval combat logistics forces, and aerial refueling forces. The overall mix and capability of these strategic mobility forces has an indelible impact on the form and size of a great power's exterior basing network. If the basing network forms the posture's skeleton, then strategic mobility assets form the posture's muscles. Working together, they can both throw the javelin represented by the great power's global attack forces and/or help the great power to move and apply combat power—in the shape of forces, strategic leverage, and effects—rapidly over transoceanic or intercontinental distances**.**

FORCIBLE ENTRY FORCES

No global military posture is likely to include an exterior basing structure large or expansive enough to support a major power projection in every potential theater of operation. Should a crises in a theater with few forward bases erupt, a great power can try to prosecute the campaign from long-range using a combination of global attack forces based in its home territory and forward-based or forward-deployed forces operating from existing exterior bases located in adjacent theaters of operations. For anything other than a quick raid or short punitive campaign, however, this is not likely to be a viable option. As a consequence, a major new campaign or expeditionary operation often results in a unique expeditionary basing structure which can be seen as a temporary expansion and extension of the steady-state basing network. This expansion may be uncontested and supported by new basing access agreements with friendly states in the region; or contested, characterized by operations to seize a forward base of operations on the enemy's own territory or territory occupied or threatened by his forces.

Establishing bases in a contested theater with no exterior bases requires *forcible entry forces*—combat forces capable of penetrating hostile territory and establishing a "lodgment" on enemy-held or controlled territory. Such forces might be best conceived of as a special strategic mobility capability that enables a great power to project intact combat forces into a contested region even in the absence of forward bases. The traditional forces used to conduct forcible entry operations are airborne and amphibious assault forces. When nearby theater land or sea bases do exist, air assault operations that involve the air-landing of combat forces using either fixed-wing transport or rotary-wing aircraft (e.g., helicopters and tilt-rotors) provide a third means to conduct forcible entry operations.[65]

Because they do not normally require forward bases to initiate combat operations, forcible entry forces are quite useful. As outlined in joint doctrine, they can be used to initiate a campaign or major war by establishing a lodgment for follow-on forces (i.e., the Normandy model); conduct a major operation within a joint campaign (i.e., the Inchon model); or conduct an independent

[65] Joint Publication 3-18, *Joint Doctrine for Forcible Entry Operations* (Washington, DC: Office of the Joint Chiefs of Staff, July 16, 2001), pp. I-1 – I-3.

coup de main that aims to achieve immediate and decisive results (perhaps the closest historical example being Operation *Just Cause*, the 1989 US invasion of Panama).[66]

Rapid Base Construction Forces

Because they are often used to establish a lodgment in a theater with no forward bases, forcible entry forces are often accompanied by *rapid base construction forces*—construction units skilled at the rapid assembly of expeditionary bases using such things as mobile harbors, prepositioned base sets, expeditionary airfield kits, and modular hospitals. As will be discussed, these forces and the rapid construction bases they build allow a great power to consolidate and exploit a lodgment on enemy-held territory quickly to sustain follow-on attacks from the lodgment, and/or to establish a semi-permanent basing network in austere forward theaters.

Together, forcible entry and rapid base construction forces provide a great power with the means to project and sustain power into contested regions that lack a supporting exterior basing structure. In truth, however, neither is often needed. For example, the last time the United States conducted a major amphibious assault was in the Korean War. Large-scale combat air drops have also been exceedingly rare. Therefore, a key question for the designers of any future US global defense posture is how much airborne and amphibious assault capacity should be retained as a hedge against the likelihood that bases might need to be seized in the future. Another key question is what emphasis and resources should be devoted to an ability to construct harbors, ports, airbases, or land bases rapidly. As will be discussed later in the report, these are key questions now confronting US defense strategists.

GLOBAL C3I FORCES

C3I forces, including communications, ISR, and indications and warning (I&W) assets, have also long been an important part of a great power's military posture. For example, early great land empires used a variety of means—among them foot and horse messengers, carrier pigeons, smoke signals, and beacons—to improve communications between their frontier bases and their "center," primarily to give their leaders prompt indications and warning of impending or gathering threats and to improve their strategic reaction time to these threats.

The first C3I "networks" were composed of tightly linked forward bases and improved communications and strategic mobility capabilities. For example, some of the Roman forts located along contested imperial frontiers were connected to larger frontier garrisons by means of a beacon communication system and messengers. The major garrisons were themselves connected to Rome by a road and communications relay network similar to that employed by the Persians. This vast frontier ISR and communications network provided Roman commanders with early and accurate warnings of emerging threats, and the enhanced strategic mobility afforded by

[66] Joint Publication 3-18, *Joint Doctrine for Forcible Entry*, pp. I-1 – I-3.

their superior road network enabled them to shift forces quickly around the empire's periphery when needed.[67]

The Roman system was largely unmatched until the 1684 development of the semaphore, or optical telegraph. A semaphore system conveys information by means of visual signals, using hand-held flags, towers with pivoting blades or paddles, or a light with shutters. In clear weather, they send information much faster than horse messenger and more reliably than carrier pigeon. In the 1700s, an engineer named Claude Chappe and his brothers built a French national semaphore network consisting of 556 stations stretching across a total distance of 4,800 kilometers. Using this system, a typical message could be reliably transmitted between Paris and Lille, a distance of over 230 kilometers, in 32 minutes. By linking his field forces to this national communications backbone with portable semaphores—a "mobile subscriber element"—Napoleon Bonaparte could coordinate his forces and logistics over longer distances than any other army of his time. Indeed, most European nations quickly copied the French communications system and some improved upon it. The Swedish semaphore system, using a system of iron shutters, could transmit information twice as fast as the French system; it remained in operation until 1880.[68]

However, because semaphore stations had to be within sight of each other, and because the efficient operation of the network required large numbers of well-trained and disciplined operators, the costs of administration and wages associated with a semaphore network were quite high. As a result, they were rapidly replaced by the electric telegraph, which transmitted coded messages over long-range via wire-bound electrical signals. The first commercial telegraphs were developed very nearly simultaneously in Russia, Great Britain, and the United States between 1832 and 1844. They proliferated rapidly thereafter, aided immeasurably by the subsequent international acceptance of a common transmission code developed by Americans Samuel Morse and Alfred Vail. Early telegraphs could only transmit signals in one direction; but by 1892, the duplex telegraph allowed information to be transmitted in two directions at the same time. Using the telegraph, messages could be transmitted over intercontinental distances, in all weather, in hours.[69]

The development of the land telegraph lines was followed quickly by the development of undersea telegraph cables. Within a comparatively short period of time between 1866 and 1890, the combination of the two spurred the development of the first global telecommunications network. This network, in turn, spurred a revolution in the command and control of globally dispersed military forces. For example, having ownership and control of a majority of the world's transoceanic cables, command of the seas, and control over important maritime

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[67] For a good description of how the Romans built their bases as part of an overall network that also provided good C3I, see "Llandeilo Roman Fort, Dinefwr Park," Cambria University, *Excavation 2005*, Newsletter No. 1. found online at http://www.acadat.com/llandeilofortnews.pdf. See also Malinak, "All Roads Lead to Rome."

[68] See "Semaphore," found online at http://en.wikipedia.org/wiki/Semaphore_%28communication%29.

[69] "Telegraphy," found online at http://en.wikipedia.org/wiki/Telegraphy; and "Semaphore."

chokepoints meant London could often dispatch and concentrate its forces in threatened regions more quickly than could its adversaries. [70]

The next big advance in transcontinental and transoceanic communication came with the development of wireless or radio telegraphy, and soon thereafter radiotelephony. For the first time, maneuvering forces could maintain communications with static forces, and commanders at frontier or overseas bases could communicate directly by voice with distant military and political leaders, decreasing the likelihood that their orders would be misinterpreted or misunderstood. This facilitated the coordination of widely separated or multi-theater combat operations. As a consequence, the development of wireless telegraphy and telephony prompted many nations to secure basing access for radio relay sites. Whenever possible, these sites were co-located at established bases. However, establishing remote communications relay sites also proved necessary.

As states began to build regional and then global electronic communications networks, nation's naturally began to try to use direction finding equipment to locate the source and point of origin of enemy communications or even to listen in on their conversations. The emergence of electronic intelligence (ELINT) placed additional demands on exterior basing networks. In 1943, for example, the US Army established a listening post near the 7,600-foot high Eritrean capital of Asmara. This remote sight first intercepted Axis high-frequency (HF) radio communications and later Soviet communications.[71] Indeed, throughout the Cold War, the United States and Soviet Union—and their allies—erected hundreds of land-based communications intercept sites and listening posts. These listening sites were often located close to the target country, with the US military erecting posts throughout Europe, in Turkey, Iran, Pakistan, Taiwan, Korea, and Japan. For its part, the Soviet Union established an electronic listening post in Lourdes, Cuba, the largest and most productive intelligence gathering station it ever built.[72]

The exploitation of the electromagnetic spectrum also led to the development of electronic I&W systems like the British radar system that proved pivotal in the Battle of Britain. Subsequently, all major military powers established long-range radar warning networks to alert them of impending aerial attack. These efforts accelerated during the nuclear era, as strategic I&W became a top priority for nuclear-armed great powers. One of the most extensive Cold War I&W networks was the US and Canadian Distant Early Warning (DEW) line—an integrated chain of 63 radar and communication sites that stretched 3,000 miles from the northwest coast of Alaska to the eastern shore of Baffin Island opposite Greenland. The line was designed and built to give the North American Air Defense Command (NORAD) early warning of Soviet bomber strikes coming over the pole.[73] The DEW line was later augmented by three additional sites to give early

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[70] Nicholas Lambert, "Dreadnought – The Revolution that Never Was," (Unpublished Paper, 2002), pp. 1-2.

[71] David J. Danelo, "Around the Horn," *Proceedings*, June 2006, p. 19.

[72] Robert Windrem, "Lourdes the Spy Listening Post in Cuba," found online at http://www.autentico.org/oa09478.php.

[73] "DEWLINE History," found online at http://www.lswilson.ca/dewhist-a.htm.

warning of Soviet over-the-North Pole ICBM attacks; these three sites were known as the Ballistic Missile Early Warning System (BMEWS).[74]

Strategic communications, ISR, and I&W provided the driving impetus for the construction of remote basing networks in outer space. As early as the mid-1950s, US defense planners knew that high-flying U-2 spy planes would not forever be immune to Soviet surface-to-air missiles or fighter-interceptors. Moreover, the U-2 could not reach deep into the Soviet interior. As a result, these planners naturally sought to establish reconnaissance and listening posts in outer space—the ultimate high ground. This led to the development of space C3I forces, which offered greatly increased global awareness and span of control.

A spacecraft's orbit is fixed relative to the earth; its "global range" therefore depends on the fact that it speeds around a rotating earth. Depending on the orbit's inclination—its orientation with respect to the equator—every spot on the earth will at some point pass underneath its sensors. Spacecraft orbiting above the equator (0 degrees inclination) at geosynchronous altitude, the altitude at which the spacecraft's orbital speed matches that of the rotating earth, appear to "hover" over a point on the earth's surface. Sensors or communications packages on three to five such geosynchronous spacecraft thus provide near-instantaneous global "coverage," allowing the rapid collection and/or exchange of information across intercontinental distances. Other satellites, speeding along in inclined orbits or orbits over the poles at lower altitudes, frequently revisit spots on the earth and take weather readings and digital, infrared, and radar pictures. Groups of satellites in medium-altitude inclined orbits provide instantaneous navigation and timing signals to forces located anywhere on earth.[75]

By constructing constellations of spacecraft with varying orbits and numbers of spacecraft, a space power can form a virtual space base that provides rapid sensing, information gathering, and information transfer and sharing across global ranges. Space forces thus provide contemporary great powers with superior global awareness and I&W, and an improved ability to coordinate forces over transcontinental and transoceanic ranges. In the future, space forces may perform additional missions, such as global attack. In the meantime, however, their ability to improve global awareness and span of control are key capabilities for any power intent on establishing a truly global military posture.

SECURITY RELATIONSHIPS AND LEGAL AGREEMENTS

The six aforementioned physical posture components are supported by specially tailored "contractual" arrangements that include both *formal and informal security relationships as well as legal agreements.* These contractual arrangements have changed over time. Early empires and colonial powers imposed or established security relationships by conquering, colonizing, or

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[74] "Ballistic Missile Early Warning System," found at http://www.fas.org/spp/military/program/nssrm/initiatives/bmews.htm.

[75] For a good explanation of how space systems can be exploited for military purposes, see Barry Watts, *The Military Use of Space: A Diagnostic Assessment* (Washington, DC: Center for Strategic and Budgetary Assessments, 2001).

annexing territory and then dictating terms to a subjugated population. Although some empires and colonial powers allowed outlying territories great latitude in local governance, in the end all imperial territory operated under imperial law and decree. In other words, these powers worried little about security relationships or legal agreements when building their military postures, except when coercing weaker states to agree to dictated terms and treaties.

Today, all habitable territory is claimed by a sovereign state. While there remain disagreements over the trace of the borders between some countries, there are relatively few formerly conquered, colonized, or leased territories that remain in dispute. Only three come immediately to mind: the British Falkland Islands (claimed by Argentina); Gibraltar (claimed by Spain); and the US base in Guantanamo Bay, Cuba (although technically leased, the communist government of Cuba does not recognize the lease and refuses to accept the yearly US lease payments). In the post-colonial era, then, great powers interested in building a global military posture must therefore negotiate basing access and transit rights with foreign countries, however small they may be. Accordingly, any contemporary great power must rely heavily on negotiated security relationships and legal agreements if they wish to base, move their forces, to project power with the greatest possible degree of freedom.[76]

Security relationships are quite varied. They run the gamut from those between long-standing, trusted allies tied by treaty that involve continuous and comprehensive interactions at the diplomatic and military levels, to those with countries seeking a new relationship with an external basing power based on economic or military aid and assistance. Regardless of the closeness of the relationship between the basing power and the host nation, however, they generally have one thing in common: a bilateral or multilateral legal arrangement that establishes an agreed upon protocol for foreign military presence, access, and activities in the host country. These agreements define the rights and obligations of both the basing power and the host nation, set the terms and limits for a basing power's in-county military access and activities, and establish agreed upon legal protections for the basing power's forces.[77]

Status-of-Forces Agreements

Status-of-Forces Agreements are particularly important with regard to providing legal protections for foreign troops based or operating in a host nation. SOFAs "define the legal status of the foreign troops and their property, by setting forth the rights and responsibilities between the basing and hosting power with regard to such matters as criminal and civil jurisdiction, the wearing of the uniform, the carrying of arms, tax and customs relief, entry and exit of personnel and property, and resolving damage claims." SOFAs are generally an integral part of any

[76] Ryan Henry, "Transforming the US Global Defense Posture," in *Reposturing the Force: US Overseas Presence in the Twenty-first Century*, Carnes Lord, ed. (Newport, RI: Naval War College Newport Paper 26, February 2006), p. 42.

[77] Henry, "Transforming the US Global Defense Posture," p. 42.

agreement that allows foreign military forces to operate within another country. As such, each SOFA is negotiated separately between the basing power and the host nation.[78]

Transit Right Agreements

Transit right agreements are another important contemporary security arrangement. These allow one nation's strategic mobility assets or military forces to pass through or over another nation's sovereign territory while en route to their final destination. The absence of such rights can greatly hamper the transoceanic, transcontinental, and even the intra-regional movement of forces and military operations.

In this day of intercontinental air travel, overflight rights are particularly important. As one group of analysts wrote, "Insofar as the United States must respect state's sovereignty over their own territory, these entities can prevent US actions without using violence or force simply by saying 'no'."[79] For example, as previously mentioned, in 1986 the United States decided to launch punitive air strikes against Libya for their support of terrorist operations. However, France, Spain, Germany, and Italy refused to support the strikes. As a result, the US was forced to conduct the strikes using naval aircraft operating from aircraft carriers in the Mediterranean and land-based bombers operating from England. With both the French and Spanish having denied overflight rights, the flight route from Great Britain to Tripoli, Libya, was increased by about 1,300 nautical miles each way. In addition to adding 6-7 hours of flight time for the pilots and crews of the strike aircraft, the lack of transit rights required US strike planners to assemble a force of 28 tankers to support a strike force of just 24 aircraft.[80]

As this example attests, securing transit rights—especially overflight rights for US combat, refueling, and transport aircraft—can be as important as securing bases for US expeditionary operations.

The Connective Tissue: Strategic and Operational Concepts

As the international environment has become more complex and as warfare has become more demanding, especially with regard to projecting military power across transoceanic ranges, the importance of *strategic and operational concepts* has steadily risen. This is especially true for any great power bent on establishing a *global* defense posture, because these higher order

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[78] See "Status-of-Forces Agreements," found online at http://www.globalsecurity.org/military/facility/sofa.htm.

[79] David Shlapak, John Stillion. Olga Oliker, and Tanya Chalik-Paley, *A Global Access Strategy for the US Air Force*, as cited in Major Wesley P. Hallman, USAF, "Access and Overflight; Strategic Opportunities, Operational Risks," a thesis presented to the faculty of the School of Advanced Air and Space Studies, Maxwell Air Force Base, June 2004.

[80] Walter J. Boyne, "Operation El Dorado Canyon", Air Force Magazine, March 1999; "Operation El Dorado Canyon," found at http://www.globalsecurity.org/military/ops/el_dorado_canyon.htm.

concepts link any overall posture with existing or emerging contemporary national security challenges and the military capabilities needed to address them.

For example, in the interwar period between World War I and World War II, the United States was confronted by the national security challenge of having to project power across the Pacific Ocean against Imperial Japan without the benefit of its established Pacific forward basing network, which it assumed would be lost early in any war. This spurred the gradual development of operational concepts like amphibious assault operations and carrier strike operations, both a logical requirement if one did not expect to have access to forward bases. These concepts, in turn, led to the development of carrier task forces and special purpose amphibious landing forces, which help to underwrite the global expeditionary campaign posture adopted by the United States during World War II.

During the Cold War, the United States was confronted by the Soviet Union—a hostile peer that threatened to overrun its allies in Europe. In response, the United States adopted the strategic concept policy of containment, which compelled it to build and maintain powerful combat garrisons along the European frontier between the free states of Europe and those already occupied by the Soviet Union. The key operational problem was thus the rapid reinforcement of US and allied forward combat garrisons. This problem spurred the development of strategic airlift fleets as well a concepts such as the forward staging of reinforcing unit equipment in theater, which in turn triggered the development of the highly successful Prepositioning of Material Configured in Unit Sets (POMCUS) program.

Both of these examples will be developed more fully later in the report. Here it is sufficient to point out that both examples clearly suggest the inextricable link between national security problems, the strategic and operational concepts developed to address them, and the global defense posture and military capabilities that naturally follow.

THE AMERICAN LEASEHOLD EMPIRE

Up to this point, this paper has discussed each of the six separate components of a global military posture—as well as the legal arrangements that support them and the operational concepts that help shape them—separately and in a general context. However, the purpose of this exercise has been to build a common conceptual framework for debate over the best future American military posture. In doing so, one must always remember that the ultimate aim of the US global military posture is to give the United States an advantage in strategic reaction time, positioning of its forces, and achieving strategic effects, thereby contributing to a favorable strategic and political/military balance in both peace and war. Therefore, when engaging in any debate over the correct future US posture, it is important not to miss the forest for the trees. It is impossible to change any of one of the current six physical posture components without considering the effects on the other five, the associated legal framework that supports them, as well as important operational concepts. In other words, it is the overall combination of these things that is important, and not any one component itself. Said another way, the overall US global defense posture is very much greater than the sum of parts.

Hopefully, the foregoing discussion also makes clear that when it comes to developing a global military posture, great powers that assembled and ruled over empires in earlier eras had an important comparative advantage over contemporary great powers like the United States, which is now compelled to assemble a basing network primarily through alliances and mutual consent. Bases on the territory of an empire are, by definition, sovereign bases always at the imperial power's disposal. As previously discussed, the "allies" of Imperial Rome were more vassals than allies in the traditional sense. Rome's use of its bases was not subject to question or constraint, save in those instances when a province was in revolt. Similarly, the great maritime empires of Portugal, Spain, the Netherlands, and Great Britain did not have to negotiate basing rights or worry about access to or control over facilities located on conquered or colonized territory. In other words, early empires could tremendously expand their regional or global reach and power without losing any operational freedom of action.

While the United States, as the world's dominant contemporary power, has been compared to some of the great empires in history, this comparison fails when applied to its global military posture. In the years since America became an active global power, the US global military posture has come to be dominated by exterior bases located on the sovereign territory of America's trading partners, friends, and allies. Consequently, unlike Imperial Britain or Rome, the United States has traditionally enjoyed far less unfettered operational access to many of its exterior bases, or complete freedom of action for the forces stationed at them. This has been especially true following World War II, and the collapse of the last of the European overseas empires.

As a result, although it is today the most powerful nation on earth, the United States negotiates with even minor states to secure basing access. Moreover, even when the United States has a long-standing security relationship with a country or a basing agreement in hand, its access to foreign bases has been denied and its operational freedom curtailed—as was recently demonstrated when Turkey refused to allow the United States to use its territory as a jump-off point for ground operations inside Iraq.

Despite the constraints on its operational freedom of action—a circumstance that would not be tolerated by earlier empires—the constantly evolving US global military posture, based around a world-spanning, legally negotiated "leasehold" overseas basing structure, has proven to be one of the most remarkably effective, flexible, and durable postures in history.[81] Understanding how this leasehold empire evolved is therefore an important requirement before engaging in any useful or informed discussion about changing it.

Said another way, knowing where the current US military posture came from might help to better illuminate the path ahead. Accordingly, the next several chapters describe the evolution of the US global military posture since the Revolutionary War.

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[81] The term "leasehold empire" comes from a superb study of the evolution of the US exterior basing network found in C.T. Sandars, *America's Overseas Garrisons: the Leasehold Empire* (New York: Oxford University Press, 2000).

A History of Garrison and Expeditionary Postures

As this historical review will reveal, the United States has typically adopted what might best be described as either a *garrison* or an *expeditionary* military posture. Garrison postures emphasize strong forward defense, with substantial forces located along the trace of America's extended defensive perimeter in theaters of operations where they are expected to fight. In contrast, expeditionary postures see the preponderance of US combat forces located inside the continental United States, ready to deploy to meet emerging threats wherever they might form.

The difference between a garrison and expeditionary posture is generally reflected in the relative proportion of US forces stationed at exterior and interior bases, as well as the relative ratio of its forward-based to forward-deployed forces. Because expeditionary postures are characterized by a greater proportion of forces stationed in interior bases located in the continental United States, they rely upon the rapid recognition and characterization of emerging threats and an ability to rapidly move or reposition US forces across the oceans.

While the United States has experimented with both types of postures, it is now clearly on a path toward a new type of expeditionary global posture. A key question for this assessment, then, is whether or not such an expeditionary posture is an appropriate one for the 21st century.

III. US (GLOBAL) MILITARY POSTURE UP TO WORLD WAR II

A helpful framework for a historical review of how the contemporary US global military posture evolved is provided by Samuel P. Huntington, who in 1954 divided the history of the United States into three broad national security policy "phases," or eras. Huntington called them the Continental, Oceanic, and Transoceanic Phases of US national security policy.[82] Later, of course, Huntington's Transoceanic Phase was often referred to as the "Cold War."

While some contemporary foreign strategists endorse Huntington's division of US history into three initial national security phases, they differ over their proper names. For example, strategists in the People's Republic of China prefer to describe them in terms of what they perceive as America's pursuit of global hegemony: the Continental; Overseas; and Contention for World Domination phases.[83]

Regardless of how one refers to them, each of these first three broad national security policy eras spurred a unique global military posture tailored to the strategic needs of the nation. This chapter describes the first two phases and postures, which cover the period between the end of the Revolutionary War and the eve of World War II.

THE CONTINENTAL ERA, 1773-1889: A NAVAL EXPEDITIONARY POSTURE

The Continental Era was marked by several overriding and complementary national security goals: protecting the nation from outside invasions; securing the frontiers of the ever-growing nation; and preserving the Union.[84] The international system during this era was a multi-polar world characterized by great power competitions in Europe and continued waves of competitive colonization. Two supporting national security goals, outlined in the 1823 Monroe Doctrine, were to avoid any American involvement in European wars and competitions, and to limit further European colonization or interference in the Western Hemisphere.[85] As one would expect, given these inward-looking goals, the US global military posture was a minimal one, based primarily around naval forward deployments.

[82] Samuel P. Huntington, "National Policy and the Transoceanic Navy," *Proceedings*, May 1954.

[83] From the *People's Daily*, the Chinese official news service, as cited in War Room Report 41-03, Strategic Initiatives Group, Headquarters, US Marine Corps, dated October 17, 2003.

[84] Huntington, "National Policy and the Transoceanic Navy."

[85] See "The Monroe Doctrine," found online at http://en.wikipedia.org/wiki/Monroe_Doctrine.

A Continental Basing Structure

Consistent with the era's broad overarching national security objectives, the US Army never established a single permanent base beyond the confines of the North American continent. Quite frankly, its hands were quite full there. In 1792, eight years after Congress virtually disbanded the Continental Army, President Washington asked for and received funds to form the "Legion of the United States" to battle Native Americans along the nation's northwest frontier, located in modern-day Ohio. Replaced by a standing US Army in 1796, the Legion's first expeditionary campaign along the US western frontier initiated a nearly century-long series of military operations against native Americans.[86] Indeed, many of today's US Army interior bases—such as Fort Sill, Oklahoma; Fort Riley, Kansas; Fort Hood, Texas; Fort Huachuca, Arizona; and Fort Carson, Colorado—mark the locations of many of the Army's key frontier garrisons in the long-running Indian Wars. These major garrisons were augmented by numerous smaller and transitory frontier forts, which by 1857 were found in no less than 138 locations.[87]

Beyond these interior or frontier bases, given the national security tasks it was assigned, the Army had little reason or inclination to establish bases "overseas" during the aptly named Continental Era. During the War of 1812, the Seminole Wars, and the American Civil War during the aptly named Continental Era, the Army fought exclusively within the borders of the United States. Also contributing to the Army's continental focus were important domestic missions. For example, after the Civil War, the Union Army occupied the south, exercising martial law in five military districts. Later, the Army helped to police strikes in major urban areas.[88] The one exception to the Army's "stay at home" focus involved the seizure or building of temporary campaign bases in Mexico during the Mexican-American War of 1846-1847. However, consistent with the dictates of the national security era, American forces abandoned these facilities and withdrew back to the United States as soon as the war was over.

Leasehold Support Bases for Naval Forward-Deployments

Although the United States did not wish to be involved with European great power struggles, it was still compelled to protect its access to global markets and its regional interests, which were primarily economic. The means to accomplish these tasks were the US Navy and Marine Corps, which deployed and operated forces around the globe throughout this era.

Naval forward-deployments were driven as much by the predilection of their officers as by America's global economic interests. Indeed, when tasked by Congress in 1775 to defend the American coast from British commerce raiders, Commodore Esek Hopkins' first instinct was to conduct an amphibious raid on the British colonial town of Nassau in the Bahamas. As one contemporary naval analyst wrote, this very first operation mounted by the Continental Navy and Marine Corps "…became a metaphor for the entire subsequent history of the United States Navy:

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[86] Anni P. Baker, *American Soldiers Overseas: the Global Military Presence* (Westport, CT: Praeger Books, 2004), p. 4.

[87] Baker, *American Soldiers Overseas: the Global Military Presence*, p. 5.

[88] Baker, *American Soldiers Overseas: the Global Military Presence*, p. 6.

Forward-deployment and power-projection would trump coastal patrol and homeland defense every time."[89]

The US naval preference for forward-deployed operations was highlighted throughout the remainder of the Revolutionary War. Faced by the formidable British Royal Navy, the Continental Navy became proficient in blockade breaking, commerce raiding, attacks against single British warships, and small raids against British interests ashore. This last task prompted an American mission to cross the Atlantic to negotiate access to ports for forward-deployed US warships. This mission was successful; throughout the war, US warships operating from participating bases in France and Spain generally made a nuisance of themselves, attacking British merchantmen and conducting small raids. In 1778, for example, John Paul Jones landed in England itself in an attempt to burn British ships anchored in port—the first hostile landing on English soil in more than a 100 years.[90] Although these attacks hardly impacted or altered the course of the war, they helped to ingrain the Navy's and Marines' clear desires to conduct continuous, forward-deployed operations—in both peacetime and war.

As a result, as the Continental Era unfolded, the US Navy began to deploy squadrons routinely to several far-flung *fleet stations* located close to the "nexus of US security and economic interests"—namely, important overseas markets.[91] These squadrons were mostly administrative units and the warships assigned to them normally operated independently. Except during the Civil War, between 1815 and 1889 US Navy warships operated out of several of these forward stations, although not all were maintained simultaneously or continuously. The most important of these stations were the East India Station (Western Pacific); Pacific Station (West Coast of South America); West India Station (Caribbean); Brazil Station (East Coast of South America/South Atlantic); Africa Station (West Coast of Africa); North Atlantic Squadron/Station (Western and Northern Europe); and the Mediterranean Station.[92] Even though it involved relatively small numbers of forward-deployed forces, this impressive global posture was "an achievement unmatched by many larger and more modern navies of the time, which remained regionally focused."[93]

While deployed on these routine global patrols, the Navy and Marine Corps became proficient at mounting small-scale expeditionary operations to counter threats to US commerce and economic interests or to uphold national honor and prestige. The Navy and Marines conducted the nation's first two minor overseas campaigns of the era (the First Barbary War (1801-05), and the Second

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[89] Peter M. Swartz, *Sea Changes: Transforming US Navy Deployment Strategy, 1775-2002* (Alexandria, VA: Center for Naval Analysis, July 31, 2002), p. 13.

[90] Swartz, *Sea Changes: Transforming US Navy Deployment Strategy, 1775-2002*, p. 13.

[91] Harkavy, "Thinking About Basing," p. 11.

[92] The Battle Force actually manned forward stations through 1905. For the locations of fleet stations, see Swartz, *Sea Changes: Transforming US Navy Deployment Strategy, 1775-2002*, pp. 18-21 and pp. 65-67. For a wonderful description of these fleet stations, see Robert Albion, "Distant Stations," *Proceedings*, March 1954.

[93] Swartz, *Sea Changes: Transforming US Navy Deployment Strategy, 1775-2002*, p. 26.

Barbary War (1815)), as well as the last (Korea, 1871).[94] Throughout the era, forward-deployed US naval forces conducted many additional operations, in such places as Taiwan, Uruguay, Japan, Hawaii, Mexico, Egypt, China, Panama, and Korea. These operations were generally brief and required only austere expeditionary camps for their support.[95]

This is not to say that the US Navy and Marine Corps operated totally without access to forward support bases. However, consistent with the government's desire not to enter into any formal alliances, these forward support bases were part of an informal leasehold basing network. US diplomats or naval officers negotiated or leased access to facilities in the ports of trading partners or friendly nations. Typically, the access agreement included the use of warehouses in the port, overseen by a naval storekeeper who lived nearby with his family. The naval storekeeper was also responsible for negotiating access to the port's ship repair facilities, where most squadron maintenance was conducted by the Americans themselves when needed.[96]

These first leasehold bases were located near fleet station operating areas. These included Port Mahon, in Spain's Balearic Islands; Valparaiso, Chile; Rio de Janeiro, Brazil; Calloa, Peru; Luanda, Angola; Hong Kong and Macau, China; Magdalena Bay, Mexico (Baha California Sur); Colon and Panama City, Panama; Tenefre, Canary Islands; Cap Haitien, Haiti; St. Thomas in the Danish Virgin Islands; and Porto Prava in the Cape Verde Islands.[97] However, as was mentioned, these early leasehold bases represented less formal access agreements and more fee-for-service business deals; they inferred neither a security relationship between the United States and the host nation nor a desire by the US government to establish a permanent US military presence at the port.

An Imperial Expansion Into the Pacific

By the 1840s, however, the United States began to seek what would today be described as "assured access" in the Pacific basin, both to expand its economic reach and to prevent being forced out of the area by European powers. As early as 1842, President Tyler was intent on increasing the number of US naval bases in the Pacific, eyeing potential anchorages in San Francisco Bay (then held by Mexico), Puget Sound (then claimed by both the United States and Great Britain), and the Hawaiian Islands (then an independent kingdom).[98] However, in keeping with an expeditionary posture that emphasized forward-*deployed* rather than forward-*based*

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[94] For a quick summary of these two "wars," see "Barbary Pirates," found online at http://en.wikipedia.org/wiki/Barbary_pirates#Barbary_pirates_and_the_US_Navy.

[95] Short descriptions of these expeditions can be found in Swartz, *Sea Changes: Transforming US Navy Deployment Strategy, 1775-2002*. See also Kenneth J. Hagan, *This People's Navy: the Making of American Sea Power* (New York, NY: the Free Press, 1991).

[96] From a series of emails from experts at the Center for Naval Analysis, including Peter Swartz, B.C. MacCaffree, Albert Nofi, and particularly Patrick Roth.

[97] Swartz, *Sea Changes: Transforming US Navy Deployment Strategy, 1775-2002*, and emails from Swartz, MacCaffree, Nofi, and Roth.

[98] Hagan, *This People's Navy*, pp. 118-19.

forces, the United States instead opted to increase its informal leasehold basing structure—albeit in a way more akin to traditional imperial basing expansions.

For example, the 1844 Sino-American Treaty of Wanghia opened five Chinese ports to US trade. The treaty, patterned after an earlier British treaty signed after the first Opium Wars, allowed US citizens to buy land in the ports and declared the land and the people living on it exempt from local legal jurisdiction—a principle known as extraterritoriality. In essence, these treaties created sovereign US enclaves inside the Chinese ports. Ultimately, 69 Chinese ports were opened to US trade—and to US military forces. Although the treaty did not create bases *per se*, they guaranteed forward access to US naval vessels, and enabled the US Navy to purchase and establish naval warehouses in any of them. The 1854 Convention of Kanagawa opened ports in Japan under similar terms. Unsurprisingly, these treaties are among those referred to by Chinese and Japanese historians as the "Unequal Treaties" forced upon China and Japan by Europe and the United States between 1842 and World War II.[99]

The US continued to expand its Pacific (business) access by purchasing and annexing additional territory. In 1867, Secretary of State Seward arranged for the purchase of Alaska and the Aleutian Islands from Russia, and annexed Midway Island in the North Central Pacific. It also increasingly involved itself in the internal affairs of the Kingdoms of Hawaii and Samoa, establishing coaling stations in both states in 1887 and 1888, respectively.[100]

Global Attack Forces = Strategic Mobility Forces = Naval Forces

In the Continental Era, forward-deployed, global attack, and strategic mobility forces were all synonymous with US naval forces. The sailing ships that conducted the patrols on the distant fleet stations through most of the era were largely self-sufficient and served as both a warship and transport platforms. The ships relied on the power of the wind for propulsion, and carried large crews to man the sails and riggings. They also carried considerable powder and shot for their cannons, as well as extra cordage, canvas, wood, and masts, and the skilled craftsmen needed to make most voyage and minor battle damage repairs. The ships could also stand ashore as necessary to replenish water and forage or purchase food. The ships' complements included marines, who fought and died alongside sailors in battle on sea as well as land. Landing parties consisted of combined ships companies rather than expeditionary forces launched from the United States. Supplies, stores, and equipment were delivered to the fleet stations by US merchantmen sailing from the continental United States. Extra supplies were stored in the station warehouses, and also on station store ships—the first "maritime prepositioning ships." These station ships were the only unique strategic mobility asset associated with the era. [101]

In the single instance where the US mounted a large-scale extra-territorial operation—during the war with Mexico—troops and equipment were transported on chartered or purchased merchant

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[99] See "Unequal Treaties," found online at http://en.wikipedia.org/wiki/Unequal_Treaties_%28China%29.

[100] Swartz, *Sea Changes: Transforming US Navy Deployment Strategy, 1775-2002*.

[101] Swartz, *Sea Changes: Transforming US Navy Deployment Strategy, 1775-2002*; and emails from Swartz, MacCaffree, Nofi, and Roth.

ships, just as they had been in the earlier Seminole Wars. The landing of US forces at Vera Cruz was the largest US amphibious operation ever mounted, forcing the Army's Quartermaster General to lease or purchase 54 steam vessels, 4 ships, 2 barks, 8 brigs, 34 schooners, and 201 other boats. Moreover, because the Army possessed no suitable ports in Texas—what would be referred to today as sea ports of debarkation (SPODs)—the Army was forced to charter hundreds of additional craft and lighterage to first transport Army troops to the Texas coast, and then to transfer them to merchant ships at anchor in the Gulf of Mexico.[102]

After the war, the Army's Quartermaster General admitted he was "embarrassed by the want of that practical knowledge which nautical men only possess." As a result, he recommended that in the future the Navy operate all sea-going transports for the Army. However, the Navy studiously ignored the recommendation, leaving the Army to continue chartering its own vessels when needed.[103]

Toward a Global Telecommunications Network

In 1844, Samuel Morse and his partner, Alfred Vail, sent the first US commercial telegraph signal from Baltimore to Washington, DC. Less than twenty yearly later, the first US transcontinental telegraph line was completed, mainly along railroad right-of-ways. By the mid-1860s, towns and cities across the continental United States were connected by an enormous communications network based on the Morse/Vail telegraph system. Similar land-based networks were springing up throughout Europe and Russia, leading to a revolution in long-distance communications over intercontinental ranges.[104]

More significantly, at least from the perspective of a British or American strategist, was the laying of the first trans-Atlantic cable in August 1858. Prior to that time, transoceanic communications depended on written communiqués delivered by naval vessels or merchantmen. Depending on the distance involved, one-way delivery of messages might take weeks, if not months. On August 17, 1858, however, Queen Victoria sent a 98-word telegram to President James Buchanan, who promptly responded with a 143-word telegram of his own. The entire exchange took little more than a day. Without a capable, a one-way dispatch alone might have taken up to 12 days. This prompted the *London Times* to write:

> More was done yesterday for the consolidation of our Empire than the wisdom of our statesmen, the liberality of our Legislature, or the loyalty of our colonists could have ever effected. Distance between Canada and England is annihilated.[105]

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[102] See "Merchant Marine in the Mexican-American War," accessed online at http://www.usmm.org/mexicanwar html.

[103] "Merchant Marine in the Mexican-American War," and "Merchant Marine in the Civil War, at http:// www.usmm.org/civilwar. html.

[104] See "Telegraphy," at http://en.wikipedia.org/wiki/Telegraphy.

[105] Gillian Cookson, "The TransAtlantic Telegraph Cable," *History Today*, March 2000, accessed online at http://www.findarticles.com/cf_1/m1373/3_50/60081469/print.jhtml," p. 1.

The British military was already aware of the impact that a combination of undersea and land telegraph cables could have in a local theater of operations, having used them during the Crimean War to maintain reliable communications between Varna, Bulgaria and Balaklava on the Crimean Peninsula. However, just before the first trans-Atlantic cable failed, a nine-word telegraph message from London to Canada countermanded an earlier order to the British 62nd Regiment, stationed in Nova Scotia, to sail to India to assist in quelling the mutiny there. That nine-word message saved the Crown approximately 50,000 pounds Sterling, fully one-tenth of the cost of the entire cable venture. This event convinced the British War Department, Admiralty and Exchequer that a global network of undersea telegraph cables connecting all of the British Crown colonies would eliminate the tyranny of distance in global communications, and would provide Great Britain with incalculable strategic advantages in alerting, dispatching, and concentrating British combat forces around the globe. An advantage in global communications would, in effect, allow Great Britain to police its Empire with far fewer forces than might otherwise be required.[106]

The result was the first truly global telecommunications network, with the bulk of the undersea cable infrastructure owned and controlled by either the British government or British commercial companies. The Department of the Navy quickly made use of this telecommunications network; by 1889, commercial telegraphic or cable facilities were available in practically every port frequented by US warships, which provided relatively rapid communication (days or weeks instead of months) between the US government and Navy Department and the commanders of forward-deployed naval squadrons when they were in port. This development was not met with enthusiasm by US naval commanders, who were long used to exercising their independent judgment. Indeed, one senior officer assigned to the China station is purported to have protested, "Now we have become mere messenger boys at the end of the cable"—a lament still heard in different forms by US military officers to this day. However, being able to communicate with far-flung (fixed) bases over transoceanic ranges would be an essential requirement should the United States ever elect to compete directly with the top world powers.[107]

The telegraph offered the first potential means to synchronize the operations of widely dispersed military forces, both in intent and time. With regard to the latter, in 1869 a telegraphic office was established in the Naval Observatory, with lines connecting it to the Navy Department, the Washington Fire Alarm Telegraphic Office, and Western Union. The purpose of this line was to communicate exact time throughout the continental United States. This was the forerunner of the Navy's present worldwide time broadcasts, as well as time-synchronization methods for global communication systems. All that was needed to offer the same service to US forces based abroad was an American owned and operated world-wide communications network.[108]

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[106] Cookson, "The TransAtlantic Telegraph Cable," p. 4, and "Spanning the Continents: Telegraphy," found online at http://www.britishempire.co.uk/science/communications/telegraph.htm., p. 1.

[107] See "Telegraphy," at http://en.wikipedia.org/wiki/Telegraphy; and Captain L. S. Howeth, US Navy, retired, *History of Communications-Electronics in the United States Navy* (Washington, DC: Bureau of Ships and Office of Naval History, 1963), found online at http://arlyradiohistory.us/1963hw01.htm#1sec6.

[108] Howeth, US Navy, retired, *History of Communications-Electronics in the United States Navy*.

However, even if the US developed its own dedicated undersea cable telecommunications network and could send operational orders and timing broadcasts to all ports frequented by the US Navy, the challenge of transmitting the information to ships at sea would still remain. Up until the end of the Continental/Naval Expeditionary Era, even communicating between ships in close formation was difficult, especially at night or in foul weather. Indeed, prior to 1875, signals between ships were restricted to voice hails and signal flags. That year, however, a Navy lieutenant perfected an electric system for visually transmitting the English Morse telegraphic code using lights, which was installed on US warships the following year. Thereafter, ships in formation could communicate reliably, day and night, except in dense fog. If squadron flagships could somehow be connected to the world-wide telegraphic system, the globally dispersed US Navy might be converted into a cohesive global operating force.[109]

As this discussion suggests, then, the US military had no dedicated global command and control system or intelligence network to speak of in the Continental Era. However, towards the end of the era, it had caught fleeting glimpses of the great advantages that would accrue from an interconnected global C3I network.

The Continental/Naval Expeditionary Era: Global "Lite"

In summary, the US global defense posture during the Continental/Naval Expeditionary Era might best be described as "global lite"—an expeditionary posture with a primary emphasis on interior bases located in the continental United States and a leasehold exterior basing network that kept the footprint of the US forward-deployed forces extremely light. US forward-deployed, global attack, strategic mobility and logistics, and, for much of the era, global C3I forces, were generally one and the same, embodied by the US Navy and the American merchant fleet. Only by the very end of the era were widely dispersed US maritime forces even loosely connected by a global *commercial* telecommunications system.

In keeping with its wariness over entangling alliances, the only agreements made between the United States and host nations were either strict fee-for-service agreements, or coercive treaties which granted US citizens and military forces essentially sovereign rights. In regard to the latter, these coercive treaties gave the US government a taste of the freedom and flexibility enjoyed by traditional imperial powers. As events would have it, in the following national security era, the US government was to exercise imperial methods to an even greater degree to create an entirely new defense posture.

THE OCEANIC ERA, 1890-1946: A SERVICE EXPEDITIONARY POSTURE

A minimalist global military posture was quite sufficient to cover the needs of the Continental Era. However, in 1890, two events helped to mark an imminent shift in American national

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[109] Howeth, US Navy, retired, *History of Communications-Electronics in the United States Navy*.

security thinking. The first was Wounded Knee—the last Indian "battle" fought inside the borders of the continental United States. Symbolically, the Battle of Wounded Knee meant that the territory inside the contiguous borders of the continental United States was finally secure from internal threats.[110] Reflecting this fact, approximately a quarter of the Army's many frontier forts had been closed by the end of 1891.[111]

The second key event was the publishing of Alfred Thayer Mahan's *The Influence of Seapower on History*, which argued that future potential threats to the United States would originate from countries located on the other side of the Atlantic and Pacific Oceans.[112] Both to fully secure its continental territory from attack and to expand its influence and trade overseas, Mahan believed that America needed to reject its traditional naval strategy of *guerre de course*—a strategy typically employed by weak naval powers—and instead seek "overbearing power" on the sea.[113]

These two events augured the next broad phase of US national security policy, dubbed by Huntington as the Oceanic Phase.[114] This era was characterized by a more aggressive US involvement in the Western Hemisphere and a more tentative desire to extend the American defensive perimeter and to move more boldly on the world stage. As the international system remained multi-polar and marked by continued great power competition, this shift in policy saw the US become increasingly involved in affairs "over there" and increasingly willing to intervene militarily across the oceans. While US leaders demonstrated a new willingness to think globally in this new era, however, they focused particular national security attention on two key regions: the Caribbean and Pacific basins.

The shift away from an inward, continentally-focused national security policy toward a more globally-oriented but regionally-focused policy helps to explain two of the more important subsequent developments during the Oceanic Era. The first was the remarkable expansion and transformation of the US Navy, which climbed from twelfth among the world naval powers in 1883 to the number two spot in little more than two-and-a-half decades, and which vied for the

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[110] There were actually two more Indian battles fought after Wounded Knee—one in 1913 and one in 1915. However, the Battle of Wounded Knee is recognized as being the last "battle" of the long war against the plains Indians. See "The Battle of Wounded Knee," at http://college.hmco.com/history/readerscomp/rcah/html/ah094200woundedkneeb.htm; and "The Last Battle: Wounded Knee," at http://www.wealth4freedom.com/truth/1/indian5.htm.

[111] Baker, *American Soldiers Overseas: the Global Military Presence*, p. 6.

[112] Mahan actually wrote and delivered his lectures on "sea power" at the Naval War College between 1885 and 1889. However, he published them nationally in 1890. A.T. Mahan, *The Influence of Sea Power Upon History, 1660-1783*, 12th edition (Boston, MA: Little Brown & Company, 1890).

[113] As Mahan wrote in *The Influence of Sea Power Upon History, 1660-1783*: "It is not the taking of individual ships or convoys, be they few or many, that strikes down the money power of a nation; it is the possession of that overbearing power on the sea which drives the enemy's flag from it, or allows it to appear only as a fugitive, and which, by controlling the great common, closes the highways by which commerce moves to and from the enemy's shores. This overbearing power can only be exercised by great navies…"

[114] Huntington, "National Policy and the Transoceanic Navy."

number one spot thereafter.[115] The second was a dramatic transformation of the US global military posture.

Toward a Sovereign Exterior Basing Network

As the United States began to pursue a more aggressive oversea national security agenda and build a modern navy capable of backing it up, Mahan argued forcefully that building a system of "*resting places for [warships], where they can coal and repair*, would be one of the first duties of a government proposing to itself the development of the power of the nation at sea" (emphasis added).[116] An unstated corollary to this argument was that the informal, participating basing structure upon which the Navy had previously relied would no longer be sufficient. Although Mahan did not explicitly highlight the point that British exterior bases were all located on sovereign British colonial territory, given the detailed way in which he discussed British maritime strategy, he was undoubtedly cautious about building bases on the territory of "uncertain neutrals and doubtful allies." To maximize the fleet's freedom of action, then, the Navy needed not just a new exterior basing network, but one located on *sovereign-controlled territory*.

This argument struck an immediate chord with the Navy's leadership. The Navy's general lack of sovereign-controlled overseas bases had loomed larger in their strategic calculations ever since the fleet began its transition from sail to steam-powered ships in the mid-19th century. Indeed, with no sovereign overseas coaling stations of its own, the Navy's first US coal-fired, steam-powered warships had full sets of sail, and the ships' captains were trained to cruise under sail and only to fight under steam.[117] However, as the fleet shifted to all-steel, steam-powered ships, this work-around was no longer possible. As a result, the Navy began to negotiate for participating coaling stations wherever it could—especially in the Pacific, as it did with Hawaii and Samoa in the late 1880s. In the end, however, there was no guarantee that a host nation would permit US warships to coal in time of war. Without the assured availability of sovereign exterior bases, the fleet's survival might literally depend on the goodwill of foreign governments.

Mahan's call for an overseas basing structure also resonated with US political leaders, if for slightly different reasons. As indicated earlier, the Pacific basin had long been a focus of US economic attention and political leaders were well aware of the importance of securing these interests with military power. Accordingly, as the Continental Era unfolded, they became increasingly concerned over European moves to annex or colonize island chains throughout the Pacific and to build forward operating bases and coaling stations on them. US political leaders were thus quite sympathetic to the Navy's desire to establish true forward operating bases in the Pacific to augment the sovereign access they enjoyed Chinese and Japanese ports.

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[115] Swartz, *Sea Changes: Transforming US Navy Deployment Strategy, 1775-2002*.

[116] Lieutenant Peter Halvorsen, USN, "Making a Case for Naval Lily Pads," *Proceedings*, March 2005, p. 84.

[117] Hagan, *This People's Navy*, p. 118.

Although both US political and naval leaders agreed in principle on the need to build a proper exterior basing network, the United States gained its first exterior bases more by happenstance than by foresight. After the rapid US victory in the Spanish-American War, the Spanish government ceded the Philippines Islands to the United States. The US Navy promptly claimed the superb harbors located there as forward operating bases for its Asiatic fleet. To secure the lines of communication to this forward base, the Navy planned to build an intermediate fleet base at Apra Harbor on Guam, which was also ceded by Spain after the war. The route to Guam, in turn, would be secured by additional intermediate bases, facilitated by America's annexation of Hawaii in 1898 and Wake Island and American Samoa in 1899.[118] Later, in 1903, the tiny island of Midway—formally claimed by the United States in 1867—was given over to the jurisdiction of the US Navy.[119]

While the US did not acquire any former Spanish bases across the Atlantic, the Spanish-American War had turned the Caribbean basin into an American lake. Spain ceded Puerto Rico to the United States, providing the Navy with an advance base on the eastern edge of the Caribbean. However, in 1903, the Navy received an even bigger prize when the US government leased 45 square miles of land and water near Guantanamo Bay, Cuba, for use as a coaling station. This base became the Navy's central main operating base in the Caribbean. In 1934, the terms of the lease were reaffirmed, and modified to state that the base could be closed only by the *mutual consent* of the US and Cuban governments. Indeed, this provision explains why the US maintains forces in Guantanamo Bay to this day, despite continual objections by Cuba's communist government (in protest, the government refuses US annual lease payments).[120] Unlike the forward defense posture in the Pacific Ocean, then, naval war plans in the Atlantic called for a close-in defense of the US east coast from European threats, anchored around its "naval bastion" in the Caribbean.

America's Atlantic/Caribbean and Pacific regional basing networks were ultimately linked by the Panama Canal, completed in 1914, creating a single integrated network. The Canal sat astride a 553-square mile US territory located *inside* Panama. This territory, known as the Panama Canal Zone, was created in November, 1903 as part of the Hay-Bunau-Varilla Treaty.[121] This unique arrangement, forced upon a weak Panamanian government, gave the United States "as if they were sovereign" rights to the Zone "in perpetuity," and led to the creation of a separate Zone

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[118] Swartz, *Sea Changes: Transforming US Navy Deployment Strategy, 1775-2002*. Once the US Navy transitioned from sail-powered ships to steam-powered ships, it had long had its eyes on Hawaii and Samoa, establishing coaling stations in these locations in 1887 and 1888, respectively. Lieutenant Colonel Frank O. Hough, USMCR, Major Verle E. Ludwig, USMC, Henry I. Shaw, Jr., "Chapter I: Origins of a Mission," *History of US Marine Corps Operations in World War II, Volume One, Pearl Harbor to Guadalcanal* (Washington, DC: US Marine Corps Historical Branch), p. 5, found online at http://www.ibiblio.org/hyperwar/USMC/I/index.html.

[119] "Midway Island History," accessed on the web at http://www.janeresture.com/midway, on May 13, 2006.

[120] "History, US Naval Base Guantanamo Bay, Cuba," accessed on the web at http://www.nsgtmo.navy. mil/ htmpgs/gtmohistory.htm, on May 13, 2006.

[121] "Panama Canal Zone," accessed on the web at http://en.wikipedia.org/wiki/Panama_Canal_Zone, on May 13, 2006.

government run by US envoys. This arrangement was forever after a continual source of irritation and friction between the United States and the sovereign government of Panama.[122]

This integrated exterior basing network was to remain intact up through the eve of World War II, with two exceptions. In 1916, fearing that the Germans might seize the Dutch Virgin Islands as an advanced submarine base to support attacks in the Caribbean Basin, the US government offered the Dutch $25 million for their colonial possession. The Dutch agreed, and the US took possession of the islands in 1917.[123] Then, in 1934, the US Navy took control of tiny Johnston Atoll, located approximately 700 nautical miles (nm) southwest of Hawaii, approximately one-third of the way to the Marshall Islands.[124]

The clear US preference for building exterior bases on sovereign-controlled territory outside the confines of the contiguous 48 states was a key characteristic of America's global military posture during the Oceanic Era.[125] So was the way the United States got control over the territory on which it built its bases: conquering and annexing territory; negotiating coercive treaties that created sovereign US mini-states inside the national borders of foreign states; and purchasing territory with an opportunistic flair and at favorable prices. The only formal security arrangements associated with the posture were end-of-war treaties that spelled out US war prizes, declarations of annexation, and purchase agreements. The result was a string of sovereign bases that stretched from the far reaches of the Western Pacific through the Panama Canal to the Eastern Caribbean.

This backbone of sovereign exclusive US bases was augmented by the unique treaty ports in China, where US naval units enjoyed what amounted to assured sovereign access (Japan's treaty ports, and any grants of extra-territoriality, ended in 1899).[126] Indeed, after the Boxer Rebellion, the US Navy established the South China Patrol, operating out of participating bases in the British colony of Hong Kong, and the Yangtze Patrol, operating out of the sovereign British-US International Settlement in Shanghai, and later Hankow.[127] The Navy's modest presence was augmented from 1927 through 1941 by the 4th Marine Regiment, which in effect served as the permanent garrison of the International Settlement in Shanghai, living within the confines of this extraterritorial enclave.[128]

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[122] Baker, *American Soldiers Overseas: the Global Military Presence*, p. 6.

[123] See "United States Virgin Islands," found online at http://en.wikipedia.org/wiki/US_Virgin_Islands# History.

[124] See "United States Pacific Islands Wildlife Refuges," found online at http://www.cia.gov/cia/publications/factbook/geos/um.html.

[125] The Arizona Territory became the 48th state of the Union in 1912, little more than two decades into the Expeditionary Era.

[126] "Unequal Treaties."

[127] "Yangtze patrol," accessed on the web at http://www.geocities.com/Vienna/5047/YANGTZE.html#Top%20Links, on May 13, 2006.

[128] "The Fourth Marines in China, 1927-1941," accessed on the web at http://history.acusd.edu/gen/projects/moss/chinamarines1.html, on May 13, 2006.

Forward-Deployed Forces and Expeditionary Campaigns

The US armed forces established permanent garrisons at every one of their new bases, primarily for defensive purposes. Throughout the Oceanic Era, the Army and the Navy maintained forces in the Philippines, on Guam, on Hawaii, in the Panama Canal Zone, and on Puerto Rico. However, the majority of US latent combat power remained in the United States or in US home waters.

For example, the Navy, following the dictates of Mahan, concentrated its battle fleet in home waters off the Atlantic and Pacific coasts. As its battle fleet trained, however, the Navy continued its practice of deploying small naval squadrons in every region of the world. In addition to the squadrons conducting the South China and Yangtze River patrols, the Navy maintained squadrons of small combatants, occasionally augmented by cruisers and battleships, in Europe, the Caribbean, and along both coasts of South America.[129] In areas of operations not supported by US bases, these forward-deployed forces made port calls in friendly nations, where they conducted voyage maintenance and simple repairs, replenished their fuel and supplies, and rested their crews.

Naval forward deployments were nothing new; as has been discussed, they continued a practice well-established in the Continental Era. Unlike that earlier era, however, the Oceanic Phase of national security policy saw the United States conduct a succession of major expeditionary "surges"—large-scale operations involving major US ground formations—launched beyond the North American continent both inside and outside the Western Hemisphere. Between 1890 and the turn of the century, the US military mounted expeditions in response to a war scare with Chile in 1892; to protect US interests in Brazil in 1893; to confront the Ottomans in the Mediterranean in the 1890s; to fight the Spanish-American War and the Philippines Insurrection from 1898-1902; and to quell the Boxer Rebellion in 1903. Between 1900 and 1934, it mounted frequent and repeated expeditions in the Caribbean (especially in Nicaragua and Haiti); dispatched a two million-man American Expeditionary Force to Europe to fight in World War I; and sent the US Army's 339th Regiment to fight in northern Russia and Siberia during the Russian Revolution.

Importantly, however, during their numerous surge operations, US forces operated either out of allied bases or expeditionary camps and garrisons established for the sole purpose of the campaign. With the aforementioned exceptions of China and the Spanish possessions gained after the Spanish-American War, and even in the case of long expeditions such as the US operation in Haiti and Nicaragua, the United States did not subsume any of its numerous campaign bases into its permanent sovereign exterior basing network. Once an expedition or campaign came to a close, US troops closed or abandoned their campaign bases and returned to interior bases in CONUS—the hallmark of an expeditionary posture.

A striking feature of US expeditionary operations during the Oceanic Era was their strong service orientation. As one historian remarked, "Joint warfare existed primitively and under specialized conditions before 1900." With the exception of Army and Navy cooperation evident

[129] Swartz, *Sea Changes: Transforming US Navy Deployment Strategy, 1775-2002*.

in the Civil War's western theater, where the Mississippi, Ohio, Cumberland, and Tennessee Rivers offered deep avenues of advance into the Confederacy for Union forces, inter-service cooperation and collaboration in US plans and operations was generally absent.[130] Indeed, Joint operations were particularly bad in the Spanish-American War, prompting the formation of the Joint Army-Navy Board to coordinate US war planning and to iron out potential command and control and support problems. However, the impact of this Board is perhaps best indicated by the fact that the records for the board between 1903 and 1919 occupy altogether about half a file drawer in the National Archives.[131] Up until World War II, US expeditionary operations were thus characterized by the independence of service actions in both peace and war. As a result, the posture assumed during the Oceanic Era is best thought of as a Service Expeditionary Posture.

A New Emphasis on the Transoceanic Movement of Forces, Troops and Cargo

Both Army and Navy planners learned early in the Oceanic Era that any power with global ambitions required not only overseas bases, but a reliable means to transport forces to them and beyond. Said another way, as a result of its newfound determination to mount overseas military expeditions, US military planners learned quickly that strategic mobility capabilities were as important as overseas bases in constructing an effective global military posture.

Eight years into the era, as service war planners considered their moves at the outbreak of the Spanish-American War, they were stunned at the condition of the US merchant fleet; in the period since the Civil War, the US merchant fleet had shrunk to the point that it carried only 10 percent of American exports and imports. As a result, both the Army and the Navy were forced to quickly assemble their own sealift forces and to learn the business of transoceanic movement of forces and cargo on the fly.[132]

As per the precedent established during the Mexican War, the Army was responsible for planning and executing its own large troop movements by sea, which proved to be a formidable challenge for them. For example, although the Cuban invasion force numbered 25,000 men, the Army Quartermaster General could only find enough ships to transport 16,000 at a time, and only by overloading the ships. That none of the ships capsized and sank during the operation was due more to luck than skill. As for its Philippines occupation force, the Army chartered 17 ships and purchased 2 more, and converted them into the first purpose-built troop transports operated

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[130] Williamson Murray, "The Evolution of Joint Warfighting," *Joint Forces Quarterly*, Summer, 2002, accessed online at http://www.findarticles.com/p/articles/mi_m0KNN/is_2002_Summer/ai_99817509/print.

[131] "Strategy and Command: The First Two Years," The US Army in World War II—The Pacific, found online at http://www.ibiblio.org/hyperwar/USA/USA-P-Strategy/Strategy-Sources.html.

[132] "American Merchant Marine in the Spanish-American War," found online at http://www.usmm.org/spanishamerican.html.

by the US military. The newly created Army Transportation Service (ATS), part of the Quartermaster Corps, operated the ships.[133]

During the three-year long Philippines Insurrection that followed the Spanish surrender, the Army learned first-hand the difficulties in sustaining an expeditionary force over transoceanic ranges. It was forced to augment its first 19 ships with additional time-chartered, foreign-owned ships. Despite the demonstrated importance of having a reliable strategic sealift force, however, after the Philippines Insurrection was put down the Army could not afford to maintain one. The ATS was dramatically reduced, operating a skeletonized force of troop and cargo ships that primarily served their Philippines garrisons up through World War I.[134]

Meanwhile, with no large troop movements to worry about, during the Spanish-American War the Navy's focus was on improving the operational and strategic mobility of its battle fleet. However, this proved an equally daunting task, as the Navy began the war with a hopelessly inadequate fleet train. Indeed, the US squadron located in Hong Kong did not have a single supporting auxiliary. Admiral Dewey hastily arranged for the purchase of a collier and a supply ship to accompany his force as it sailed to Manila Bay. The Department of the Navy also purchased two colliers and an ammunition ship and dispatched them to the Western Pacific, although these additional ships would not reach the Philippines for weeks. If not for Admiral Dewey's prompt and overwhelming victory at Manila Bay, the outcome of the war in the Pacific might have been much different. The story was much the same in the Caribbean; US merchant crews would not sail into harm's way, requiring that the Navy purchase ships, convert them to colliers, and man them with active duty sailors.[135]

Soon after the war, then, the Navy began to take the fleet train mission more seriously and to explore the underway replenishment (UNREP) of their forces. In 1899, the battleship *Massachusetts* was replenished at sea by the collier *USS Marcellus*—the first true UNREP of a US Navy vessel operating at sea.[136] This marked the start of a 15-year effort to develop a reliable underway recoaling capability, which ultimately resulted in a rig that enabled colliers to transfer coal to a battleship's forecastle while underway. While this capability was rendered obsolete with the battle fleet's transition from coal-fired to oil-fired steam propulsion plants, it marked an important milestone in the Navy's determined effort to break a warship's dependence on forward coaling or refueling stations.[137]

As taxing as was the Spanish-American War was on the nascent US strategic mobility infrastructure, however, it paled in comparison with the challenge of dispatching and supplying the two million-man American Expeditionary Force to France in World War I. The Naval

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[133] "American Merchant Marine in the Spanish-American War."

[134] Charles Dana Gibson, "The Ships and Men of the Army Transportation Service," found online at http://www.usmm.org/atshistory.html.

[135] "American Merchant Marine in the Spanish-American War."

[136] "Underway Replenishment (UNREP)," at http://www.fas.org/man/dod-101/sys/ship/unrep.htm.

[137] Commander Paul Nagy, USNR, "The History of Sea Basing," *Proceedings*, November 2002, pp. 36-37.

Overseas Transportation Service, established in January 1918, benefited from the serendipitous seizure of 18 large German liners and ships in American ports at the start of the war, and their prompt conversion into troop transports. However, these ships, even when added to the small number of troop transports operated by the Army's ATS, were insufficient to the ultimate demands for troop movement. In the end, due to a shortfall in US strategic lift, over 50 percent of American troops were ultimately transported to Europe on British, French, and Italian troop transports.[138]

During the war, the demands of efficiently transporting large numbers of troops overseas once again spurred the War Department to request formally that the Navy Department take over the operation of the Army's ocean transportation fleet, which by early 1918 numbered some 50 ships. However, the transfer of responsibilities was not completed by war's end, and in 1919 the Army Transportation Service once again resumed responsibility for the overseas transport of Army units to and from its distant Pacific garrison in the Philippines. [139]

Even more daunting than moving troops was the requirement to move the cargo and supplies for a large, Industrial Age armed force. These requirements spurred a massive expansion of Navy-owned and operated cargo vessels, which by war's end numbered over 400 ships capable of carrying over two million tons of cargo and equipment. However, as was the case with US troop carrying capacity, these numbers were wholly insufficient for the cargo requirements. As a result, the US government funded a massive expansion of the US merchant fleet. The United States Shipping Board Emergency Fleet Corporation was formed to acquire, build, and operate merchant ships. The Board authorized new shipyards, which were built by private firms. This body eventually authorized the building of over two thousand ships, although many of them were not completed before the end of the war.[140] Unfortunately, with the major cuts in defense spending after 1921, the majority of these cargo ships were scrapped, sold off to commercial operators, or placed into reserve, leaving the Army and Navy to operate their own small fleets of troop and cargo transports throughout the remainder of the interwar period.[141]

Interwar Improvements in Strategic Mobility and Forcible Entry

Between the two world wars, despite relatively tight defense budgets, the US military did four things to improve their ability to project power across transoceanic distances. They continued to refine the underway refueling and replenishment of ships operating at sea; they experimented with aerial transports; they developed mobile airfields (i.e., aircraft carriers); and they developed doctrine and ideas for forcible entry operations. The following paragraphs provide a brief summary of each of these initiatives.

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[138] Paul Halpern, "The US Navy in the Great War," found online at http://www.worldwar1.com/tgws/usnwwone.htm.

[139] Gibson, "The Ships and Men of the Army Transportation Service."

[140] Halpern, "The US Navy in the Great War."

[141] Gibson, "The Ships and Men of the Army Transportation Service."

After the Spanish-American War, naval planners desired to make the battle fleet as independent as possible from bases in a forward theater. This led to experiments aimed at developing an ability to transfer coal at sea from fleet colliers to battleships. Although the Navy successfully demonstrated an ability to transfer coal between ships at sea after a decade-and-a-half of experiments, the ability to replenish ships efficiently at sea was advanced immeasurably by the shift from coal to oil-driven steam plants. Indeed, the Navy's first oil-fired battleship, the USS *Nevada*, was commissioned in 1916.[142] By the end of World War I, the Navy had perfected the technique of transferring oil between ships at sea while steaming alongside one another in close formation.

Throughout the interwar period, the Navy continued to perfect its at-sea refueling capabilities. By 1939, the battle fleet was adept at refueling all of its ships at sea, including its aircraft carriers.[143] In contrast, the British Royal Navy, having operated largely in the North Sea during World War I and being accustomed to operating with the benefit of a global logistics infrastructure consisting of bases scattered all over the world, never bothered to develop an efficient technique for refueling at sea. Up through the end of World War II, their ships relied on the slow method of steaming ships in tandem with the trailing ship being refueled from a fuel line being towed by the leading ship.[144] In any event, the development of what is today referred to as *combat logistics forces* promised to greatly improve the strategic and operational mobility of US naval forces.

A second major interwar improvement in the US strategic mobility portfolio was the emergence of the aerial transport as a potential new way to transport men and material over long distances. In 1921, the Douglas *Cloudster* became the first airplane in history to lift a useful load (fuel, aircrew, and cargo/passengers) greater than its own weight. During the 1920s, rapid advancement in aircraft performance and reliability, as well as commercial competition soon spurred the development of increasingly capable passenger and light cargo planes. The first Boeing Model 40A commercial transport, built in 1927, could carry only two passengers and mail. One year later, however, it was followed by the first true commercial airliner—the Boeing Model 80, which carried 12 passengers in a spacious and comfortable cabin.[145]

Throughout the 1930s, intense competition in the emerging commercial air transport business spurred additional rapid improvements in aircraft performance. In 1931, United Airlines (a partnership between Boeing Air Transport, National Air Transport, Varney Airlines and Pacific Air Transport) was providing coast-to-coast passenger service in the continental United States, with the trips taking 27 hours. Just two years later, the Boeing 247, capable of carrying 10 passengers and 400 pounds of cargo, cut the coast-to-coast flying time to 20 hours. Soon thereafter, the Douglas aircraft company introduced the DC-1 as a competitor for the Boeing 247, which quickly evolved into the famous DC-3—which turned out to be one of the greatest

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[142] "Nevada class," found online at http://www.history.navy.mil/photos/usnshtp/bb/bb36cl.htm.

[143] Nagy, "The History of Sea Basing."

[144] "Developments in Naval Warfare," at http://www.ramskov.nu/krih/ww2/001/12.htm.

[145] See Chronology in "Boeing History," located on found online at http://www.boeing.com/ history/mdc/ dc-4.htm.

aircraft of all time. This tough, rugged, and reliable aircraft could carry 28 passengers on day trips, or 14 passengers in berths on overnight trips, or up to 4,500 pounds of freight, over ranges approaching 1,500 miles at speeds over 190 miles per hour.[146]

While the DC-3 helped to make commercial air transport a popular and profitable business in the United States, it was just the first taste of things yet to come. By the eve of the war, the famous Boeing *Clipper* flying boats could carry 74 passengers and 10 crewmen and stewardesses over 3,500 miles, and the Boeing *Stratoliner*, the first commercial aircraft with a pressurized cabin and thereby capable of operating over the prevailing weather, boasted a trans-continental flight time of just over 12 hours.[147]

Up through World War II, there was not enough of a market in air cargo or mail to justify the development of purpose-built commercial cargo aircraft. However, the commercial airliners developed during the 1930s proved to be easily modified for a military air transport role. In 1936, the Army Air Corps purchased a pair of DC-2 commercial aircraft for testing as potential military cargo planes. Pleased by the results, they ordered 18 cargo versions, also capable of carrying combat-equipped paratroopers, and two staff transports, designating the planes as C-33s and C-34s, respectively. In 1937, based on the experience gained from operating these aircraft, the Army ordered a cargo plane built to its own specifications, resulting in the production of 35 C-39s—a blend of the DC-2 and DC-3 commercial airliners. These planes marked the first move toward a permanent US military air transport capability.[148]

In June 1941, as the country moved closer toward war, the newly renamed US Army Air Forces (USAAF) ordered nearly 750 transport aircraft: 545 C-47 *Skytrains*, a modified version of the rugged DC-3, and 200 C-46 *Commandos*, a modified version of the Curtis CW-20 airliner developed to compete directly with the DC-3. The only differences between these military versions and their commercial siblings were that the military aircraft boasted strengthened floors, large cargo doors, and were configured to tow military gliders.[149] This pre-war production order ensured that if war was declared, the USAAF could quickly ramp up production of two proven transport designs from a hot industrial base. This move proved to be prescient; less than three weeks after Pearl Harbor, the USAAF accepted delivery of its initial batch of C-47 *Skytrains*—the first of over 13,000 delivered during the war.[150]

As the added provision to tow military gliders suggests, the US Army never saw its new air transport forces solely as a *cargo-carrying* force. Instead, it saw them as a new means for attacking an enemy from the air. The Army's first experimental parachute unit, the 504th Parachute Infantry Battalion (later renamed the 503rd, and then the 509th), was established at Fort

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[146] See Chronology, "Boeing History."

[147] See Chronology, "Boeing History."

[148] See Chronology, "Boeing History."

[149] See Chronology, "Boeing History," and "The C-46 Curtis '*Commando*'," found online at http://www.ruudleeuw.com/c46_tech.htm.

[150] See "C-47 *Skytrain* Military Transport," found online at http://www.ruudleeuw.com/c46_tech.htm.

Benning, Georgia in early 1941. This battalion was just the first of many parachute units; four years later, the Army counted no less than five airborne *divisions* in its wartime structure. As airborne forces could be landed directly on enemy controlled territory, they provided a provided a potential way to seize advance bases.

The development of naval combat logistics forces and aerial transports were spurred primarily by technological developments. Two other interwar improvements were developments were tied directly to operational concepts spurred by War Plan Orange—the US plan to confront and defeat the Imperial Japanese armed forces in the Pacific. From the early 1920s on, War Plan Orange was the subject of numerous war games and operational and tactical analyses. A common planning assumption was that the United States would lose its forward bases in the Western Pacific early in a war, owning to the asymmetries in strategic geography. US planners therefore had to devise ways to project power across the Pacific without any initial access to forward bases. The only way to do so was to develop mobile air bases and an ability to seize defended bases.

With regard to the former, the US Navy had long been intrigued by the British development of aircraft carriers during World War I, and it moved quickly after the war to explore the potential impact of these mobile airfields on fleet operations. It converted a former collier, the *USS Langley*, into its first experimental carrier in 1922, and over the next two decades it built no less than seven additional operational carrier prototypes. Through a series of fleet problems backed up by operational analysis and war games, the Navy sought to determine how these new mobile airfields might best be integrated into battle fleet operations. Although the carrier was still considered to be a battle line support asset on the eve of World War II, the experimental work on carrier operations conducted during the 1920s and 1930s enabled the relatively quick transformation of a battle fleet built around a concentrated force of armored battleships to one designed for dispersed operations of fast carrier task forces. More importantly, the development of these mobile bases with both operational and strategic mobility was to ultimately help transform the way the US projected joint combat power over transoceanic distances.[151]

With regard to seizing forward naval bases, amphibious operations had been an important part of naval warfare for as long as nations had built and employed ships for war. However, they generally involved the landing of troops and equipment from warships or transports along undefended portions of an enemy's coastline. Indeed, this was the tactical model used by joint US forces during the Mexican, Civil, and Spanish-American Wars. For example, during the Spanish-American War, Marines landed unopposed at Guantanamo Bay to set up a coaling station for the Navy ships then blockading Cuba, and then fought off subsequent Spanish attempts to dislodge them.[152]

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[151] For a good description about the two decade long development of US carrier aviation, see Thomas Hone, Norman Friedman, and Mark D. Mandeles, *American & British Aircraft Carrier Development 1919*-1941 (Annapolis, MD: Naval Institute Press, 1999).

[152] Jack Murphy, *History of the US Marines* (New York, NY: Exeter Books, 1984), pp. 48-51; Hough, Ludwig, and Shaw, Jr., "Chapter I: Origins of a Mission," *History of US Marine Corps Operations in World War II, Volume One, Pearl Harbor to Guadalcanal.*

However, sometime after 1913, three years after the formation of the Marine Corps' new Advance Base School, some Marines began to make the logical argument that any enemy in a forward theater of operations would likely to be drawn to the same suitable fleet anchorages as the US fleet, and they would also likely attempt to garrison them.[153] As first envisioned by Captain Earl H. "Pete" Ellis, and later codified in 1921 in the form of Operations Plan 712, "Advanced Base Operations in Micronesia," this might require the Marines to *forcibly capture* an advance base. In other words, an ability to mount an amphibious *assault* would become the main Marine Corps contribution to US Navy sea control operations.[154]

As a consequence, the Marines began to study the problem of landing intact combat units directly against defended enemy bases or territory using tactical ship-to-shore movements. Their efforts led to the publishing of the *Tentative Manual for Landing Operations* in 1934.[155] This document marked a great advance in the US approach to amphibious warfare, as indicated by the fact that in the 1934 edition of *War Instructions, United States Navy*, the subject of "amphibious warfare" was not even listed in the index; the only indirect referral to the subject was found in the Instruction's list of the eight main tasks of the US Navy in war, which included "Escort of and cooperation with Expeditionary Forces in the seizure and defense of advanced bases and the invasion of enemy territory."[156]

In a series of fleet exercises conducted between 1935 and 1941, the Marines, Navy and Army all worked together to develop the means to project combat power ashore in contested theaters. As a result, even though there was not one purpose-built amphibious landing ship in the US Navy on December 7, 1941, the amphibious doctrine, tactics, techniques, and procedures were largely in place to subsequently enable the US and its allies to conduct maneuver and to retain a great measure of strategic and operational mobility even in cases where forward bases were not available in a forward theater.

Developing a Long-Range Military Command and Control System

The development of a sovereign exterior basing network and improved strategic mobility and forcible entry capabilities was accompanied by the development of the US military's first true long-range command and control (C2) system. The development of this C2 system was influenced heavily by the Spanish-American War, which highlighted the dangers of depending upon commercial communications in time of war. Indeed, Admiral Dewey received his orders

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[153] The Advance Base School was formally opened in 1910 in New London, Connecticut. It moved the next year to Philadelphia. See Vice Admiral George C. Dyer, USN, ret., The Amphibians Came to Conquer, found online in its entirety at http://www.ibiblio.org/hyperwar/USN/ACTC/actc-6.html.

[154] Hough, Ludwig, and Shaw, Jr., "Chapter I: Origins of a Mission," *History of US Marine Corps Operations in World War II, Volume One, Pearl Harbor to Guadalcanal*; Henry I. Shaw, Jr., Bernard C. Nalty, and Edwin T. Turnbladh, *History of US Marine Corps Operations in World War II, Vol. III, The Central Pacific Drive* (Washington, DC: US Marine Corps Historical Branch, 1966), found online at http://www.ibiblio.org/hyperwar/USMC/III/index.html.

[155] See especially, Shaw, Jr., Nalty, and Turnbladh, *History of US Marine Corps Operations in World War II, Vol. III, The Central Pacific Drive*.

[156] Dyer, The Amphibians Came to Conquer, p. 223.

via a British-owned commercial cable that ran under the Atlantic, through the Mediterranean, across the Red Sea and Indian Ocean, and onto Hong Kong—over the same cable used by the government of Spain to communicate with its forces in the Philippines! Moreover, after his May 1, 1898 victory over the Spanish fleet at Manila Bay, Admiral Dewey proposed to the Spanish commander that both forces use the British-owned cable connecting Manila to Hong Kong to report the situation to their respective governments. After the Spanish commander refused, Admiral Dewey reluctantly cut the cable. However, as he had no means to grapple the wire and to establish telegraphic communications from his ships, he was forced to send word of his victory to Hong Kong via dispatch boat. As a result, word of his victory was not received by US leaders until May 7.[157]

On April 25, the Navy Department had sent a cable to Admiral Sampson, the commander of US operations in the Caribbean, which declared commercial submarine communication cables to be neutral and ordered him not to interfere with their operations. After the incident in Manila Bay was made known, however, the Navy Department ordered Sampson to sever the cables connecting Cuba with Spain, thereby isolating the Spanish garrison on Cuba. Meanwhile, communications to Sampson were facilitated by a new naval coastal communications system established in April 1898, consisting of 230 East and Gulf Coast stations equipped with telegraph, telephone, signal flags and signal lamps. These events demonstrated the importance of having dedicated and redundant sovereign *military* C2 systems, as well as the advantages gained by interdicting enemy communications.[158]

At a broader level, the Spanish-American War was the first US conflict that saw *linked* actions taking place simultaneously in widely separated overseas theaters of operations. It suggested a requirement for centralized strategic decision-making in Washington and decentralized execution of orders in distant theaters of operation. This, in turn, would require a dedicated and reliable long-range command and control system that facilitated rapid communications between the War and Navy Departments and US naval and ground forces overseas. The initial US thinking was that fixed exterior bases would be connected to the C2 system with dedicated telegraph cables running over and through sovereign or sovereign-controlled territory, which led to the laying of a US-owned and operated cable link from stretching from the West Coast to the Philippines. The US government's desire for the intermediate cable stations to be on sovereign-controlled territory contributed in no small way to its postwar decision to annex Hawaii, Wake Island, and America Samoa.[159]

This still left the problem of connecting US maneuver forces to the long-range communications backbone. The answer to this problem seemed to be wireless telegraphy, developed in 1895 by a number of inventors. Just as the Spanish-American War was ending, three British Royal Navy ships were exchanging radio telegraphy messages over ranges of 74 nautical miles. Soon thereafter, the US Secretary of the Navy appointed the members of a wireless telegraph board for

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[157] Howeth, *History of Communications-Electronics in the United States Navy*.

[158].Howeth, *History of Communications-Electronics in the United States Navy*.

[159] Howeth, *History of Communications-Electronics in the United States Navy*.

the purpose of investigating the Marconi system of radio telegraphy onboard US naval ships. Although the results of the tests were mixed, in 1901 the Navy elected to discontinue its unreliable homing pigeon service and to pursue instead wireless telegraphy. This decision was no doubt spurred on by the fact that the British, French, and Italian navies were already adapting the system for their own shipboard use. Follow-on tests in 1902 experimented with six different systems, four made in Europe and two in the United States. In the event, the Navy determined a European set to be the most promising design and ordered 45 of them, setting off a furious protest from US radio telegraphy manufacturers.[160]

The first shore-based naval radiotelegraphy stations were established in Cape Elizabeth, Maine; Cape Ann, Massachusetts; San Juan, Puerto Rico, and on Corregidor Island and at Cavite Navy Yard in the Philippines. Additional stations quickly followed, forming the US Naval Radio System. By 1904, the Navy had 20 stations and plans for 60 more. The Navy extended the system to sea by installing portable sets on battleships and cruisers starting in 1903. However, because shipboard naval commanders were even less enthusiastic about wireless telegraphy onboard their ships than they were with cable landings at their home ports, they resisted using the system. This resulted in the evolution of two distinct naval radio systems—a well-disciplined and run shore-based radio system and a less disciplined and reliable naval operational system. Indeed, it was not until 1906 that mobile naval units even began to explore the strategic and tactical uses of the new radio system in fleet exercises.[161]

To make matters worse, and as was typical during the Oceanic Era, the War Department and Naval Departments began constructing their own radio telegraphy systems rather than collaborating and developing an integrated C2 system. Their efforts were, in turn, duplicated within the continental United States by the Department of Agriculture, resulting in intense competition for suitable radio station sites, particularly along the Atlantic and Pacific coasts. This prompted President Roosevelt to convene an Interdepartmental Board of Wireless Telegraphy, generally known as the Roosevelt Board, in 1904. Given the preeminence of the Navy's national security role and the sympathetic support that service received from the President, it was not at all surprising that the Board unanimously recommended that responsibility for all government radio operations be assigned to the Navy.[162]

Whatever the Board's motivation, the new Navy-run radio communication system led to important firsts and successes. After issuing its "Instructions for the Transmission of Messages by Wireless Telegraphy" on 30 November 1904, the Navy Department directed all naval shore radio stations to promptly transmit all weather reports and storm warnings provided by the National Weather Bureau on designated schedules, as well as hurricane information as soon as warnings were received. In addition, to assist in the celestial navigation of ships at sea, the Navy began to transmit exact Naval Observatory time, the beginning of a worldwide service to naval

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[160] Howeth, *History of Communications-Electronics in the United States Navy*.

[161] Howeth, *History of Communications-Electronics in the United States Navy*.

[162] Howeth, *History of Communications-Electronics in the United States Navy*.

operators still rendered today. Finally, in 1912, the Navy issued the first radio frequency plan to allocate available bandwidth among government users and to prevent inadvertent interference.[163]

The Navy's early radio system was hampered by the short-range of early low-powered radio stations. Naval ships were often out of range of the radio signals, which gave their commanders a continuing excuse to refuse fully exploiting their shipboard radios. However, the development of new high-powered radio stations was inexorably leading toward a new transoceanic communications network focused, like the exterior basing network, on the Pacific and Caribbean basins. Just as the cost of operating semaphore stations led to its inevitable displacement by the telegraph, the high costs associated with the laying and maintaining of submarine cables spurred the development of increasingly longer-range wireless communications networks which fleet commanders simply could not ignore. In 1912, Congress directed the construction of a long-range wireless communications network, with seven high-powered stations located in Arlington, Virginia; Panama; San Diego, California; Hawaii, Guam, American Samoa, and the Philippines. Bowing to the inevitable, the Atlantic Fleet created a billet for its first Fleet Radio Operator, who injected radio play into battle fleet exercises and oversaw immediate improvements in fleet radio discipline and operations—so much so that by 1913 radiotelegraphy became the primary means for fleet tactical communications. [164]

The so-called "high-powered chain," which provided radio coverage from the Western Pacific to the Eastern Caribbean, was not completed until after World War I. As a result, it was not fully completed in 1914 when US troops occupied of Vera Cruz, Mexico. As a result, a US battleship had to serve as a floating relay station between the legacy low-powered radio station in Key West, Florida and the forces at Vera Cruz to ensure communications between Washington and the on-scene commanders. Still, US commanders enjoyed relatively good connectivity with Washington. As the Service Expeditionary Era continued to evolve over the remainder of the Oceanic Era, however, such field expedients became increasingly unnecessary as the C2 system became ever more capable, enabling reliable communications over extremely long ranges. Moreover, the system soon added a revolutionary new capability—voice communications. In 1915, a new radio telephony station in Arlington, Virginia sent voice messages and music to receiving stations in the Panama Canal and at Mare Island, California, over ranges of 2,100 to 2,500 miles, respectively.[165]

Soon thereafter, the Naval Radio Service was renamed the Naval Communications Service, under a new Director of Naval Communications in the Office of the Chief of Naval Operations. As a result of this high-level interest, by the time it entered World War I, the US Navy had better radio equipment than any other navy in the world, and the United States had one of the best long-range C2 systems in the world, rivaled only by that of the British Empire. During the war, the Navy's continental and exterior network of high-powered radio stations expanded dramatically. In addition, American radio engineers made rapid progress in developing more efficient and

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[163] Howeth, *History of Communications-Electronics in the United States Navy*.

[164] Howeth, *History of Communications-Electronics in the United States Navy*.

[165] Howeth, *History of Communications-Electronics in the United States Navy*.

reliable high-powered receivers and transmitters and high-gain and directional antennae. Transmitters and receivers became more compact, allowing their installation in the smallest of naval vessels, and even airplanes. Significantly, the US Navy built a dedicated C2 link to service the American Expeditionary Force in France, enabling for the first time direct voice and data communications between political and military leaders in Washington and operational level commanders in a distant theater.[166]

As radio became more important in long-range military communications, the Navy also developed means to interdict and exploit enemy communications, including jamming and radio direction finding (RDF). Indeed, the US Navy—along with its British and French allies—used RDF with great effect to track and attack or avoid German submarines during the war. For its part, the Navy established RDF sites around all of its major interior ports to warn of possible nearby German submarine activity, as well as on an exterior participating base in Brest, France. Alone among the allies, the US Navy augmented their shore-based radio direction finding stations with ship-board sets.[167]

Improvements to the burgeoning US military's new *C3I* system continued during the interwar period, principally in the development of extremely long-range high-frequency radio communications and more reliable shipboard and airborne tactical radio installations. These improvements were spurred, in part, by the widespread post-war commercialization of radio by the US Radio Corporation of America (RCA). The shore-based radio network also continued to expand, ringing the Pacific and Caribbean Basins with receiver-transmitter stations stretching across the Pacific from French Indonesia to the US West Coast, through Central America and into the Caribbean. Continual experiments involving the electromagnetic spectrum had additional spin-offs, among the most important the development of radio detection and ranging (radar); sound detection and ranging (sonar); and experiments with radio-controlled aircraft—presaging the later development of guided weapons.[168]

The Oceanic Era's Service Expeditionary Posture: Thinking Globally, Acting Regionally

By the eve of World War II, although the United States had established itself as a global expeditionary power, its exterior basing network and C3I systems were more regional in scope, focused on its long-time interests in the Pacific and Caribbean. After a modest imperial expansion into these regions, the United States had not made any further moves to increase its permanent overseas presence. However, it had demonstrated a remarkable ability to sustain forward-deployed forces in multiple theaters and to surge and sustain expeditionary military forces over transoceanic ranges. During the Oceanic Era, the US military mounted major military operations in the Caribbean, China, the Western Pacific, Europe, and Russia. Moreover, it

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[166] Howeth, *History of Communications-Electronics in the United States Navy*.

[167] Howeth, *History of Communications-Electronics in the United States Navy*.

[168] Howeth, *History of Communications-Electronics in the United States Navy*.

demonstrated a growing appreciation for strategic mobility forces, having developed huge sealift forces in wartime (although not maintaining them in peacetime) and having experimented with aerial transport forces; developed its first mobile airfields; developed effective combat logistics forces that could keep its battle fleet at sea, independent of land bases; and experimented with new forcible entry techniques that would allow it to seize forward bases, if necessary.

By 1939, as war was raging in Europe and the Far East, about the only supporting global posture component that the United States had no real conception of was security arrangements or legal agreements to gain access to foreign exterior bases. Except during World War I, the US government had little experience in negotiating forward access agreements, having avoided security treaties and having based its forces on conquered, purchased, annexed, or sovereign territory, or on extraterritorial enclaves in weak foreign states where it essentially exercised sovereign power. As a result, it had never been forced to consider or negotiate anything like Status of Forces Agreements or host nation support. This lack of experience was to cause problems in the years ahead.

In any event, while the United States may not have had the same number of far-flung imperial holdings as Britain or France, it was ready to assume a truly global military posture, if necessary. Because it had patiently created or experimented with all of the components needed to quickly scale up its regional posture, it was able to do so relatively quickly after the Second World War broke out. Indeed, in just a few years after the war started, the United States could claim title to the most extensive global military posture in history. The next chapter describes how it was able to do so.

IV. WORLD WAR II: GOING GLOBAL

World War II started an inexorable shift away from a posture focused primarily on the Caribbean and Pacific toward one with a truly global focus, with forward-based and forward-deployed forces in or along every populated region on earth. As a consequence, the period 1939 through 1949 can be properly seen as a decade-long transition period from the Oceanic Era and its Service Expeditionary Posture to the next major phase of US national security strategy, policy, and posture.

EXPANDING THE PACIFIC AND ATLANTIC DEFENSIVE PERIMETERS

In 1939, soon after the German invasion of Poland, the United States began to hedge against the likelihood that it would be drawn into the war. Its first move was to begin to quietly expand its Pacific and Atlantic basing structures. By this time, US defense strategists instinctively understood the important contributions that exterior bases played in fashioning a strong military posture.

As the war approached, planners were increasingly pessimistic that they would be able to hold their forward Pacific bases in the Philippines and Guam. As a result, their focus was on gaining additional strategic depth and strengthening and expanding their peripheral bases. One result was a new focus on military bases in America's Alaskan territories. By 1941, the US Navy had established three bases: Sitka, located on the northeast coast of the Gulf of Alaska; a seaplane and submarine base on Kodiak, an island off the south coast of Alaska; and a seaplane patrol base at Dutch Harbor on the Aleutian Island of Unalaska.[169] The Army also looked to Alaska to improve its Pacific defenses. In 1940, Colonel Simon Buckner arrived in the territory with orders to develop the Army's basing structure there, especially for Army Air Corps units. His efforts led to the development of Elmendorf Airfield in Anchorage; Ladd Airfield at Fairbanks; and two additional airfields at Cold Bay and on Umnak Island.[170]

In the Atlantic, US defense strategists faced a much different challenge. Instead of worrying about holding their forward bases and building up their peripheral basing network, they sought to expand and extend the American defensive perimeter beyond its close-in Caribbean bastion deeper into the Atlantic Ocean. In this they were spurred by President Franklin D. Roosevelt, who ignored most US Interwar defense assumptions and unambiguously signaled that the Atlantic would be the primary theater of operations in any upcoming war. He did so by declaring a US Navy "neutrality zone" that extended from Newfoundland to South America. In effect, Roosevelt's expansive interpretation of America's eastern defensive perimeter obliged the US Navy to escort convoys far into the Atlantic. By so doing, British naval units could be freed up to

[169] Franklyn E. Dailey, Jr., Alaska Based Navy P2Y-2's," found online at http://www.daileyint.com/flying/ flywar6.htm.

[170] Franklyn E. Dailey, Jr., "Buckner Goes to Alaska" found online at http://www.daileyint.com/flying/ flywar7.htm.

fight the Germans elsewhere. Roosevelt defended his aggressive moves to the American public by using the rhetoric of *hemispheric defense*.[171]

In any event, patrolling such a broad oceanic area would require that the US greatly expand its Atlantic basing structure. Given the political geography of the Atlantic basin, the logical implication was that the US would need to establish exterior bases on foreign soil. In September 1940, in exchange for 50 surplus World War I four-stack destroyers, Roosevelt was able to persuade the British to give the United States 99-year leases for exclusive bases in the Bahamas, Jamaica, Antigua, Saint Lucas, Trinidad, and British Guiana. At the same time, the British also authorized the US shared access to its bases in Newfoundland and Bermuda. The president labeled the US-British transaction, "the most important action in the reinforcement of our national defense…since the Louisiana purchase."[172] It also was just the first of successive waves of US foreign basing initiatives that led to the most impressive expeditionary basing network in history.

The next wave of basing acquisitions pushed the US basing network even deeper into the Atlantic. To solidify the emerging sea and air bridges between the east coast of the United States and the British Isles, the US negotiated shared access to British naval bases in Northern Ireland, and it occupied Greenland and Iceland in April and July, 1941, respectively. Greenland was a Danish colony and Iceland was a separate state under the Danish Monarchy. The US and British agreed both territories should be "protected" after Denmark was occupied by the Germans in 1940. The US occupation of Greenland was tacitly approved by Denmark's ambassador to the United States, and Iceland formally requested the American occupation, which freed up the British troops that had been there since 1940. These moves, along with the previous round of Atlantic base acquisitions, enabled the US Navy to assume responsibility for transoceanic convoys as far east as Iceland.[173]

EXPLOITING THE BRITISH GLOBAL BASING STRUCTURE

After America entered the war, it continued to benefit from its close ties with the British. Indeed, its World War II global basing posture rested first and foremost on its ready access to bases on the British Islands and on the British Crown colonies and dominions scattered across the globe. In fact, the very first contingent of US troops sent overseas after the Japanese attack on Pearl Harbor went to Australia. A naval convoy of some 4,600 troops, en route to Hawaii on December 7th, was quickly renamed Task Force South Pacific and ordered to Brisbane, where it was initially billeted in hotels. Having access to exclusive and shared bases in Australia helped to lessen the early wartime loss of US sovereign bases in the Philippines and on Guam. From these bases, US naval ships and submarines and long-range bombers began to carry the war to the Japanese in the early days of the war. Later, after the United States built up its strength in the

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[171] Hagan, *This People's Navy: the Making of American Sea Power*, pp. 287-88.

[172] Hagan, *This People's Navy: the Making of American Sea Power*, p. 289.

[173] Hagan, *This People's Navy: the Making of American Sea Power*, p. 295, and "World War II in Greenland," accessed online at http://www.everything2.com/index.pl?node_id=1298794 on May 22, 2006.

Pacific, American and Australian soldiers used Australia as a base of operations to launch and resupply counterattacks against Japanese ground forces throughout the Southwest Pacific. It has been estimated that as many as one million Americans were stationed in Australia at some point in the war, and at its height as many as 5 percent of the Australian population was composed of American troops.[174]

Similarly, the British base cluster in India formed the allied base of operations in the China-Burma-India (CBI) theater. Although an economy-of-force theater for the Americans, ready access to the British bases did allow the US to make a contribution to the operations there. In February 1942, soon after Singapore had fallen to the Japanese, General Joe Stillwell arrived in India whereupon he was made Chief of Staff of the allied armies. He personally commanded the Chinese 5th and 6th Armies operating in Burma until chased from that country by the onrushing Japanese. Thereafter, Stillwell subsequently used India as the main training base for Chinese armies until he was recalled in 1944. Perhaps more significant, India was home to the main US air transport units flying over the Himalaya Mountains—referred to as the "Hump" by American pilots—to supply Chinese forces.[175]

Of course, the British Isles themselves served as a vast US overseas training and staging base for the ground troops preparing for the eventual invasion of Europe By June 1944, Great Britain was home to 1.7 million Americans awaiting the invasion of Europe; many of them had lived in Great Britain up to two years before the allied landings at Normandy.[176] In addition, Britain served as the base of operations for USAAF long-range bomber forces participating in the around-the-clock strategic bombing campaign against Germany, as well as for USAAF Tactical Air Forces and Troop Transport Commands. The US had access to over 700 airfields in East Anglica alone, including 122 exclusive bases.[177]

Another important indirect addition to the combined US and British peripheral global basing structure were the bases located on the Azores Archipelago, claimed and controlled by Portugal. The Azores sit approximately 1,000 miles due west from Portugal. Naval aviation bases there allowed the allies to close the gap in land-based anti-submarine warfare (ASW) aircraft coverage in the central Atlantic, and provided a refueling and rest stop for aircraft on there way from CONUS to allied bases in Northern Africa. However, Portugal declared its neutrality early in the war, and it was not until August 1943, under the auspices of a 600-year old treaty signed between England and Portugal, that Portugal granted the British basing rights to two naval anchorages and two airfields on the islands. The British quickly moved three ASW patrol

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[174] Baker, American Soldiers Overseas, p. 30.

[175] "China-Burma-India Theater of World War II," found online at http://en.wikipedia.org/wiki/China_Burma_India_Theater_of_World_War_II .

[176] Baker, American Soldiers Overseas, p. 31.

[177] "United States Air Force," found online at http://www.norfolkbroads.com/focus/historical/usaaf2.

squadrons to the airfields, which helped to seal the final allied victory in the Battle of the Atlantic.[178]

Soon thereafter, in December 1943, the Portuguese government extended to the United States *participating* basing rights on the British bases, on the condition that US forces "be under the control" of the British forces on island. The US military promptly began using Lajes Air Field to ferry aircraft across the Atlantic and to extend the aerial resupply bridge from America into North Africa and the Mediterranean. By so doing, it cut the average time of flying from the United States to North Africa from 70 to 40 hours. By June 1944, over 600 US airplanes were transiting through the Azores bases each month. So important was the Azores to the US global logistics effort that the US subsequently negotiated a secret agreement with the Portuguese government allowing them to construct an exclusive airfield on Santa Maria Island dedicated to US operations. To maintain Portugal's veneer of neutrality, Pan-American Airways fronted the construction of this exclusive US base. Although the huge airfield was completed only a month before the war ended in Europe, it became a central hub for the evacuation of wounded personnel and US troops on the way home from Europe.[179]

CLOSING THE CIRCLE: LINKING THE ALLIES' ATLANTIC AND PACIFIC BASING NETWORKS

Denied easy east-west transit through the Mediterranean, still hotly contested by the Germans, the Atlantic and Indian Ocean/Pacific components of the combined US and British peripheral global basing structure were tied together by a hastily erected, globe-spanning string of southern bases. This southern leg of the allied basing network was anchored in Brazil, which broke from the Axis in January 1942 at the Rio Conference and officially joined the allied cause in August of that year. In early September 1942, Brazilian President Getúlio Dornelles Vargas gave an American admiral full authority over the Brazilian navy and air forces, and complete responsibility for the defense of the long Brazilian coastline. Brazilian naval bases made it possible for the US and Brazilian navies to close the "Atlantic Narrows" to Axis blockade-runners.[180]

President Vargas also gave US forces unfettered access to Brazilian bases, and approved the construction of additional exclusive US bases on Brazilian soil. Indeed, the USAAF constructed its largest World War II airfield outside the continental United States at Natal, Brazil. Natal—connected to the US by air bases in the Caribbean and the Guianas, and to the CBI theater by new bases constructed on the British-controlled Ascension Island and Kenyan Territories, and on

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[178] "Lajes AFB, World War II," found online at http://www.lajes.af.mil/history2.html on may 23, on May 23, 2006.

[179] "US Enters the Azores," found online at http://www.lajes.af.mil/history2a.html. on May 23, 2006.

[180] Frank D. McCann, "Brazil and World War II: the Forgotten Ally," found online at http://www.tau.ac.il/eial/VI_2/mccann.htm on May 23, 2006.

free French territories in Senegal. These bases served as "logistics trampoline" between the United States and allied forces in the Middle East and in India.[181]

This entire combined basing network, which stretched all the way around the world from the east coast of the United States to the west coast of the United States, delineated the starting line for subsequent allied counter-offensives against the Axis powers. From this vast network of bases located around the periphery of Axis-controlled territory, the allies launched attacks at times and places of their own choosing. The inexorable squeeze on the Axis powers was marked by the steady erection of expeditionary land bases along the allied axes of advance, in North Africa, Sicily, Italy, and across France and central Europe in the west; and from Burma, the Solomons, New Guinea, the Philippines and China from the south.

Mobile Sea Bases Make Their Appearance

The American Central Pacific drive required an entirely different type expeditionary basing structure. Starting from the secure sovereign bases in Alaska, on Midway Island, and in Hawaii, the drive moved westward, straight through the heart of the Japanese anti-access/area denial network, linking up with a supporting thrust originating from the Southwest Pacific. The Japanese A2/AD network was built around successive rings of island garrisons and air fields, augmented by mobile Japanese naval forces. To penetrate the network, the US would conduct an "island-hopping campaign" that would bypass and isolate some Japanese bases and seize others—both to eliminate their threat to American lines of communications and to create a string of logistical support bases used to sustain the American's own drive westward. Later, an additional aim was to seize developed air bases from which to bomb mainland Japan.

Before penetrating this dense A2/AD network, the US Navy had to:

- Build up its own force of mobile air fields (i.e., aircraft carriers), to allow US forces to concentrate US air forces against any Japanese naval force or base in the Pacific;

- Destroy as many Japanese aircraft carriers as possible and to cripple Japan's mobile naval forces, in order to isolate the scattered island garrisons;

- Secure the sea and air lines of communication between the US and Australia, in order to complete the globe-spanning chain of US and British peripheral bases and to secure the drive's southern flank;

- Build up the US fleet train to sustain the forward operations of the fast carrier task groups even when they lacked access to forward bases; and

- Build up the mobile assault bases (i.e., amphibious task forces) needed to seize selected Japanese island bases.

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[181] McCann, "Brazil and World War II: the Forgotten Ally."

The Battle of Midway in June 1942 accomplished the second task; the Battle of Coral Sea in May 1942 and the invasion of Guadalcanal in August the third. The first, fourth, and fifth tasks took longer to accomplish. However, once complete, the results were a sea-based power-projection fleet without equal in history.

Mobile Air Bases for Fleet and Joint Action

Even on a wartime budget, naval planners had to take into account the cost of building a large fleet of aircraft carriers. The result was a cost-effective mix of three different types of aviation power-projection platforms. The most powerful of the platforms were the large, fast fleet carriers (CVs), with air groups of over 100 fighters, dive bombers, and torpedo bombers. These formed the heart of the Navy's striking fleet in the Pacific. The standard US fast fleet carrier was the *Essex*-class, the result of all lessons learned during the Interwar experimentation with aircraft carriers; a total of 32 were ordered just prior to and up through the end of World War II, of which 24 were ultimately completed.[182]

While capable, these ships were expensive and took a long time to build. Indeed, the first of the *Essex*-class carrier was not commissioned until December 31, 1942, by which time five of the Navy's eight carrier prototypes had been sunk in action. Six more *Essex* CVs followed in 1943, not enough to sustain a deep drive into the Japanese A2/AD network. As a stopgap measure, the Navy quickly converted nine light cruiser hulls into light carriers (CVLs), commissioning all nine in 1943. These ships were as fast as the CVs but capable of carrying only one-third the numbers of planes.[183]

Escort carriers, or CVEs, were the third type of carrier built during World War II. Early CVEs generally were small converted merchantmen; later CVEs were purpose-built from the keel up. However, they all one thing in common: with top speeds of 17-19 knots, they were capable of keeping up only with slower transoceanic convoys and amphibious task groups. When accompanying the former, they concentrated on ASW work; when accompanying the latter, they concentrated on fleet air defense and close air support. Whereas the CVs and CVLs operated almost exclusively in the Pacific, the CVEs operated in all theaters of operations, escorting convoys in all oceans, and providing close air support for amphibious landing operations. [184]

By late 1943-44, however, the Central Pacific drive thrust forward under the cover of an increasing number of CVs and CVLs. These platforms operated together in widely dispersed multi-carrier task forces consisting of three to four fleet carriers and one or two light carriers, protected by dense screens of escorts. Each of these task forces represented a hardened and heavily defended mobile air base cluster, carrying up to 300-400 aircraft. The thinking was that

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[182] See "Fleet Carriers," found online at http://home.grandecom.net/~cvproj/war-fleet.htm; also Chapter 7, "The Essex Class," in Norman Freidman, *US Aircraft Carriers* (Annapolis, MD: Naval Institute Press, 1983).

[183] See Freidman, *US Aircraft Carriers*, pp. 182-92; also Reynolds, *The Fast Carriers: The Forging of an Air Navy*, p. 38.

[184] CE1 Robert A. Germinsky, USNR, "Escort Carriers," from a Brief History of US Navy Aircraft Carriers, found at http://www.chinfo.navy.mil/navpalib/ships/carriers/cv-escrt.html.

the light carriers would provide local air cover for the base carrier cluster, freeing up their aircraft for offensive strikes.[185]

Mobile Logistics Bases

These mobile air base clusters were sustained at sea by an expanded combat logistics force (to be discussed presently) and followed by a completely new and novel mobile logistics sea base. In the early stages of planning for the Central Pacific drive, the first inclination of naval planners was to form pre-packaged expeditionary basing kits that could be used to quickly establish a *land-based* port and fleet support facility:

> Such units were specially organized in the United States with equipment packaged for erection in forward areas. Designated as Lions (major bases), Cubs (minor bases), and Acorns (aviation bases), they included construction battalions, boat pools, harbor defense units, repair facilities, and other functional components. These had to be set up in advanced areas and could not readily be moved forward as the war advanced. Cubs were established at Espiritu Santo and Guadalcanal, and a Lion was set up at Manus.[186]

These Lions, Cubs, and Acorns were the first rapid construction bases developed by US military forces. However, as implied above, while the pre-packaged bases enabled the relatively rapid erection of a base, once in place it was difficult to pack up and move. As a result, as the war progressed, and as the Navy-Marine team pushed farther and father inside the Japanese A2/AD network, the Navy began to outrun these early expeditionary shore bases. As explained by retired Rear Admiral W.R. Carter, in the definitive book about World War II battle fleet logistics, *Beans, Bullets and Black Oil*, "All these (rapid construction bases) went to make great bases which after a very short period of activity found themselves so far in the rear as to raise the question whether the amount of shipping required to build them might not have *supplied the necessary fleet support afloat, and been mobile and ready to go forward at short notice"* (emphasis added).[187] As a result, as the war progressed, the Navy literally began to shift its Lions, Cubs, and Acorns to sea.

After the capture of the Marshall Islands in February 1944 the Navy combined all of its "mobile logistics forces" and formed Service Squadron Ten, a "medley of floating equipment, including repair ships, floating dry docks, tenders, provision ships, ammunition ships, hospital ships, station tankers, lighters, tugs, floating cranes, distilling ships, survey ships, cold storage ships, and floating barracks." The largest piece of floating equipment used during the war was the ABSD (advanced base sectional dock), a modular dry dock consisting of up to ten separate sections which were towed separately and mated at a protected anchorage. The ABSD was

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[185] See Freidman, *US Aircraft Carriers*, p. 191.

[186] "Developments in Naval Warfare."

[187] Rear Admiral Worrall Reed Carter, USN, ret., *Beans, Bullets and Black Oil*, pp. 60-61. I would like to thank Commander Mark Becker, Deputy Sea Base Pillar Lead (N832) at the Navy Warfare Development Command, for highlighting this great book to me.

capable of lifting 90,000 tons and docking any ship in the Pacific, including aircraft carriers and battleships.[188]

The only requirement for this distributed logistics sea base was a large fleet anchorage protected from submarine attack. The only land-based requirement for these mobile sea bases were austere air strips for fighters and air transports, recreation areas, and some modest support facilities. The atolls and islands of the Central Pacific were perfectly suited for these requirements, as indicated by the string of logistics seabases that marked the US advance across the Pacific, located at Majuro, Eniwetok, and Ulithi. Earlier in the war floating bases were established in conjunction with shore facilities at Noumea in New Caledonia, Espiritu Santo in the New Hebrides, and Manus in the Admiralty Islands. Afloat bases were also later assembled at Samar in the Philippines and the Kerama-retto near Okinawa.[189]

Mobile Assault Sea Bases

The successful development of mobile air base clusters, mobile logistics sea bases, and expanded combat logistics forces meant that by 1944-45 the fleet no longer needed to seize forward *naval* bases; instead, they concentrated on the seizure of forward air and land bases needed to support the final invasion of Japan. In this regard, the Interwar experiments on amphibious assaults proved to be time well spent. Guided by doctrine first set down in 1934—long before the development of a supporting amphibious fleet—the US and British fashioned a new and awesome instrument of war: mobile assault sea bases capable of supporting and sustaining multiple division assaults.

The power of these mobile assault sea bases was demonstrated by the combined invasion of Europe initiated by sea and air on June 6, 1944, and soon thereafter during the 1945 invasion of Okinawa, the prelude to the final invasion of Japan. This latter operation involved landing a joint ground force about the same size as the one put ashore on an island located only 350 miles from the Japanese mainland. However, unlike the landings in France, which were launched and subsequently supported from scores of land and naval bases located on nearby Britain, the invasion of Okinawa was conducted in a Joint Operations Area located over 4,000 miles from Hawaii and 800 miles from the recently seized Marianas Islands. In essence, the 1,200 ships that constituted the Okinawan "sea base," and which supported the forces on the island for the duration of the campaign, substituted for the hundreds of land bases located on Britain.[190]

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[188] "Developments in Naval Warfare."

[189] "Developments in Naval Warfare."

[190] For a wonderful recap of the operations of the Sea-based Power-projection Fleet off of Okinawa, see Hone, "Seabasing: Poised For Takeoff."

A Global Expeditionary Movement and Maneuver System

The important and inextricable linkage between a basing structure and its supporting strategic mobility system—supported by forcible entry forces and rapid construction bases—was demonstrated vividly during World War II. After quickly erecting a global- peripheral basing network, the allied powers began projecting power into Axis territories at times and places of their own choosing. The pace and character of the thrusts were dictated primarily by the availability of strategic mobility and forcible entry assets, not troops and equipment. In the end, the combination of the two formed what might be thought of as a Global Expeditionary Movement and Maneuver System (GEMMS) which moved troops, equipment, and supplies first to peripheral bases; moved reinforcements as needed along the allied perimeter; and supported and sustained the maneuver of forces as they attacked and penetrated territory defended by the Axis powers.

The Key Component: Sealift

The key component of the World War II GEMMS was sealift, which remained the most efficient means to transport the enormous quantities of supplies necessary to sustain forward-based and deployed mechanized armies. During World War II, in addition to the huge numbers of personnel, jeeps, trucks, tanks, artillery pieces, and engineer equipment needed to support allied attacks, every forward-deployed soldier consumed between seven and 15 tons of supplies, ammunition, and support gear each year, depending on the theater of operations. With millions of men continuously deployed, the amount of equipment and cargo that needed to be transported across transoceanic ranges was staggering, and sealift provided the most reliable and efficient means for doing.[191] The US Merchant Marine alone operated more than 5,700 ships during the war, including 2,751 Liberty Ships, 531 larger Victory Ships, and numerous troop transports. This fleet, augmented by the equally large British merchant fleet, carried the majority of supplies, equipment, food, cargo, and ammunition forward combat operations in multiple theaters of operations.[192]

Airlift Makes an Important Contribution

For the first time in history, however, the "sea bridge" to forward theaters was augmented by numerous "air bridges" made possible by the rapid expansion of the allied airlift fleet. In June 1942, soon after the USAAF placed its first major orders for aerial transports, it formed the Air Transport Command (ATC), which was intended to provide high priority movement of personnel and cargo within and between theaters of operations. By the end of the war, the US had built some 13,000 C-47 *Skytrains* (2,000 more were built under foreign license) and over 3,000 C-46 *Commandos*. These two relatively short-range two-engine transports (with normal operating ranges of 1,200-1,600 miles) were augmented by an additional 1,200 four-engine C-54 *Skymasters*, modified versions of the DC-4 airliner, each capable of carrying 14 tons over a

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[191] "The US Merchant Marine in World War II," found online at http://www.usmm.org/ww2.html.

[192] See "Ships for Victory," at http://www.seawaves.com/bookreviews/shipsforvictory.htm.

range of 4,400 miles.[193] By 1945, at the end of the war, the ATC operated over 3,700 transports of all types. In July 1945 alone, these aircraft carried 275,000 passengers and 100,000 tons of cargo through a worldwide network of air bases.[194]

With effort, strategic airlift proved itself capable of substituting for sealift in emergencies. With land and sea routes to China closed, the only way to resupply allied forces in China was via the aforementioned "air bridge" from India over the "Hump" and into Chinese territory. In December 1942, the total amount of cargo flown over the "Hump" amounted to 1,227 tons. By July 1945, the monthly transport had risen to 71,042 tons—over 70 percent of the total amount of aerial cargo flown worldwide. This stunning achievement came at a steep price, however; over 1,600 airmen died during this nearly three-year long aerial resupply operation.[195]

Combat Logistics Forces for Fleet Support

As mentioned earlier, another critical component of the GEMMS was focused on moving and providing fuel, supplies, and cargo directly to forward-deployed naval task forces. By mid-1944, the Navy had perfected the means to transfer all types of supplies and cargo between ships operating at sea. After oil, due to their relatively small magazine spaces, the next major replenishment need for warships was ammunition. Next was the requirement to replenish dry and refrigerated stores, supply parts and assemblies, and even to transfer crew replacements or casualties. By enabling forward-deployed naval task forces to operate for long periods at sea without access to ports or land-based airfields, these new underway replenishment capabilities helped to improve the operational and strategic mobility of naval strike forces.[196]

Indeed, the job of replenishing combat ships at sea became so important to providing the fleet with freedom of action that it led to the formation of Service Squadron Six, which was tasked with replenishing the ships of the Pacific Fleet while at sea and underway in forward combat theaters. The forerunner of today's combat logistics forces, ServRon Six consisted of tankers, ammunition ships, aircraft transports, dry store ships, and tugs or salvage ships used to tow battle damaged ships away from a forward operating area.[197]

Forcible Entry Forces and Rapid Construction Bases

The combined improvements to US sealift, airlift, and combat logistics forces dramatically improved the strategic mobility and operational freedom of action of US land, sea, and air forces, enabling the United States to project and sustain operations across the globe. However, World War II demonstrated the critical difference between *movement* of troops and supplies and the

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[193] See "Airlift Cargo Aircraft," found online at http://www.globalsecurity.org/military/systems/aircraft/ cargo.htm.

[194] Dr. William M. Leary, "Strategic Airlift: Past, Present, Future," *Air University Review*, September-October 1986. The article can be found online at http://www.airpower.maxwell.af.mil/airchronicles/ aureview/1986/sep-oct/leary.html.

[195] Leary, "Strategic Airlift: Past, Present, Future."

[196] Nagy, "The History of Sea Basing;" and "Developments in Naval Warfare."

[197] "Developments in Naval Warfare."

maneuver of intact combat units capable of immediate defensive and offensive action, including forcible entry into enemy-held territory.

As discussed earlier, the two forces capable of conducting forcible entry operations were amphibious assault forces and airborne forces. With regard to the former, by 1944-45, the United States alone operated over 2,500 large amphibious landing ships and craft; they were capable of projecting 13 divisions in ready-to-fight conditions into contested territory—out of a total of 91 non-airborne Marine and Army divisions or 14 percent of the total force.[198] This formed the bulk of the maneuver capacity of the World War II GEMMS.

The United States formed five airborne divisions; however, they played a lesser role than amphibious forces in forcible entry operations. Although parachute units were relatively lightly armed and equipped, the GEMMS could only deploy and employ a small percentage of the total force structure at any given time. For example, during Operation *Market-Garden* in 1944, the IX Troop Carrier Command assembled no less than 1,545 transports and 478 gliders to support the planed air drop. However, even this staggering force could only carry 1.5 division equivalents out of an attack force consisting of three British and US parachute divisions and one Polish independent parachute brigade. As a result, the commander of the attack was forced to piecemeal his forces into the target area over the course of several days, which contributed to the ultimate failure of the operation.[199] Moreover, even in good weather conditions, unclear or erroneously marked landing zones could badly scatter an attacking force; windy conditions made the problem much worse. As a result, allied air drops often were plagued by high casualties for little return.[200] Nevertheless, parachute drops continued throughout the war, supported by the aerial transports of the allied GEMMS.

The rapid construction of bases also helps a great power's strategic mobility by establishing bases that improve the throughput of supplies, equipment, personnel and cargo into theaters that lack a substantial forward basing structure. Thus the Lion, Cub, and Acorn mobile base sets facilitated the rapid construction of forward fleet logistics and air bases in the Pacific. However, an even more vivid example was demonstrated in the European Theater of Operations. In circumstances quite unlike those found in the Pacific, allied war planners were secure in the knowledge that the forcible entry operation that initiated the invasion of continental Europe would be launched and supported by hundreds of ports and airfields located in Britain, separated from the French coast by the relatively narrow English Channel. However, the forcible entry operation was just the first phase of an allied attack aimed at the German heartland located hundreds of miles from the invasion point. To sustain the reinforced invasion force in its drive into Germany, the allies would need heavy logistics portals—deep draft and developed harbors

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[198] During World War II, the Marines formed six combat divisions. The Army assembled 67 infantry divisions; 16 armored divisions; and two cavalry divisions, for a total of 91 non-airborne divisions. See http://www.army.mil/cmh/lineage/cc/inf.htm.

[199] "Problems; Operation Market-Garden," found online at http://en.wikipedia.org/wiki/Operation_Market_Garden#Problems.

[200] For an indication of the formidable problems associated with airborne assaults, see "Airborne Forces," found online at http://en.wikipedia.org/wiki/Airborne_forces#Operation_Torch:_North_Africa.

and ports—to transship the thousands of tons of "beans, bullets, and band aids" the attacking allied armies would consume every single day.

Therein lay the challenge. As the failed amphibious raid on the French port of Dieppe suggested in August 1942, the German defense of the western coast of Europe included formidable defenses around every suitable port. Because of the strength of these defenses, the allies began to think about alternative means to sustain their invasion force in the early stages of the invasion. The innovative and elegant solution, conceived of and implemented by the British, was to bring a port along with the invasion force.[201]

The resulting Mulberry was a mobile, rapid construction harbor that could be transported in pieces by sea and hastily erected along the coast anywhere a favorable beach gradient could be found. Each harbor consisted of roughly 6 miles (10 kilometers) of flexible steel roadways, code-named Whales, which floated on steel or concrete pontoons called Beetles. The roadways terminated at massive pierheads—called "Spuds"—that could be jacked up and down on legs which rested on the seafloor. All of these structures were sheltered from the sea by lines of massive sunken concrete caissons (Phoenixes), lines of scuttled ships (Gooseberries), and a line of floating breakwaters (Bombardons). When fully operational, a Mulberry harbor had the design capacity to transship 7,000 tons of vehicles and supplies per day from ship to shore.[202]

Two Mulberry harbors were constructed in secrecy, one to support the US forces and one to support British Commonwealth forces. Almost immediately after D-Day, the allies started to float components of the harbors into position, and both harbors were operational within 12 days of the landing. However, just one day later, on June 19, 1944, one of the most violent Channel storms in history began, and within four days the American Mulberry was completely destroyed. To make up for the loss in supply throughput, the US and Royal Navies were forced to initiate a much more inefficient shuttle service between Britain and Normandy using beachable landing ships. Meanwhile, the damaged and repaired British Mulberry supported the Allied armies for the next ten months, serving as the transshipment point for two-and-a-half million men, a half million combat vehicles, and four million tons of supplies.[203]

Although these rapid construction harbors were not reusable (remains of the British Mulberry can be seen today off the French coast near Normandy), they nonetheless demonstrated the powerful combination of forcible entry operations and rapid construction bases. As one historian has written:

> 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

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[201] See "MULBERRY," at http://www.britannica.com/dday/article-9344572.

[202] "MULBERRY."

[203] "MULBERRY."

> 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* (emphasis added).[204]

A GLOBAL C3I SYSTEM

During World War II, the US military constructed a command and control system than enabled it to exercise positive command and control of forces operating in multiple theaters. It did so in three ways: by expanding its Caribbean command and control structure to cover the entire Atlantic Ocean, South America, Europe and North Africa; by expanding its Pacific C2 system; and by linking the two with the United Kingdom's C2 network covering the Middle East, Central Asia, and Australia. This C2 system included long-range HF communications and long-range radio telegraphy and teletype systems, including undersea cables. In other words, World War II saw no new long-range C2 systems developed; it merely saw a large expansion of existing US and British C2 systems.

The emphasis on network expansion was well captured by US Fleet Admiral Chester Nimitz, who wrote after the war that:

> Upon assuming command of the U.S. Pacific Fleet on 31 December 1941, I found a well-functioning communication system capable of great expansion. Could it expand rapidly enough to handle the far-reaching demands suddenly thrown upon it? It could and did, to my great satisfaction. This gigantic task was accomplished so efficiently that the Pearl Harbor headquarters was able to exercise complete and effective control of the operations of the far-ranging forces on, under, and above the sea. The radio silence usually imposed upon the forces afloat made absolute confidence in the integrity of our communications system a matter of paramount importance. This confidence was earned and well merited.[205]

Although the global communications backbone saw little in the way of innovation, tactical radios—radios which connected maneuvering forces with the long-range C2 network, saw dramatic improvements. Among the most important improvements were the introduction of very high frequency amplitude modulation (VHF AM) radios, which carried more voice channels than early AM radios, as well as new frequency modulation (FM) radios, which were less susceptible to interference and weather effects than their AM counterparts. These radios could be connected to the global C2 backbone by the use of tactical radio relays, which had their origins in the North

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[204] Jane Penrose, editor, *The D-Day Companion* (New Orleans, LA: The National D-Day Museum, 2004), pp. 134-35.

[205] C.W. Nimitz, Fleet Admiral, USN, in the introduction to Howeth, *History of Communications-Electronics in the United States Navy*.

Africa campaign in 1943. During the campaign, US signal forces used a chain of Motorola FM police radios to provide a one-channel teletype link from Algiers to Tunisia, a distance of 640 kilometers (500 miles). Later in the war, purpose built tactical radio relay sets had eight channels, enabled by pulse amplitude modulation using time division multiplexing, or "time slicing."[206]

World War II also saw the development of new means of electronic intelligence as well as new types of electronic indications and warning systems, like radar; new identification friend or foe (IFF) systems; communications intelligence (COMINT) systems, like ULTRA; radio navigation systems including LORAN, TACAN, and SHORAN; radio direction finding equipment, especially High Frequency Direction Finding (HF/DF); and numerous electronic countermeasures. These new developments led to a "Wizard's War" dominated by scientists, and the development of a global intelligence collection apparatus that contributed in no small way to the ultimate defeat of the Axis powers.[207]

GLOBAL SUPERPOWER, GLOBAL MILITARY POSTURE

By the end of World War II, the United States was an economic and military superpower, with a global military posture to match. The US expeditionary basing network was unprecedented—with bases located on every continent in the world except Antarctica. Of over 3,000 bases, over 2,000 were sovereign, exclusive, shared, and participating exterior campaign bases.[208] The capital costs for this unprecedented overseas basing network amounted to some $13 billion, an astounding sum in 1945.[209] These fixed bases were supported by a fleet of over 100 mobile air bases (i.e., aircraft carriers) of varying sizes, as well as a huge mobile logistics sea base that could be established in any suitable fleet anchorage.

The US did not yet possess any global attack systems; the aircraft with the longest range, the B-29 *Superfortress*, was capable of strikes over a combat radius of 2,000 miles. However, because it had such an extensive basing structure, it could mount sustained operations against both Germany and Japan from peripheral and remote bases that were essentially immune from attack.

The impressive global basing structure was supported by an equally impressive Global Expeditionary Movement and Maneuver System that included a strategic sealift fleet of over 5,000 vessels; an aerial transport fleet comprising some 3,700 aircraft; a large naval combat logistics force capable of sustaining US naval forces at sea indefinitely; and a fleet of over 2,500 amphibious landing ships that could form huge distributed assault sea bases capable of projecting

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[206] Chapter 11, "The Wizard War: WW2 and the Origins of Radar," found online at http://www.vectorsite.net/ttwizb.html.

[207] For a good description of the contributions made by these new electronic intelligence devices during World War II, see "The Wizard War: WW2 and the Origins of Radar."

[208] James R. Blaker, *United States Overseas Basing*, (New York, NY: Praeger, 1990), pp. 30-33.

[209] United Press, "US Spent $13 Billion Abroad in 5 Years On Service Pay, Bases, Materials, Loans," *New York Times*, September 26, 1945, p. 12.

and sustaining multi-division assaults from the sea. These assaults could be supported by the dual-role aerial transport fleet, which could support division-sized air drops. Rapid construction bases—like the Mulberry harbor—linked the maneuver of forces with the subsequent movement of reinforcements, supplies, and equipment.

Equally impressive was a global C3I system that provided intelligence and reliable command and control of US forces operating around the globe in multiple combat theaters.

This stunning global military posture was, of course, a unique *surge posture* resulting from a wartime requirement to conduct and sustain multi-theater combat operations against Germany, Italy, and Japan. Even as the war was raging, one of the biggest questions facing US defense strategists and planners was thus: what should the postwar *steady-state* global military posture look like? In other words, how should the United States modify its globe-spanning military posture to adjust to the forthcoming peacetime environment? Should the US military continue to have a robust exterior basing network? If so, where should the bases be? How would these bases be obtained? How many forward-based and forward-deployed troops should the US maintain on an enduring basis? How should they be allocated among regions? What level of resources would be devoted to strategic mobility assets, forcible entry forces, and rapid base construction forces?

So important were these and other questions that they spurred what should be properly viewed as the first formal Global Defense Posture Review conducted by the US defense establishment since the birth of the Republic. This review—initiated by the president and ultimately involving the Services, the Joint Chiefs of Staff, and the State Department—was conducted under conditions of great uncertainty caused by radical change in the global strategic environment and rapid technological advances. As a result, as will be seen in the next two chapters, the posture first envisioned by the US defense planners was much different than the one that eventually evolved.

V. 1942-1947: GLOBAL DEFENSE POSTURE REVIEW, TAKE ONE

It is often remarked that the rapid pace of technological change in the Information Age and the current state of flux in the international environment makes strategic planning especially difficult today. However, during and immediately following World War II, an earlier generation of US defense planners had to contend with at least as much strategic uncertainty and technological upheaval. In this unsettled period, these planners conducted the first formal US Global Defense Posture Review, during which they tried to predict the nature of the postwar world and to envision—and fashion—the US military posture best suited to that world.

The purpose of this chapter is to review how their thinking evolved over the course of the war and during its immediate aftermath. As will be seen, the planners grappled with many of the very same problems that vex US strategists today.

AN EMERGING IDEOLOGY OF NATIONAL PREPAREDNESS

The character of America's postwar global military posture was an issue that interested US military planers even before America officially went to war. In November 1941, Army Chief of Staff George C. Marshall called Brigadier General John McAuley Palmer out of retirement to be his special planner for postwar plans. The focus of Palmer's planning effort was to help the Army avoid a dramatic demobilization like the ones that had characterized previous US wars.[210]

In keeping with General Marshall's thinking, as the war progressed, US postwar defense plans became increasingly colored by a shared "ideology of national preparedness." This ideology sprang from the searing experience of a major post-World War I demobilization, followed by a global depression, followed by the painful transition of an unprepared military from peacetime to a second world war. It was marked by two complementary lines of thinking. First, postwar and international affairs should necessarily focus on ensuring economic prosperity and guaranteeing the peace. Second, despite efforts to the contrary, America and its allies might once again be confronted by a hostile, totalitarian regime capable of striking over transoceanic ranges. Both of these lines of thinking mandated a more assertive global leadership role for the United States. Moreover, they suggested that the peacetime US armed forces would need to be much larger than they had been in the past, and capable of deterring and defeating a military challenger after a rapid mobilization.[211]

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[210] Elliott V. Converse III, *Circling the Earth: United States Plans for a Postwar Overseas Military Base System, 1942-1948* (Maxwell AFB, AL: Air University Press, August 2005), p. 1. This is a fascinating study of the evolving thinking and plans for the US postwar exterior basing network. The information in this section is drawn almost exclusively from it. Unless otherwise noted, embedded quotes are from this work. Cites hereafter will refer only to Converse and the page number.

[211] Converse, pp. 1-5.

The urge to "deter forward"—an during American notion that can be traced from early World War II up through the 2006 QDR—also suggested something else: in the postwar period, the US postwar steady-state global military posture likely would need to be more robust than the Naval and Service Expeditionary Postures associated with the Continental and Oceanic Eras. As the US experience just prior to and in the early stages of the war indicated, this would necessarily make the acquisition of basing rights *in foreign countries* a top priority in the postwar world. As a result, the State Department would be an important ally in the fashioning of the postwar global military posture.[212]

All aspects of the ideology of national preparedness were well reflected in a late 1942 presidential tasking to the JCS to prepare a study of basing locations for a postwar International Police Force. Early in the war, President Roosevelt and his vice president, Henry Wallace, foresaw a postwar world in which there would be four global "policemen"—the United States; Great Britain; Russia; and China. In this envisioned postwar world, the four policemen would maintain and enforce the peace. The primary means for peace enforcement world be long-range aircraft. Since the President expected commercial air transport to link the global economy together and to help spur a postwar economic expansion, it therefore made sense to co-locate commercial and military airfields. These international commercial/military airfields would form the structure for the entire international economic and security system. After relaying this strategic vision to the JCS, the president ordered them to determine the best locations for the postwar network of international air bases. In so doing, he initiated the first phase of what was to be the nation's first global posture review—a review that was to last nearly five years, well after the end of the war.

JCS PLAN 570/2: A RETURN TO A REGIONALLY-FOCUSED MILITARY POSTURE?

The results of this first phase of planning resulted in JCS Plan 570/2, completed in late 1943. The origins of the plan originated from the Joint Strategic Survey Committee (JSSC), which was tasked by the JCS to develop the answer to the president's tasking. Unsurprisingly, given FDR's stature as a war president, the JSSC deviated little from his thinking. They endorsed the idea that the International Police Force would be "essentially an Air Force" based at airfields along the "strategic air routes of the world." The Committee's planners also agreed with the president's thinking that postwar civilian and military airfields would be closely aligned. As a result, the JSSC predicted that the US postwar exterior basing network would be dictated by commercial air routes and the location of commercial airfields.[213]

However, the JSSC did made two important assumptions that were to influence all subsequent posture thinking until well after the war. First, until and after the president's International Police Force or other suitable international peace enforcement organization was organized, the JSSC assumed that the victorious *allied powers would provide global stability by dividing the world*

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[212] Converse, p. 2.

[213] Converse, pp. 7-10.

into areas of jurisdiction and patrol: the US would take responsibility for the "American Zone;" Great Britain and Russia would share responsibility for the "Europe, Africa, and Middle East Zone;" and the three major powers plus China would police the "Far Eastern Zone." Second, *the US would not permanently occupy or establish permanent bases on German or Japanese territory*. After some period of time, US troops would return home; this period was not expected to take much longer than five years, the amount of time it took for all post-World War I US occupying forces to return home.[214]

Whether consciously intended or not, these assumptions suggested a return to the globally-oriented, regionally-focused Service Expeditionary posture of the Oceanic Era. Indeed, the JCCS envisioned a steady-state exterior basing structure that was only a slightly expanded version of the one erected before World War II. In the Pacific, the "American Zone" would be defined by a west-to-east string of bases from the Philippines through Guam to Hawaii. In the Atlantic, the zone would be defined by a north-to-south trace of bases including all those leased from Britain just prior to the war, as well as the bases in northeast Brazil.[215]

Not all of the Services embraced the ideas proposed by the JCCS. For example, instead of a postwar continental exterior basing system designed to support an International (Air) Police Force, the Navy's General Board argued in favor of a combined US-Great Britain maritime basing system focused on "policing the high seas." Even so, the bases would be located in virtually the same regions as those envisioned by the JSSC; the Board initially listed 50 desired sovereign or exclusive in two general regions: the Western, Central, and South Pacific; and the Western Atlantic out to 25 degrees, west longitude (to the east coast of Greenland). It reasoned that all bases to the east of 25 degrees would be "joint projects" with the British.[216]

Meanwhile, the Army Air Force disagreed with the JSSC's (and by extension, the president's) thinking that the defense of US global interests should be delegated to an International Police Force. In view of the uncertainty surrounding the postwar world, the USAAF Air Staff believed national interests should drive the postwar global military posture. In a world of "long-range bombers, radar control, glider and rocket bombs," the Air Staff argued that the postwar basing posture should be focused primarily on defending the United States from long-range aerospace strikes. In their view, the country's defensive perimeters would therefore need to be extended to the ends of both the Pacific and Atlantic Oceans in order to provide US forces plenty of defensive depth. Guided by this thinking, the Air Staff generally accepted the General Board's recommended western defensive perimeter, traced by a forward basing network that stretched from Alaska through the Aleutian Islands and Kuriles, on through the Bonin Islands to the Philippines, then on through the South Pacific via New Britain, the Solomons, Samoa, and ending on to the Galapagos Islands off the west coast of South America. In the Atlantic, however, the Air Staff expanded the eastern defensive perimeter to encompass nearly the entire Atlantic basin. The perimeter would start in the South Atlantic at Ascension Island, move up

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[214] Baker, *American Soldiers Overseas*, p. 21.

[215] Converse, pp. 7-10.

[216] Converse, pp. 12-13.

through Dakar, the Azores, Iceland Greenland, and across Canada to Alaska. The forward bases in the Atlantic and Pacific would be supported by a ring of inner peripheral bases located in the Caribbean, Brazil, Hawaii, and Guam, among other places.[217]

Although the Joint Staff, Navy, and War Departments had some disagreements in the underlying logic behind the postwar global military posture, as well as the exact trace of the American defensive perimeter, there was complete agreement that the US postwar exterior basing network would be regionally-focused in the Pacific and the Atlantic Oceans. All parties were content to accept a basing framework with national regional responsibilities and shared global responsibilities. Importantly, neither Joint nor Service planners anticipated that the United States would occupy the defeated Axis powers indefinitely.

NEGOTIATING—OR DICTATING—FOREIGN BASING RIGHTS?

Even a regionally-focused military posture would require that US troops either be based at or given access to foreign exterior bases after the war. As was discussed earlier, however, the United States had precious little experience convincing countries to willingly accept permanent US bases within their sovereign borders. The last time the US government had had to negotiate access was in the early Continental Era, and these negotiations were strict fee-for-service agreements covering port services. In the later stages of the Continental Era and throughout the Oceanic Era, exterior bases were built on territory won in wars (e.g., the Philippines, Guam, and Puerto Rico); annexed territory (e.g., Midway, Wake, Hawaii, Samoa, Johnston Island); and purchased land (e.g., Alaska and the Virgin Islands). The only negotiating the US government had to do was to broker coercive treaties that forced weaker nations to renounce their sovereign rights (e.g., China, Japan, Panama, and Cuba).

Indeed, the only prior experience US diplomats had in negotiating long-term base access agreements with another strong sovereign state was with Britain just before the beginning of the war—and Britain was already under attack and predisposed to negotiate terms favorable to the Americans for their own strategic purposes. After the war started and all nations were forced to either choose sides or to declare their neutrality, many of the subsequent wartime basing rights were the result of informal access and basing agreements. Indeed, many were made between local US military commanders and the host nations. Additionally, the large numbers of expeditionary bases the United States erected to prosecute and support operations in countries occupied by the Axis were, of course, never negotiated with representatives of the occupied countries. Therefore, when it came to making these wartime arrangements permanent in the peace that followed, American military and diplomatic planners had little precedent to go on. There was great uncertainty over how easy it would be in negotiating base access in the absence of the favorable negotiating position enjoyed by an imperial power or a power fighting a global war.[218]

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[217] Converse, 23-27.

[218] Converse, p. 30.

This uncertainty was reflected soon after the JSSC reported its initial conclusions to the Joint Chiefs of Staff. After reviewing their work, and perhaps prompted by the work of the Air Staff, the Joint Chiefs asked the members of the JSSC why they had not included the campaign bases located in Greenland, Iceland, the Azores, Dakar and Ascension Island as part of the postwar Atlantic defensive perimeter. In reply, the members argued that ambitious US demands for postwar airfields and bases would likely conflict with the national interests of Denmark, Portugal, France, and Britain, and that the United States would do well not to be "overreaching in their demands for basing access."[219]

The Services were as concerned as the JSSC over the potential problem of negotiating postwar basing rights. For example, Air Transportation Command Plans Report No. 61, dated July 24, 1943 and entitled "US Interest in Air Bases on Foreign Soil," highlighted the need to start early negotiations for postwar air base and overflight rights. This report prompted the formation of a special USAAF committee to keep the matter of postwar air facilities under continuous study, in order to identify "the bases and facilities and rights for operations of US military aircraft which should be acquired by the US in and over territory not now under exclusive US sovereignty," as well as "the method or methods by which these could be acquired." In this regard, for any base dedicated to the defense of the continental United States, senior USAAF leaders were especially interested in maintaining *sovereign or exclusive* basing access.[220]

Generally, the initial position taken by the US military on base access negotiations rested on two themes. The first was that basing rights negotiations should be conducted during the war, when the United States enjoyed a superior negotiating position. Post-World War I experience made US defense planners reluctant to accept that the "the good faith and gratitude of the recipients of American help" would extend long after the war ended. The second was that possession of a wartime campaign base should constitute nine-tenths of any postwar negotiating effort—and the remaining tenth should revolve around a simple question: given that the US military had been instrumental in defeating the Axis powers, was an allied nation really willing to refuse the United States postwar base access? In this, they were supported by key members in Congress, who wanted to see the United States get its money worth out of the thousands of overseas bases built at its taxpayers' expense.[221]

This position reflected the hard-nosed US approach to building its basing structure during the Oceanic Era. However, not everyone subscribed to this view. Members of the State Department were troubled by the short step from such talk "to rank imperialism." Moreover, upon first hearing the JSSC's plan, planners in the Air Transport Command thought that both major powers and the American public would object to a postwar basing structure that would ensure US military control over two-thirds of the earth's surface, and neither would support such a large overseas presence of forward-based US forces.[222] As events turned out, these concerns proved to

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[219] Converse, pp. 9-10.

[220] Converse, pp. 16-26.

[221] Converse, pp. 23-32.

[222] Converse, pp. 23-32.

be prescient. At the mid-point of the war most US defense strategists were confident that they would be able to negotiate any basing access agreement they felt was in the United States' best interests.

FINALIZING JCS 570/2

JCS Plan 570/2 was submitted to President Roosevelt for review in the autumn of 1943. It covered the period up though defeat of Germany, and then up through the defeat of Japan and the establishment of a world-wide peace supervised by the Four Policemen. It did not cover the period after a formal international peace-enforcement organization had been established, since the JCS deemed this period to unsettled or uncertain for planning purposes. The plan outlined a robust exterior basing network, but one regionally focused in the Pacific and Atlantic Oceans.[223] The plan was heavily influenced by the ideology of national preparedness, and featured a globally-oriented, regionally-focused posture focus reminiscent of the Oceanic Era.

The plan included three color coded basing regions which were designed to guide State Department negotiations for postwar base access. The first region, outlined in blue, included "bases required for the direct defense of the US, leased areas, and possessions, including the Philippines." The blue zone indicated the inner US defensive perimeter, composed mainly of sovereign or exclusive foreign bases. This region included Alaska, the Philippines, US Pacific possessions, selected Japanese-mandated islands, the Galapagos Islands, Central America, the Caribbean, and the leased British bases. A second region was outlined in green; it contained "bases required by the US as one of the great Powers enforcing peace, pending world wide organization." This zone would consist of exclusive and shared foreign bases located in Canada, Greenland, Iceland, the Azores, West Africa, Brazil, and on the Clipperton Islands—a French possession located 1,600 miles west of Nicaragua astride the Pacific approaches to the Panama Canal. A third region, outlined in black, was a region that would have participating bases in the southeast and western Asia from which the US would help China to enforce the postwar peace.[224]

In early 1944, President Roosevelt approved JCS 570/2 with two modifications, which indicated how little concern US political and military leaders gave to the subject of postwar base negotiations. First, he wanted the blue-bordered zone to be expanded south and east of American Samoa to include France's Society and Marquesas island groups, which sat astride the South Pacific air routes. Second, he directed that postwar plans for US bases in western Africa be expanded beyond those already planned to include additional bases in Casablanca, Dakar, and Liberia. These changes aside, JCS 570/2 became the basis for initial US postwar posture planning, being referred to by one Navy strategist as the postwar "base bible." The President directed the JCS to develop minimum and maximum basing requirements for countries in each colored region. Using these inputs, the president then expected the State Department to begin

[223] Converse, pp. 32-33.

[224] Converse, pp. 33-34.

negotiations with the necessary countries and to put JCS 570/2 into effect "at the earliest possible moment."[225]

Note that JCS 570/2 was created with no particular postwar enemy in mind. Although American strategists were fairly certain the US would someday be challenged by a hostile power, in 1943 and 1944 there were no certain adversaries on the horizon. The JCS met this uncertainty by staking out the minimal American defensive perimeter that the US military was willing to live with. This may help to explain its strong similarities with the Service Expeditionary Posture adopted during the Oceanic Era, although it seems just as likely that US military planners were simply resetting to familiar, comfortable planning assumptions. In any event, the plan assumed *no* postwar military presence in Europe; Africa; the Middle East; or South and Central Asia. Presence in southwest and western Asia would be restricted to participating bases. Moreover, the majority of bases were assumed to be air or naval bases; defense strategists did not foresee basing large numbers of ground forces overseas.

It is often said that military leaders often plan for the last war. It appears the same can be said about planning for future military postures.

THE SERVICES MAKE THEIR INITIAL POSTWAR PLANS

Between early 1944 and the end of the war, guided by the revised and approved framework of JCS Plan 570/2, the Services steadily refined their postwar basing plans. In June 1944, the Army Air Force published its *Initial Postwar Air Force* (IPWAF) *Plan.* This plan outlined the laydown of a planned postwar force of 105 bomber and fighter groups (each group consisting of 30 aircraft) extending eastward from the Philippines to western Africa. The closest Air Force units to Europe were heavy bomber and fighter groups stationed in Iceland, Dakar, and Casablanca; consistent with JCS Plan 570/2, the bulk of AAF forces based outside CONUS were located in the Pacific (including Alaska) and the Caribbean. This east-west orientation, with little attention to the polar air routes between the continental United States and the Soviet Union, provides solid evidence that even in the late stages of the war the Air Staff was not anticipating a mortal Soviet threat to the United States. It instead faithfully reflects the three main national security tasks implicit in JCS Plan 570/2: to defend the US and Western Hemisphere from direct attack; to police the Pacific, including Japan; and to ensure US economic well-being.[226]

With regard to the latter, the Army Air Force appeared to endorse President Roosevelt's linkage of postwar military and commercial air routes. As a result, its postwar basing plans included numerous air bases along the trace of what it considered to be the most important commercial air routes. For example, the planned air route to serve the South Pacific called for a string of exclusive bases located on the French Clipperton and Marquesas Islands; in the Cook and Tonga Islands (self-administering territories of New Zealand); and in New Zealand and Australia.

[225] Converse, pp. 34-36.

[226] Converse, pp. 51-55.

Revealingly, air planners continued to assume that US diplomats would have little trouble securing exclusive basing rights in each of these locations.[227]

In stark contrast, the Navy's postwar planning was becoming increasingly colored by a growing concern over a potentially heated postwar competition with the Soviet Union. In October 1944, Fleet Admiral Earnest J. King, then-Chief of Naval Operations (CNO), directed his Deputy CNO to assume supervision of Navy postwar planning. In the event, the Deputy CNO delegated the authority for much of the actual planning to the Assistant Chief of Staff (Plans), who in turn delegated the authority to a small planning section known as F-14. In December 1944, F-14 published an untitled 30-page planning document that was later referred to as "Determination of Requirements," or simply "Requirements." This modest document outlined a remarkably prescient vision for the postwar world. It foretold of an impending "revolutionary era," not only with respect to the internal dynamics of nations, but in the sense of a "universal contest between the opposing ideologies of capitalism and socialism."[228]

In this ideologically divided world, many countries, wracked by economic dislocation, political uncertainty and instability, would see revolution and civil war. The colonial empires of European nations were likely to be fatally weakened. Latin American nationalism would rise. The world would bifurcate into two camps—one led by the United States in the Western Hemisphere, one by the Soviet Union in Europe, Asia, and the Near and Middle East. Great Britain, although greatly weakened by the war, would occupy an important "swing position." The two great power blocs would engage in a massive postwar ideological struggle for leadership, which might devolve into physical conflict.[229]

As accurate as this future turned out to be, however, F-14's subsequent planning for postwar naval bases remained quite consistent with plans prepared by both the Air Staff and JCS. This apparent incongruity reflects the strong influence that ingrained institutional biases and preferences have in the development of future plans. For example, F-14 planners made two critical assumptions: that the Royal Navy would remain strong, and that continental Europe would fall naturally under Soviet influence. As a result, F-14 planners concluded that the primary region in which the postwar ideological struggle between the United States and Russia would play out would be in the Pacific—the primary focus of US naval planners throughout the Oceanic Era and World War II. F-14 therefore foresaw little need for US naval forces in the eastern Atlantic, Mediterranean, Middle and Near East, or Indian Ocean—patrol areas in which the Royal Navy was assumed to be dominant. Instead, they advocated that US exterior naval bases be concentrated in the western Pacific, with additional bases along the Alaskan air approaches and the Atlantic maritime approaches to the continental United States. In other words, although F-14 accurately foretold the impending ideological struggle between two

[227] Converse, pp. 77-78

[228] Converse, pp. 55-61

[229] Converse, pp. 61-62.

superpowers, its vision for the postwar military posture focused on the Pacific, and not the Atlantic—a mirror of the Navy's thinking throughout the Oceanic Era.[230]

Based on the guidance found in "Requirements," the Navy's final postwar basing plan included 75 sites in the Pacific and Atlantic, with no fewer than 53 of the sites in the Pacific. However, in anticipation of sharply reduced postwar budgets, of the 53 Pacific sites, only eight would be sovereign or exclusive main operating bases; 30 would be shared and participating bases that would generally support forward-deployed, rather than forward-based forces; and fifteen would be shared or participating bases kept in "reduced operating status" or "caretaker status," ready for expansion when needed.[231] This hierarchy of overseas bases, duplicated in the Atlantic on a smaller scale, is eerily similar to the aforementioned MOB-FOS-CSL hierarchy adopted in the most recent Global Posture Review.

Importantly, this hierarchy reflected less a concern over basing access negotiations and more a concern about the anticipated budget-constrained postwar environment. Like the USAAF planners, F-14 assumed the US would have little trouble in negotiating basing access. However, they might not be able to afford all of the bases they really wanted. As a result, the Navy would seek "exclusive rights to build and control bases" in any of these 75 sites, but would exercise these rights only for the most important bases. In other words, Navy planners distinguished between negotiating for the right to build a future base and negotiating for permanent access.[232]

In keeping with its century-and-a-half expeditionary heritage, although the Navy subscribed to a regionally-focused basing network, it planned to position its "naval forces in such strength and condition of readiness that they may be moved promptly and in effective force *to any part of the world* in support of national policies." In other words, similar to Service Expeditionary Posture it a had adopted in the Oceanic Era, the Navy conceived of its exterior basing network as both defending CONUS from direct attack *and* supporting the global projection of US naval power.[233]

JCS PLAN 570/40: INCHING TOWARD A GLOBAL POSTURE

In August 1945, in a radio address to the American people following his return to from the Potsdam conference and the dropping of the first two atomic bombs against Japan, President Harry S. Truman told the American people just how important he considered America's postwar global military posture to be. Even before he announced the employment of the atomic bomb, Truman said:

> Though the United States wants no territory or profit or selfish advantage out of this war, we are going to maintain the military bases necessary for the complete protection of our interests and of world peace. Bases that our military experts deem to be essential for our protection, we will

[230] Converse, pp. 62-67.

[231] Converse, pp. 72-73.

[232] Converse, pp. 72-73.

[233] Converse, pp. 67-68.

> acquire. We will acquire them by arrangements with the United Nations Charter.[234]

However, by the time President Truman was announcing the vital importance of the US postwar defense posture would be to the nation's security, it was becoming clear that US postwar planning would have to be adjusted to account for three emerging realities. First, negotiating postwar basing agreements would be far more difficult than anticipated. By early 1945, the US had secured just one postwar basing agreement—signed with Brazil in June 1944.[235] Second, as was foreseen by F-14, the Soviet Union was beginning to emerge as a direct competitor and potential threat to the United States. And third, the World War II development of long-range bombers, ballistic missiles, and, most importantly, the atomic bomb, had seemingly shrunk the ocean barriers that had long protected the United States from direct attack.

These three new realities helped, over time, to refine and reshape JCS Plan 570/2. Indeed, the first stab at adjusting the plan came in the spring of 1945, when the JCS tasked the newly formed Joint Post-War Committee (JPWC) to review JCS Plan 570/2. In addition to the bases required to support an international peace enforcement organization, the Joint Chiefs wanted the JWPC to consider the additional the bases required should the US find itself at war with a major power or powers. Although the JCS did not name any particular major power in its tasking, the only plausible nation then capable of threatening US interests at the time was the Soviet Union.[236]

As one would expect, reconsidering the global military posture through the lens of preparing for possible war against a major power prompted planners to begin to question some of the assumptions associated with JCS Plan 570/2. For example, both US political and military leaders judged that the United States would be more vulnerable to surprise attacks and continental devastation than ever before. To prevent such attacks from occurring, the armed forces would have to be strong enough to deter attacks and be positioned to fight preventive wars—known in these early days as "first strikes." Extending the defensive perimeter around the United States and building exterior forward bases thus became an increasingly important goal.[237]

This thinking prompted the JPWC to start conceiving of the US postwar exterior basing structure in terms of an *integrated network of bases designed to support global deterrence and warfighting*—and not national economic growth or security patrolling in limited areas of US responsibility. The network would consist of a ring of outer "perimeter" (forward) bases "from which to reconnoiter and survey possible enemy actions, to intercept his attacking forces and missiles, to deny him use of such bases, and to launch counterattacks…." These perimeter bases would be linked to "primary" (main operating) bases located well back from the frontier by "connecting secondary" bases (forward operating sites and cooperative security locations). Such

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[234] *Public Papers of the Presidents of the United States, Harry S. Truman, 1945* (Washington, DC: Government Printing Office, 1961), p. 203.

[235] Converse, p. 82.

[236] Converse, p. 104.

[237] Converse, pp. 122-23.

an integrated network would provide "security in depth, protection of lines of communication and logistical support of operations."[238]

Armed with this new strategic vision for exterior basing, the JPWC began to debate how JCS Plan 570/2 should be changed. Early in the debates, its members adopted several key principles. First, planners reaffirmed the notion that it was "incompatible both with US policy and with the requirements of national security…to *maintain* US military forces on the continents of Europe and Asia after the occupation needs had ceased (emphasis added)." Second, the wartime vision of linking commercial and military air bases should no longer drive postwar posture planning; however important civil aviation would be in the postwar world, the future basing network would be designed primarily to support deterrence and warfighting. Finally, because of anticipated tight postwar budgets, the optimal exterior basing network might not be affordable. In this regard, in a variation of the Continental Era's informal lease-hold basing structure, the JPWC hoped that allied countries would build bases that could serve as the network's perimeter and connecting secondary bases, and that United States military forces could gain participating access to them when needed, on a cash-for-services basis.[239]

Guided by this vision and these three basic principles, the JPWC developed a new postwar basing plan, which they forwarded to the JCS. The Joint Chiefs approved the plan, designated it as JCS Plan 570/40. Importantly, consistent with their starting guidance, JCS Plan 570/40 was not focused on ant particular country or adversary. Instead, it was designed to better prepare the United States for war against any emerging postwar enemy. In effect, the plan outlined a hedging posture. Consistent with its planning principles, the plan included no planned bases on continental Europe or Asia. It called for ten exterior "primary base areas" (base clusters). In the Pacific, these base clusters would be located on Okinawa; the Philippine Islands; the Marianas (Guam); Alaska; and Hawaii. In the Atlantic, the clusters would be found in the Azores; Iceland; Newfoundland; Puerto Rico-Virgin Islands; and the Panama Canal. These ten primary bases would be supported by 60 smaller forward and secondary connecting bases. In a major shift, the bases would include large forward garrisons for ground forces.[240]

Conceptually, JCS Plan 570/40 depicted a shrunken version of the American wartime campaign basing network. Just as it had immediately prior to World War II, the Atlantic region became a more important part of the expected postwar posture. As a result, the plan's exterior basing network was equally balanced between the Pacific and Atlantic. Moreover, as was the case in the war, the two regional basing clusters would be linked by participating bases in Algiers; Tripoli; Egypt; Saudi Arabia; India; Thailand; and Saigon. Although JCS Plan 570/40 could still not be considered a truly global basing posture, it was certainly moving in that direction.[241]

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[238] Converse, p. 125.

[239] Converse, pp. 131-33.

[240] Converse, pp. 133-34.

[241] Converse, p. 135.

1945-1947: When Plans and Realities Collide

JCS Plan 570/40 was forwarded to the State-War-Navy Coordinating Committee (SWNCC) for approval in the fall of 1945. On October 25, the SWNCC approved the plan and forwarded it to the State Department for action.[242] While this 70-base plan reflected a mere shadow of the US wartime campaign posture, it was positively grandiose in comparison to the steady-state military postures of the Continental and Oceanic Eras

The plan was heavily contingent on the State Department's success in negotiating foreign basing rights. Of the 70 total bases envisioned in the network, the United States possessed sovereignty (e.g., Alaska and Hawaii), had occupied (e.g., Okinawa), or had previous agreements (e.g., the leased British bases in the Atlantic) for 35. The State Department would have to negotiate basing rights for the remaining 35. To help guide their efforts, the JCS divided the forward and secondary bases into two categories: essential and required. The State Department was expected to focus its efforts on gaining access agreements for the essential perimeter and support bases located on foreign soil.

Given the unexpected difficulty in gaining base access to this point, political and military leaders were under no illusions that building this network, which included such a high percentage of foreign exterior bases, would be easy. They were resigned to the fact that the heavy-handed negotiating strategies preferred earlier in the war would not work. Adopting a page from the early Continental Era, they concluded that the primary instrument for negotiating basing agreements would be economic inducements.

Consistent with the JPWC's thinking, Defense and State planners developed a concept they called a "Maintenance Covenant," which would award a country's agreement to maintain bases to US standards and to grant US military forces access to the bases with economic reconstruction packages; by forgiving wartime lend-lease debts; or by training a nation's armed forces, for free.[243] Despite a return to financial and economic inducements, however, diplomats in both the Department of State and the British Foreign Office labeled the basing list and plan "too long and far more an ambitious program than the Army and Navy can support" for both fiscal and diplomatic reasons. They were highly skeptical that foreign nations could be induced—financially or otherwise—to accept US bases on their soil.[244]

These concerns quickly proved accurate, especially on the diplomatic front. After the war was over it rapidly became clear that *any* base access negotiations with sovereign countries would be far more contentious than US strategists ever anticipated. The French, for example, were particularly incensed that the US government automatically assumed it could secure exclusive postwar basing rights on its Pacific territories, and refused to grant them. Negotiations with other countries fared little better: Denmark refused to extend US basing access to the 17 bases it had constructed during the war; Iceland, which had declared its independence in 1944, balked at

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[242] Converse, p. 164

[243] Converse, pp. 132-35.

[244] Converse, p. 152-53.

providing the US with any postwar basing agreements; and Ecuador and Peru wanted US wartime bases immediately closed down. To add insult to injury, the Philippines, liberated from a Japanese occupation and granted its full independence by the United States in 1946, was not entirely supportive of a continued US military presence there. Then, in 1947, the Panamanian Assembly unanimously rejected a postwar base agreement with the United States. Even the British, a trusted wartime ally, reacted negatively when the US requested their assistance in gaining approval from Portugal for continued base access on the Azores and Cape Verde Islands.[245]

In addition to international intransigence over granting the US permission to maintain wartime bases on their soil or to build new postwar bases, it was not at all clear that Congress and the American taxpayers would support such a major postwar exterior basing network. Indeed, the prospects of sharp postwar budget cuts caused officers on the USAAF staff to doubt that the American people would "support a United States military establishment adequate to construct, maintain, and garrison complete military bases at every point" along a desired exterior defensive perimeter.[246]

Given the mounting difficulties in gaining foreign basing access, and with little money of their own to build the desired basing structure, US military planners shifted their negotiating strategy once again. Adopting an idea originally conceived by the Navy, instead of seeking to build bases on foreign soil or to convince foreign governments to build potential participating bases, the planners hoped to *secure the right to build bases at some point in the future.* As the JCS explained:

> The utilization of the word base…in connection with the areas in which military rights are desired [is] not intended to imply necessarily the permanent garrisoning of troops or stationing of aircraft or naval bases in foreign territory during peacetime or even wartime. There is a distinction between "rights" desired which can be exercised when necessary, and the actual establishment, garrisoning, or maintenance of bases. Whether or not the United States intends to take advantage of rights at any particular site will depend on a number of factors, such as the current strategic concept, the international situation, new weapons of war, and the material manpower resources available to the armed forces of the United States.[247]

Consistent with this thinking, US planners also began to argue that US *de facto* "right of control" over the forces on a base should no longer be the minimum acceptable negotiating position when seeking basing rights.[248] In other words, the planners argued that shared and participating bases could serve US interests just as well as exclusive bases. US planners apparently concluded that the risks of having other nations put constraints on US operational freedom of action could be

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[245] Converse, pp. 82-86; 152; see also Baker, *American Soldiers Overseas*, pp. 52-53.

[246] Converse, p. 101.

[247] As cited in Converse, p. 159.

[248] Converse, pp. 159-60

mitigated by having in place a large number of these basing rights or temporary access agreements in place with a variety of countries, which would increase the likelihood that when push came to shove, the military could gain basing rights or access in at least some countries. As will be discussed later in the report, much the same thinking is behind the new US global military posture.

A Grave and Gathering Threat

In addition to worries about negotiating postwar basing access, US strategists were becoming increasingly worried about the increasingly ominous turn of the Soviet Union's postwar actions. Even before the war ended, the Soviet Union was increasingly at odds with the United States and Britain over the fate of Germany and Eastern Europe. By the winter of 1945-46 Washington was lodging furious diplomatic protests over continued Soviet troop presence in northern Iran. In February 1946, Joseph Stalin, declared that "world capitalism proceeds through crisis and the catastrophes of war."[249] American politicians took the speech as a threat; one Supreme Court Justice described the speech as a declaration of World War III.[250]

When the American Embassy in Moscow was asked by the State Department to comment on Soviet intentions, George Kennan—an embassy official who had lived in Moscow since 1933—responded with the famous "Long Telegram," which argued that the Soviets were determined to destroy the American way of life and would do everything they could to oppose America. Soon thereafter, British Prime Minister Sir Winston Churchill gave his famous "Iron Curtain" speech in Fulton, Missouri.[251] Then, in August, 1946, the Soviets demanded that the Turkish government provide Russia with shared basing rights in the Dardanelles. After President Truman ordered a naval task force to the area some officials thought war was likely.[252]

Although the Dardanelles crisis abated, more and more US political and military leaders were certain that more clashes would follow, and that the United States and the Soviet Union were on an ideological collision course. However, these leaders also understood that most nations, and even the American people, did not yet recognize the Soviet Union—an important ally in World War II—as a grave and gathering threat. The time was not yet ripe to begin to confront the Soviet Union more overtly.

As a result, the US military continued the rapid abandonment of its huge wartime campaign basing structure. The reluctance of foreign countries to accept US bases on their territory, combined with the exuberant postwar demobilization and budget reductions ordered by the Administration and Congress, hastened the process. By 1947, the number of exterior US bases had fallen to 1,139—nearly half of the wartime high of over 2,000 installations. Moreover, many

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[249] See "Churchill's Fulton Speech," at http://www.johndclare.net/cold_war7.htm.

[250] Converse, p. 157.

[251] "Churchill's Fulton Speech." A full copy of Churchill's impressive speech can be found online at http://www.nationalcenter.org/ ChurchillIronCurtain.html.

[252] Converse, p. 167.

of the bases were occupation bases located in Germany and Japan, which the US military planned to close.[253] Still, the number of bases overseas still far exceeded the number planned for the final steady-state US global military posture. As will be seen, this gave US defense posture planners a great deal of flexibility as the postwar era evolved.

[253] Blaker, *United States Overseas Basing*, pp. 30-33.

VI. THE TRANSOCEANIC ERA, AKA THE COLD WAR, 1947-1989: ADOPTING A NEW GARRISON POSTURE

SETTLING IN FOR A LONG COLD WAR

Two series of events marked 1947 as a turning point in American postwar thinking, and the starting point of a new strategic era. First, in early 1947, the Soviets helped instigate the collapse of order in Greece. Despite the Soviet interference, Great Britain, which was struggling economically after the war, reluctantly announced it would end its aid program to that country. In response, on March 12, Truman asked Congress to approve a $400 million aid program for both Greece and Turkey, and in the process announced a new national policy to support countries and peoples "resisting attempted subjugation by armed minorities or by outside pressure." In effect, the so-called Truman Doctrine committed the United States to resisting any further expansion of the Soviet Union, if at first only through economic means. Soon thereafter, the United States implemented the Marshall Plan, designed to aid the countries in Western Europe, especially those abutting the forward edge of the Soviet Empire, to get back on their feet economically.[254]

The second event that helped mark the postwar turning point was the publishing of "The Sources of Soviet Conduct," an article written by a "Mr. X" in the July edition of the prestigious journal *Foreign Affairs.*[255] Mr. X was diplomat George Kennan, and the article was a synopsis of the aforementioned Long Telegram he had written to the State Department a year earlier. The article arguably had as galvanizing an influence on US national leadership and the American public as Alfred Thayer Mahan's work did 57 years before.

Together, these two events augured a transition to a new third phase of US national security policy, which was characterized by an intense ideological-military competition with the Soviet Union. Because the Soviet Empire was a continental empire built through the gradual occupation and subjugation of the states abutting its borders, the primary national security mission of the US armed forces thus quickly became "containing" the expansion of communism, primarily by deterring and resisting efforts by the Soviet Union to forcibly expand its empire by direct attack or proxy wars. To stop further Soviet expansion, the United States would have to base and maintain military forces around the periphery of the Soviet Empire. This prompted Samuel Huntington to refer to this period as the Transoceanic Phase of national security policy. Of course, most people now know and refer to this era as the Cold War—a four-decade long

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[254] Daniel Yergin, *Shattered Peace: The Origins of the Cold War* (Boston, MA: Houghton Mifflin Co., 1977), pp. 280-85.

[255] George Kennan, "The Sources of Soviet Conduct," found online at http://www.historyguide.org/europe/kennan.html.

national emergency during which the United States and Soviet Union prepared for, but did not fight, a third world war.[256]

The term Cold War is especially apt because the US global military posture that subsequently evolved, as first envisioned by the Joint Post War Committee, would be one optimized for *forward deterrence and warfighting*. However, in contrast to the JWPC's hedging posture to account for any number of peer competitors, the new global posture would be focused squarely on the Soviet Empire. As the threat of Soviet expansionism became clearer, US planners began to rethink their long hesitation about assembling, manning, and maintaining standing garrisons on foreign soil. Prior to this time, the only two times the United States had maintained an enduring garrison inside the national boundaries of a sovereign power was in the Panama Canal Zone and in China—and in both instances the US forces operated on what was, in effect, US sovereign territory. Now, in contradiction to all planning conducted since 1942-43, US strategists began to argue for the establishment of permanent external bases inside the territory of its allies in Europe and Asia. The result would be an entirely new type of military posture, perhaps best titles the Garrison Posture.

Indeed, the titles Cold *War* and Garrison Posture are complementary, as the former helps to explain how the US diplomats were gradually able to overcome the natural postwar reluctance of foreign governments to allow garrisons of US troops on their territory. Between 1945 and 1950, Soviet actions gradually convinced more and more nations that communist ideology in general, and the Soviet Union in particular, posed a mortal threat to their freedom. Given the poor condition of their postwar economies and militaries, this prompted many nations to reconsider their refusal to allow US garrisons inside their sovereign borders.

It was this clear perception of a shared ideological and "wartime" threat that ultimately allowed the United States to erect what was to become the most expansive "peacetime" global military posture in its history. As long as the perception of a shared mortal threat existed, the United States would have little trouble gaining the basing rights it needed to construct and maintain bases in foreign countries.

JCS 570/83: GOING GLOBAL (ON THE CHEAP)

The international perception of a shared threat had not yet fully formed in 1947; it would take several more years before this would happen. Therefore, it was not yet clear to US strategists that they would be able to successfully negotiate access to external foreign bases. Nevertheless, new US posture plans slowly began to take concrete form and shape as the JCS began to develop their first formal war plans against the Soviet Union. These efforts, begun in the summer of 1947 after the announcement of the Truman Doctrine, were preceded by a series of studies, under the

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[256] For a thorough description of Cold War/Garrison Era, see Joseph Smith, *The Cold War, Second Edition, 1945-1991* (Historical Association Studies: Blackwell Publishers, 1997). CNN also has an excellent interactive website on the Cold War at http://www.cnn.com/SPECIALS/cold.war/episodes.

collective code name of *Pincher*. The purpose of these studies was to identify probable Soviet courses of wartime action in specific regions, as well as options for US counter-responses.[257]

The *Pincher* studies concluded that, barring a miscalculation, the Soviets would not resort to war for at least three years. Should war occur, however, the Soviets would likely conduct simultaneous overland offensives in Europe and the Middle East. Planners judged that the Soviets would overrun continental Europe, but not the British Isles. They also concluded that US and allied forces would be able to stop, or at least delay, an expected Russian thrust towards the Suez Canal. Based on these calculations, and given the general lack of readiness in US ground forces in 1947, the US would pursue an "offset strategy"—that is, it would mount a long-range air campaign using both atomic and conventional weapons against Soviet urban and industrial targets in order to destroy the Russian's will and capacity to sustain wartime operations in Europe and the Middle East.[258]

Subsequent US posture deliberations were thus strongly influenced by the capabilities of the aircraft that would prosecute such a campaign. The combat radius of the World War II four-engine B-29 bomber was approximately 2,000 nm. Consequently, the planned basing posture outline in JCS 570/40—the hedging posture adopted immediately after the war was over—would not support wartime operations against the Soviet Union. As the JCS planners wrote, "The US, Atlantic Islands, and other base areas do not provide adequate bases, or coverage of target systems in the USSR, for a strategic air campaign…." A long-range air offensive against the Soviet Union therefore would require three major additions to the basing network envisioned in JCS 570/40. These included new air bases in Europe; a ring of polar air bases enabling over-the-pole attacks into central Russia; and a ring of bases along Russia's southern flank—extending from North Africa, through the Middle East, and on to India—to enable attacks into southern Russia.[259]

Given the assumption that the Soviets would likely overrun all of continental Europe, the only logical place to build bases in Europe was on the territory of America's closest ally—Great Britain. Although B-29s operating out of Britain could not attack Soviet industrial targets east of the Urals, they could range all of continental Europe and western Russia, to include Moscow and the oil fields in Romania. By mid-1947, at the urgent request of the United States, the British had re-opened and improved five mothballed World War II airfields in East Anglica, allowing them to support heavy B-29 units. Four additional bases were identified for activation should US bomber forces based in Britain be expanded.[260]

US plans for polar and southern bases were more problematic. The United States had not yet gained permission to build air bases in Canada, Greenland, Iceland, or the Azores—much less in

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[257] Converse, p. 170.

[258] Converse, pp. 170-71.

[259] Converse, pp. 124-25; 171-73.

[260] Converse, p. 172.

countries in North Africa, the Middle East, or India. In addition, the costs associated with building new bases in these countries appeared to be prohibitive. The estimated cost to build the JCS Plan 570/40 exterior basing network of 70 bases was $5 billion. In 1947, the total amount of annual military appropriations was expected to range between $2 and $4 billion, steady state. Even if $200 million was earmarked for exterior base construction, it would take 25 years to complete the network. Therefore, to save money, the new basing plan for war against the Soviet Union, outlined in JCS Plan 570/83, reduced the number of planned exterior bases to 53 and eliminated any reference to forward bases along Russia's southern flank. Instead, it included four new primary base areas (Alaska/Aleutians; Canada; Greenland/Iceland; and Newfoundland/ Labrador) that sat astride the northern access routes to Soviet Russia. In other words, defense planners concluded they could afford either the polar bases, or the southern rim bases, but not both.[261]

Consistent with this relatively modest exterior basing plan—which reflected both the initial uncertainty over Soviet postwar intentions and the severe immediate postwar fiscal pressures facing the US military—the number of exterior bases in the residual World War II campaign basing network continued to decline rapidly from its wartime high. By 1949, the number of exterior bases in the network had declined to 582—less than half the number of network bases in just two years before, and about a quarter the size of the final World War II campaign network.[262]

1949-1953: A REMARKABLE TURNAROUND

After 1949, however, the strategic climate began to change substantially. The fierce ideological struggle first foretold by the Navy's F-14 planning section in late 1944, and which had preoccupied US political and military leaders from at least 1947 on, was beginning to take concrete shape. The Soviets' occupation of Eastern Europe in 1945-46, its meddling in Greece and Turkey in 1947, and its blockade of Berlin in 1948 had convinced the major western European powers that the threat of further Soviet expansion was a real one. The first key indicator of this change in thinking was marked by the 1948 Treaty of Brussels, a mutual defense pact signed by Great Britain, France, the Netherlands, Belgium, and Luxembourg. However, the leaders of these nations knew that only American military power could counter more aggressive Soviet moves, and negotiations for a broader security alliance with the United States began almost immediately.[263]

Another indicator of the emerging ideological struggle was that US political leaders had begun to grudgingly reconsider their long-standing antipathy toward "entangling alliances." The 1947 Inter-American Treaty of Reciprocal Assistance, better known as the Rio Pact, was the first formal agreement ever signed by the US government which committed itself to the defense of

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[261] Converse, pp. 174-81.

[262] Blaker, *United States Overseas Basing*, p. 32.

[263] The Treaty of Brussels was signed in March, 1948. See "NATO," found at http://en.wikipedia.org/wiki/ NATO.

other nations. Although the Rio Pact was seen at the time as little more than codifying the long-standing Monroe Doctrine, it indicated a new willingness of US leaders to enter into mutual defense treaties and other binding security relationships. It thus previewed a powerful new tool that US leaders would employ with great effect to fight the further expansion of communism and help pave the way for forward US basing access.[264]

Indeed, in April 1949, soon after the Rio Pact and Treaty of Brussels were ratified, the United States joined the North Atlantic Treaty Organization (NATO)—a collective security organization dedicated to the defense of Western Europe. In addition to the United States, member states included Canada, Great Britain, France, Italy, the Netherlands, Norway, Denmark, Luxemburg, Belgium, Portugal, and Iceland.[265] By joining this alliance, the United States committed itself to the defense of any of the NATO signatories threatened by a Soviet attack—or any other outside power. Therefore, while a strategic air campaign might still remain the primary means to defeat the Soviet Union should war break out, the US government was now compelled to base ground and tactical air forces in continental Europe—a notion it had rejected as late as 1948. On the other side of the coin, all NATO signatories were compelled to reconsider US requests for basing rights that they had consistently denied since the end of the war.

The United States was also reconsidering the effort required to confront the communist threat. Between August 1949 and June 1950, the Soviets exploded their first atomic bomb; China fell to the Communists; and North Korea invaded South Korea. Up though the middle of 1950, President Truman and a large segment of US political leadership were unconvinced that the US should substantially increase its expenditures on defense, preferring instead to combat the expansion of communism through economic instruments. After the North Korean invasion, however, Truman signed NSC-68, a 58-page classified document originally published by the National Security Council in April 1950. This document, which laid out the rationale for a coherent strategy of global containment of the Soviet Empire, also triggered a massive rearmament program that led to much higher "peacetime" US defense budgets.[266] As a result, costs were no longer as great an obstacle to the development of a more robust US exterior basing structure.

The signing of the Rio Pact, the formation of NATO Treaty, and the adoption of NSC-68 triggered an immediate reappraisal of JCS Plan 570/83 and its modest exterior basing structure of 53 bases. United States' plans for its exterior basing network became much more expansive, with more (forward) main operating bases, peripheral bases, and connecting intermediate bases. For the strategic air campaign itself, US military planners envisioned an exterior basing network that would include a ring of some 150 air bases around the periphery of the Soviet Union. These would be augmented by bases housing additional ground and tactical air force bases in Europe

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[264] See "Inter-American Treaty of Reciprocal Assistance," at http://en.wikipedia.org/wiki/Rio_Treaty.

[265] See "50th Anniversary of the North Atlantic Treaty," found online at http://www.trumanlibrary.org/nato/nato.htm.

[266] NSC-68, found online at http://en.wikipedia.org/wiki/NSC-68.

and the Pacific; hundreds of small installations to gather intelligence and provide communications; and a supporting global logistics basing infrastructure.[267]

The costs for this dramatic expansion of the US base network expansion would be defrayed by an unexpected source: the allies themselves. In return for the protection provided by US forces, most European nations agreed to pay for the construction of US exterior bases—even bases reserved for exclusive US military use. Before 1949, the hope was that foreign powers would build bases and the US could pay for the right to use them when necessary. Now, the allies would actually pay the United States to occupy bases that they themselves built! These so-called offset payments were to balance the infusion of cash that forward-based US troops and their families poured into local economies. In lieu of cash payments, many countries agreed to buy US military equipment to equip their armed forces. The net result: a distributed allied base building program that enabled the US overseas basing network to expand much more rapidly than might otherwise have been expected—and at negligible cost to the new US Department of Defense. In addition, the US defense industry benefited from the adoption of many US-built systems as standard NATO military equipment.[268]

The shared international recognition of the Soviet threat, a new willingness of allies to base US troops on their territory, and the ready availability of both US and allied funds for the construction of bases triggered a remarkable turnaround in the US postwar basing network. The US occupation bases in Germany scheduled to close instead began a gradual conversion into permanent main operating bases, which included housing for the dependents of US forward-based troops. Great Britain opened additional airfields for bombers and fighters, and US Navy ships enjoyed participating basing rights at all British naval bases. Portugal withdrew its objections to a permanent US presence in the Azores, and reauthorized US base access to bases there as well as on the Cape Verde Islands. In 1951, Denmark approved the building of a huge US airfield at Thule, Greenland, and newly independent Iceland once again granted permission for US bases. That same year, France approved a US request for five new bomber bases in French Morocco. The following year, in 1952, the French signed a bilateral agreement with the United States that gave the latter permission to build or take possession of air bases in eastern France, and to build a major new supply depot in Chateaurouz. These bases completed a newly constructed logistics air bridge from the United States directly into south and central Germany.[269]

Unsurprisingly, then, 1949 proved to be the nadir of the US postwar basing network. The signing of the Rio Pact, NATO, and the erection of numerous Korean campaign bases caused the total number of number of US exterior bases to increase from 582 bases in 1949 to 815 in 1953, an impressive 40 percent increase. Moreover, as indicated by Figure 1, the exterior basing network was truly global in scope, with US bases found in every region except for South Asia.

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[267] Baker, *American Forces Overseas*, p. 49.

[268] Baker, *American Forces Overseas*, pp. 67-69.

[269] Baker, *American Soldiers Overseas*, pp. 51-53.

Figure 1: Number of US Overseas Base Sites by Region, 1947-1988[270]

	1947	1949	1953	1957	1967	1975	1988
Atlantic (including Canada, the Atlantic Islands, and Europe)	506	258	446	566	673	633	627
Pacific	343	235	291	256	271	183	121
Latin America	113	59	61	46	55	40	39
Africa/Middle East	74	28	17	15	15	9	7
South Asia	103	2	-	-	-	-	-
Totals	1,139	582	815	883	1,014	865	794

A NEW LEASEHOLD EMPIRE: BUILDING THE TRANSOCEANIC ERA'S GLOBAL BASING NETWORK

After the Korean War, the US exterior basing network continued its steady expansion. Between 1953 and 1957, the United States added over 100 bases the Atlantic Region alone. A key impetus for this second expansion was the airbase network needed to support the large medium-range bomber fleet fielded by the US Strategic Air Command in the 1950s. As will be discussed further in the report, between 1950 and 1956, SAC deployed over 1,300 of the swept-wing, jet-engine B-47 *Stratojets* and an additional 250 RB-47s, a modified reconnaissance variant of the bomber. Although highly advanced for their time, these planes had a combat radius similar to the World War II B-29—approximately 2,000 nautical miles. As a result, SAC still required a large number of exterior dispersal and recovery bases to execute its nuclear warfighting plans.[271] This led to the construction of three large bases in Spain, and more bases in Italy, Greece, Turkey, and Libya.[272] However, the increase in bases in Europe was offset, to some degree, by the closure of numerous Korean campaign bases and the consolidation of other US bases in the Pacific.

The US basing network expanded yet again between 1957 and 1967 as NATO defense plans matured and the war in Vietnam caused a modest spike in the number of Pacific bases. As

[270] James R. Blaker, *United States Overseas Basing*, p. 32. Note: the data found in Figure 1 are consolidated numbers; each "base" includes all satellite facilities within a 25 mile radius. Therefore, the number of individual sites in the network is in actuality far higher than the numbers suggest.

[271] See "B-47 *Stratojet*" at http://www.fas.org/nuke/guide/usa/bomber/b-47.htm.

[272] Baker, *American Soldiers Overseas*, pp. 50-53.

indicated in Figure 1, the bulk of the new bases were found in Europe. By 1960, the basing network was home for over 300,000 military personnel in Europe and about 100,000 in the Pacific. These personnel were joined by another half-a-million family dependents.[273]

Between 1967 and 1988, the penultimate year of the Cold War/Garrison Era, the total number of US exterior bases gradually declined to 794. However, even as the number of bases went down, the number of forces based overseas actually continued to climb. By 1985, the US military based 358,000 military personnel in Europe; 125,000 in East Asia; and 9,000 in the Persian Gulf.[274] The vast majority of these forward-based forces came from the US Army and Air Force. In Europe, the Army based four heavy divisions, four separate brigades, two armored cavalry regiments, and the equipment sets for several more brigades. In the Pacific, the Army maintained a division in both Hawaii and Korea, with separate brigades in Alaska and in the Panama Canal Zone.[275] USAFE—US Air Forces, Europe—maintained dozens of fighter and fighter-bomber squadrons in Germany, Italy, and Britain, and the Pacific Air Forces based aircraft in Alaska, Hawaii, Guam, the Philippines, and Japan.

The Navy and Marines based far fewer forces forward than either the Army or the Air Force. Hawaii was home base to numerous surface combatants, submarines, and a single Marine brigade. The Navy's Seventh Fleet was home-ported in Japan, operating out of the well-equipped shared facilities in Yokosuka and Sasebo. After 1973, the Navy home-ported an aircraft carrier battle group in Yokosuka (the only aircraft carrier ever based in a foreign country), and later home-ported an Amphibious Ready Group in Sasebo.[276] Starting in 1956, the Marines based a division-wing team and a Marine Expeditionary Unit in Okinawa. The US Sixth Fleet home-ported its command ship and a small number of vessels in Europe, generally out of shared and exclusive facilities in Italy. Later, the US Fifth Fleet home-ported a command ship in an exclusive naval base in Manama, Bahrain.[277] However, the total number of forward-based naval personnel never approached that of Army and Air Force personnel.

When reviewing Figure 1, one is struck by the remarkable stability of the US Cold War exterior basing network between 1953 and 1988—a period covering from the end of the Korean War to the end of the era. Over this 35 year period, the average number of bases in the network was 874, with a maximum deviation of 140 bases. Disregarding the high in 1967, the average was 839 bases, with a maximum deviation of 45. The bulk of exterior bases were consistently found in Europe, with the majority of the remaining bases being located in the Pacific—a reversal in the

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[273] Baker, *American Soldiers Overseas*, p. 53.

[274] Henry, "Transforming the US Global Defense Posture,"

[275] Chapter 10, "Department of the Army Historical Summary, FY 81," found online at http://www.army.mil/cmh/books/DAHSUM/1981/ch10.htm.

[276] Norman Polmar, *Ships and Aircraft of the US Fleet*, 16th Edition (Annapolis. MD: Naval Institute Press, 1997), p. 104.

[277] As will be discussed, the US Navy has maintained a permanent presence in the Gulf since the establishment of the Middle East Force (MIDEASTFOR) in 1949, operating out of Bahrain (first at a participating British colonial base, later at an exclusive exterior base). Over time, the facilities in Bahrain were dramatically improved. These facilities now support the US Fifth Fleet. See http://www.globalsecurity.org/military/facility/manama.htm.

basing priorities evident in prewar, wartime, and early postwar posture plans. This is an important point that bears repeating: although war never broke out between the United States and the Soviet Union, the Cold War/Garrison Era military posture was very much a *wartime* basing posture, with Europe as the primary expected combat theater. The stability of the era's overseas basing network, and its emphasis on forward bases in Europe and the Atlantic, reflected the unchanging nature of the primary US national security threat.

As mentioned earlier, however, the stability of the Cold War basing network also reflected the shared international appreciation of the Soviet threat. Although many of the exterior bases in the Cold War/Garrison Era were converted World War II campaign bases, they were erected with the willing consent of the governments following the negotiation of some sort of security or economic agreement with the US government. That said, the United States was not averse to resorting to traditional imperial methods to bulwark its network, when necessary. In 1953, for example, a CIA-sponsored covert operation installed the staunchly anti-communist Shah of Iran as leader of that strategically located Middle Eastern country. Nevertheless, the primary reason the US Cold War exterior basing network was so stable was because it was welcomed by so many foreign governments.[278]

As one would expect, the stability of the threat and the extent of the US basing network had a profound effect on the remaining global posture components. In general, because US military forces were garrisoned in superb forward main operating bases in their expected wartime operating areas, US defense planners were relatively certain that they would not have to fight there way into a theater, or to fight to assemble campaign bases once there. They had ready access to all the land bases, ports, and airfields necessary to fight the war. Put another way, the Cold War/Garrison Era was an era *of assured forward basing access*. As the following sections will show, this condition had a powerful effect on the remaining components of the Cold War/ Garrison Era global military posture.

TOWARD FORWARD-DEPLOYED "COMBAT CREDIBLE" FORCES

In the first decade-and-a-half of the Cold War/Garrison Era, because the primary expected theater of operations was a continental theater, and because nuclear warfighting held so much sway in American strategic and military thinking, the Army and Air Force enjoyed the initial advantage in defense allocation fights. Forward Army garrisons and Air Force tactical air bases located along the edge of the Soviet frontier would serve as a "tripwire" force while the nuclear-armed Strategic Air Command would provide the primary muscle for deterrence and warfighting. Indeed, it was the central relevance of the Air Force to the era's early national security strategy of *massive retaliation* that caused it to become the nation's dominant "peacetime" armed service—a position the Navy had jealously held and guarded during the Oceanic Era. This dominance was especially evident after 1953, as the Eisenhower Administration's "New Look" defense program took effect, and as long-range airpower and

[278] For a through discussion of this operation, see Mark J. Gasiorowski, "The 1953 Coup D-etat in Iran," found online at http://iran.sa.utoronto.ca/coup/web_files/markcoup.html.

atomic weapons became the primary means to project US military power across transoceanic distances.[279] As a result, by the mid-1950s, the Air Force was receiving the lion's share of US defense resources.[280]

In the first decade-and-a-half following the Second World War, Navy and Marine Corps leaders thus had a hard time justifying their relevance. With no enemy fleet to fight, large standing garrisons on allied soil supported by an increasingly efficient land-based infrastructure, no forward bases to seize, no continental invasions to plan for, and with naval maneuver threatened by atomic weapons, the Navy and Marines rapidly lost both clout and resources. The number of active aircraft carriers fell to seven by 1950, and the Navy's new super-carrier, the *United States*, was canceled, leading to the famous "revolt of the admirals."[281] As a result, by 1950 the battle fleet had shrunk from its World War II high of 6,768 ships to 634 ships, and the Marine Corps was reduced to two skeletal divisions.[282] The impressive World War II battle fleet had been eviscerated.

Just as its fleet was shrinking, however, the Navy was taking on additional global responsibilities. Recall that during its initial postwar planning exercise, the Navy (F-14) assumed that the Royal Navy would patrol from the North Atlantic to the Indian Ocean. However, it soon became clear that the proud Royal Navy was not up to this task, and that the role of patrolling the world's sea lanes would increasingly fall to the United States.[283] Partly to meet this new role, partly to define a new naval mission, and partly to arrest the precipitous decline of its battle fleet, Navy leaders argued forcefully that the Navy should once again return to maintaining forward-deployed naval task forces around the globe.

For the Naval Expeditionary Posture during the Continental Era, US forward-deployed patrols consisted of small squadrons of ships designed to protect US merchantmen in peacetime and to scatter and wage independent commerce raiding during wartime. For the Service Expeditionary Posture during the Oceanic Era, with the battle fleet concentrated in home waters, less capable naval units operated forward to show the flag and protect US interests. For the Transoceanic Era's new Garrison Posture, the Navy and Marines argued that US forward-deployed naval forces should consist of powerful, self-contained *combat credible* naval strike and maneuver

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[279] For a thorough description of the New Look, see Saki Dockrill, *Eisenhower's New Look National Security Policy, 1953-1961* (New York, NY: St. Martin's Press, 1996). For a shorter, more concise treatment on the economic reasoning behind the New Look, see "John Lewis Gaddis on President Eisenhower's Military Strategy," found online at http://www.pbs.org/wgbh/amex/bomb/filmmore/ reference/interview/gaddis7.

[280] It was during this period of Air Force ascendancy that Huntington wrote his article, "National Security Policy and the Transoceanic Era."

[281] See Hagan, *This People's Navy*, pp. 339-41. For a longer, more detailed account of the "revolt," see Jeffrey G. Barlow, *Revolt of the Admirals: The Fight for Naval Aviation* (Washington, DC: Naval Historical Center, 1994).

[282] "Marine Corps History," found at http://globalsecurity.org/military/agency/usmc/history.htm. A great recounting of the trying years for the Navy after World War II is found in Chapter 12, "In Search of a Mission," in Hagan, *This People's Navy*.

[283] Hagan, *This People's Navy*, p. 337.

groups. Forward-deployed combat credible naval forces would help to deter Soviet probes or incursions beyond their established frontiers, and could immediately transition to war and begin to mount attacks along the flanks of the Soviet Union if deterrence failed. In this regard, the global patrols also served a new fleet scouting role—conducting reconnaissance, surveillance, and other means of ascertaining and reporting tactical information about Soviet naval, ground, and air units and forces.[284] This new role was similar to the role envisioned for forward "perimeter bases" at the end of World War II.[285]

The practice of deploying and employing rotational US Carrier Battle Groups (CVBGs)—mobile, defended air bases—out of two or three fleet "operating hubs" came to define the battle fleet's basic operating pattern through the end of the Cold War/Garrison Era and beyond.[286] Similarly, rotationally deployed Amphibious Ready Groups (ARGs), with embarked Marine Battalion Landing Teams (BLTs), Marine Amphibious Units (MAUs), or Marine Expeditionary Units, provided the nation with forward-deployed patrols consisting of ready, small-scale combined arms combat units. While on these forward-deployed patrolling and scouting missions, both of the naval services excelled at crisis response operations at the lower end of the conflict spectrum, including small-scale, unilateral punitive strikes—just as they had in the earlier Continental and Oceanic Eras.[287] These roving naval patrols enabled the Army and Air Force to concentrate on improving their forward garrisons and practicing and honing their skills for expected wartime missions and operations in Europe and Korea.

The Army and Air Force also deployed forces during the Cold War/Garrison Era. However, these forward deployments generally were mounted either to support a campaign or a particular operational requirement. For example, in the 1950s and early 1960s, the Strategic Air Command rotationally deployed bomber wings to bases in Northern Africa. In 1979, as part of the Camp David Peace Accords between Egypt and Israel, the United States agreed to contribute a battalion to a peace-keeping mission known as the Multinational Force and Observers in the Sinai Desert. The Army decided to meet this commitment by rotating battalions from the United States rather than permanently basing a small force in the Sinai. The Army and Air Force both routinely forward-deployed forces to train and exercise with allied nations and friendly powers. However, only the United States Navy and Marines consistently conducted long-duration global patrols using forward-deployed forces.

The ready availability of forward bases helped the US Navy and Marines to sustain the continuous six-month patrol deployments of naval task forces that became the standard in the

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[284] Hughes, *Fleet Tactics*, p. 11.

[285] The significance of maintaining "combat credible" forces forward is well captured in Swartz, *Sea Changes: Transforming US Navy Deployment Strategy, 1775-2002*, pp. 48-49.

[286] As described in Swartz, the first rotational hubs were in the Mediterranean and the Western Pacific. In the 1970s, a permanent Middle East Force was established. By the 1980s, the Middle East and Indian Ocean had become a third hub. See *Sea Changes: Transforming US Navy Deployment Strategy, 1775-2002*, pp. 48-45.

[287] As described by Hagan, in President Eisenhower's "New Look" Defense Strategy, the aircraft carrier and forward-deployed Amphibious Ready Groups played the same role for the United States in the Garrison Era as the frigate played for the British Empire during the age of sail. See Hagan, *This People's Navy*, p. 350.

Garrison Era. In the Atlantic and Mediterranean, the US Sixth Fleet had shared access to all NATO ports, and especially the state-of-the-art naval facilities in Great Britain, Spain, the Netherlands, and Italy. In the Pacific, the Navy had access to superb exterior sovereign naval bases on Hawaii and Guam, to a huge exclusive naval base in Subic Bay, Republic of the Philippines, and access to both exclusive and shared facilities in Japan. In addition, the Navy had participating base rights in a number of Pacific countries, notably South Korea, Australia, and Singapore. Finally, the Navy enjoyed exclusive and shared access to a number of naval air facilities scattered around the globe that provided logistical support to its deployed battle groups and operational support to its large fleet of land-based maritime patrol aircraft.

Over the course of the Cold War/Garrison Era, the Navy's two long-time fleet hubs in Europe and the Pacific were gradually augmented by a third hub in the Indian Ocean and Persian Gulf, supported by exclusive fleet facilities at Manama, Bahrain and on Diego Garcia in the central Indian Ocean.[288] The late Cold War requirement for 15 CVBGs would have allowed the US Navy to maintain a "1.0 carrier presence" in the Mediterranean, the Indian Ocean, and the Western Pacific.[289]

The practical result of this surfeit of forward access is that the Navy and Marine Corps world views began to naturally diverge. The Navy focused its attention on fighting the Soviet Navy. The Marines focused on a new expeditionary force-in-readiness role, in which it readied itself for a host of rapid expeditionary operations up and down the conflict spectrum. Navy and Marine Corps forward-deployed operations thus became increasingly separate. The training periods and deployments of CVBGs and ARG/MAUs were not synchronized and the two units generally operated independently. The carrier task groups focused on independent strike operations, while the amphibious task groups specialized in rapid sea-based intervention operations at the lower end of the conflict spectrum, such as non-combatant evacuation operations, humanitarian and disaster relief, and small raids.

The divergence of Navy and Marine world views and the failure of separate carrier and amphibious task groups to routinely train and operate together as a coherent combined arms seabase were merely symptoms of a broader underlying cause for weakening institutional bonds. Simply put, the Cold War/Garrison Era's condition of assured forward access largely removed the operational requirement to seize and defend advance naval bases or to conduct naval maneuver—a Service Expeditionary Posture requirement that helped to link the two services so closely together during the Oceanic Era and in World War II. As will soon be discussed, this was to have an enormous impact on the postwar evolution of the World War II Global Expeditionary Movement and Maneuver System.

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[288] Diego Garcia is a British Indian Ocean Territory. The Navy Support Facility (NSF) on Diego Garcia was established on October 1, 1977, after six years as a Navy communications station. Now known as the "Footprint of Freedom," it plays a primary role in support of US military units operating in the Indian Ocean and Arabian Gulf. The island's only occupants are NSF personnel and tenants. The Air Force and Army also maintain support elements on the island. See http://www.globalsecurity.org/military/facility/ diego-garcia.htm.

[289] A "1.0 presence" means that a CVBG is on station in a every day of a given year.

THE EMERGENCE OF GLOBAL (NUCLEAR) ATTACK FORCES

Over the course of the Cold War/Garrison Era, US forward-based and forward-deployed forces were gradually augmented by a new generation of forces that could operate relatively independently over transoceanic ranges. Prior to the era, the only forces capable of independent transoceanic movement and action were naval forces, but their movement was relatively slow. The arrival of long-range bombers and intercontinental ballistic missiles allowed a great power to strike targets and to achieve effects over transcontinental and intercontinental ranges at unprecedented speeds. When coupled with the development of nuclear and thermonuclear weapons, the appearance of these new global attack forces had a major impact on the strategic competition between the United States and the Soviet Union.

In this regard, and consistent with post-World War II war planning, the newly formed Strategic Air Command began grappling with the problem of delivering coordinated nuclear strikes against the Soviet Union.[290] As has been discussed, the most capable platform available to launch the attacks was the B-29 *Superfortress*, which had carried the fight to mainland Japan from bases in China and the Marianas. With a standard bomb load, this plane had a combat radius of approximately 2,000 nautical miles. These operating ranges, impressive as they were in World War II, were less than ideal when considering a strategic air campaign against a nation the size of the Soviet Union. It required that SAC have access to scores of forward airfield around the Soviet Union (recall that early planning called for a minimum of 150 air bases)—airfields that were themselves vulnerable to interdiction and attack.[291] As a result, one of the most pressing operational goals for SAC planners was to increase the operational range of SAC bombers. Increased range would at once increase SAC's strike coverage over Soviet territory and decrease the need to base the bombers so close to Soviet territory.

Taking a historical cue from the Navy's combat logistics forces which were designed to decrease the fleet's dependence on oversea bases, SAC's first step toward fielding a global attack force involved perfecting the art of aerial refueling and developing a dedicated aerial refueling force. While aerial refueling was first demonstrated in the 1920s, it was not until after the war that SAC conceived of long-range bombers and a supporting aerial refueling force as forming a new type of global attack system. For example, SAC's first strategic bomber, the B-50, was nothing more than a World War II B-29 modified to carry the large and heavy first-generation nuclear bombs. However, when supported by new KB-29s aerial tankers, also converted B-29 bombers, the B-50s literally could strike any target on the globe from bases in CONUS. In 1949, for example, forward-based KB-29s refueled a B-50 three times, allowing it to circumnavigate the globe in 94 hours without ever touching down at an air base.[292]

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[290] SAC was formed in March, 1946. See "Strategic Air Command," found online at http://www.globalsecurity.org/wmd/agency/sac.htm.

[291] Baker, *American Soldiers Overseas*, p. 49.

[292] See "B-50 *Superfortress*," found online at http://www.globalsecurity.org/wmd/systems/b-50.htm.; and "Aerial Refueling," at http://en.wikipedia.org/wiki/Aerial_refueling.

Aerial refueling was especially critical as SAC began to shift from propeller-driven to jet bombers, because the unrefueled combat radius of its first jet bomber was not much more than the B-29/50 it replaced. The aforementioned B-47 *Stratojet* was a technological marvel at the time—a graceful, swept-wing aircraft with jet engines slung under the wings in pods that was faster than many of the fighters of the day. Indeed, its radical design proved so successful that it became the basis for the follow-on B-52 bomber, the Boeing 707 commercial airliner, and the KC-135 aerial tanker. However, because it had a combat radius of only 2,000 nm, it was as dependent on forward bases as the piston-engine bombers it replaced.[293]

The new B-47 would thus be accompanied and supported by the first true aerial refueling aircraft, the piston-engined KC-97 *Stratotanker*, which was fielded in 1950. The first aerial refuelers were all converted B-29 bombers with fuel tanks in their bomb bays and the most rudimentary of fuel dispensing systems. A tanker crew would simply reel out a hose to be snagged by a hand-held grapple used by a trailing B-50's aircrew. Once snagged, the refueling probe would then be connected manually to the plane's fuel system. In contrast, the KC-97 was a specially modified B-29 with a greatly fattened fuselage designed for greater interior volume, and an entirely new rigid flying refueling boom that could be "flown" by a boom operator in the tail of the tanker into an exterior fueling receptacle on a trailing aircraft. This made air-to-air refueling safer, faster, and more efficient. Unfortunately, the KC-97 was much slower than the B-47, which meant that the refueling operation had to begin at a high altitude so that the KC-97 could gain a higher speed as it descended. Later KC-97s were given one jet engine under each wing to allow them to fuel the B-47s in level flight.[294]

Between 1950 and 1956, the Air Force built no less than 816 KC-97s. Although subsequently replaced by jet tankers, these airplanes pioneered the art of aerial refueling. Moreover, when not rigged as a tanker, the KC-97 could also serve as a cargo aircraft capable of hauling either 34 tons of cargo or 96 combat-equipped personnel—introducing a dual-purpose design common to all subsequent Air Force tankers.[295]

By 1955, SAC's combined force of over 1,300 B-47s and 500 operational KC-97s constituted the world's first truly global attack force. Tankers staged at forward bases in Alaska and Greenland could top off B-47s flying from the United States over the North Pole toward Russia. However, SAC exploited its availability of forward bases to complicate greatly the Soviet air defense problem. In the early 1950s, it introduced "reflex operations"—forward deployments of bomber and tanker wings. The first involved rotational deployments to five new SAC bases built in French Morocco in the early 1950s. Later, SAC adopted and routinely practiced an even more ambitious global dispersal program—surge deployments that spread out its bomber and tanker forces over a number bases in the United Kingdom, Spain, Morocco, Libya, Guam, and Alaska. By interspersing its tankers and B-47s along the periphery of the Eurasian land mass, SAC

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[293] See "B-47 *Stratojet*," found online at http://en.wikipedia.org/wiki/B-47_Stratojet.

[294] "KC-97 *Stratotanker*," at http://en.wikipedia.org/wiki/KC-97_Stratotanker, and "Aerial Refueling."

[295] "KC-97 *Stratotanker*," and Aerial Refueling."

threatened the Soviet Union along multiple axes of attack, compelling that country to spend enormous sums on air defenses.[296]

From the very beginning, however, SAC planners sought bombers (and tankers) with greater unrefueled ranges, because increased range translated into greater basing and attack flexibility. Indeed, design work on SAC's first intercontinental bomber, the huge B-36 *Peacemaker,* began in 1941-42 when it appeared Britain might be knocked out of the war. Designed and built before aerial refueling had been perfected, the bomber's chief design requirement was for the plane to be able to bomb Berlin and other targets in continental Europe from North America (Newfoundland) without access to forward bases—an unrefueled range of nearly 6,000 nm. The resulting piston-engine monster (later planes had four jet engines in addition to the original six piston engines) dwarfed the B-29/50. The plane could carry its payload of nuclear weapons over a combat radius of nearly 4,000 nm.[297]

The B-36, built during a time when jet interceptors were being developed, was essentially obsolete when it entered service. As a result, in the late 1950s and early 1960s, SAC introduced its first all-jet global strike system. It began replacing both its long-range B-36s and medium-range B-47s with no fewer than 744 intercontinental-range B-52 bombers, which had an unrefueled combat radius of 4,400 nm. At the same time, it began replacing its 816 piston engine KC-97s with 749 faster; more capable KC-135 jet tankers (converted B-707 commercial airliners). The longer ranges and greater speeds of both these new aircraft—when coupled with the impressive US exterior basing network then available—provided SAC even more global basing and employment options. Indeed, although SAC ultimately lost its bases in French Morocco and Libya, the longer range B-52 force prevented any coverage gaps from developing in US bomber attack plans.[298]

The switch to an all-jet, long-range global attack system also improved SAC's force responsiveness. After the Soviets launched Sputnik in October 1957, the implicit threat of attack from nuclear intercontinental ballistic missiles prompted SAC to keep a portion of its force on constant alert, either continuously in airborne orbit or on 15-minute ground alert status. By 1960, SAC maintained 33 percent of its force in this ready posture; President Kennedy subsequently ordered the alert level to be increased to 50 percent of the force. The shift from medium-range B-47s to long-range B-52s and the burgeoning KC-135 fleet helped in no small way to help SAC achieve these demanding goals.[299]

The Soviet Union also introduced its own long-range global attack forces. Its first bomber, the turboprop Tu-95 *Bear,* had an unrefueled combat radius of approximately 6,000 miles—more than enough to attack the continental United States from interior bases inside Russia using polar

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[296] See "Strategic Air Command," found online at http://www.globalsecurity.org/wmd/agency/sac.htm.

[297] See "Convair B-36 *Peacemaker*," found online at http://en.wikipedia.org/wiki/B-36_Peacemaker.

[298] See "B-52 *Stratofortress*" at http://en.wikipedia.org/wiki/B-52_Stratofortress; "KC-135 Stratotanker," at http://en.wikipedia.org/wiki/KC-135; and "Strategic Air Command.

[299] "Strategic Air Command."

routes.[300] Later, the Soviets copied the Americans and introduced shorter-legged jet bombers serviced by dedicated tankers. However, their general lack of exterior foreign bases forced Soviet attack forces to concentrate on over-the-pole attacks, which simplified the US (and Canadian) defensive problem. The United States and Canada erected the Distant Early Warning Line—a cluster of over 60 remote radar bases well north of the Artic Circle that stretched from Alaska east toward Greenland—to cue Canadian and US interceptors of the North American Air Defense Command should Soviet bombers be detected.

Both SAC and Soviet long-range bombers were subsequently augmented by nuclear-armed, land-based intercontinental ballistic missiles. Nearly all of the initial liquid-fueled *Atlas* and *Titan* ICBMs fielded by SAC were replaced between 1962 and 1967 with 1,000 *Minuteman* ICBMs. With (one-way) ranges of over 5,200 nm, these missiles could target all of Soviet territory from their underground, hardened silos located in CONUS.[301] The Soviet Union ultimately fielded over 1,000 ICBMs of its own, which were similarly capable of ranging the entire continental United States using over-the pole trajectories.

As discussed earlier, the deployment of US ICBMs allowed the rapid retirement of its nuclear-armed intermediate-range ballistic missiles based in Great Britain, Italy, and Turkey. Interestingly, some Air Force officers argued that maintaining IRBMs in forward bases strengthened deterrence because of the dilemma they caused the Soviets. Their thinking was that in case of war, the Soviets had one of two options. They could mount preemptive strikes on the close-in IRBMs, in which case US leadership would have plenty of time to launch its own CONUS-based missiles and bombers in retaliation. Alternatively, they could launch simultaneous impact attacks, in which case the longer flight time of the missiles inbound toward the United States would give the overseas missiles time to fuel and fire before they were struck. However, Albert Wohlstetter soon helped to debunk this argument, as it was based on the supposition that the US would launch on radar warning alone—something no US leader was likely to do. Wohlstetter cogently argued that the value of oversea bases lay in their contributions to *non-nuclear limited wars*, and to nuclear wars for the dispersal and recovery of bomber forces and tankers. As a result, the last of US *land-based* IRBMs were deactivated in 1963.[302]

This decision was also hastened by the deployment of the first US *sea-based* IRBMs. The first US nuclear-powered ballistic missile submarine, the *USS George Washington*, was commissioned in 1959. It conducted its first deterrent patrol starting in November 1960, carrying with it 16 *Polaris* intermediate-range SLBMs armed with nuclear warheads. The *Washington* was at sea and underway for 67 days; 66 days and 10 hours of which were spent unseen, underwater. Because of their ability to hide in the world's oceans, SSBNs carried the nation's survivable "second-strike" nuclear retaliatory force, which underwrote the nation's nuclear deterrent strategy of mutual assured destruction. Forward IRBM land bases were thus less

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[300] "Tu-95 *Bear*," found online at http://www.fas.org/nuke/guide/russia/bomber/tu-95.htm.

[301] "Minuteman Missile History," http://www.strategic-air-command.com/missiles/Minuteman/Minuteman_Missile_History.htm.

[302] Albert Wohlstetter, "On the Value of Overseas Bases," P-1877, January 5, 1960, found online at http://www.rand.org/publications/classics/wohlstetter/P1877/P1877.html.

strategically relevant than the covert mobile undersea missile base formed by the new SSBN force.

Just as the shift to longer range bombers increased SAC's flexibility and decreased its reliance on foreign bases, the gradual shift from shorter-to-longer range SLBMs provided US strategic planners with much greater flexibility in operating their covert undersea strike base. The 1,250-nm range of the *Polaris* A-1 meant that the SSBN patrols had to be conducted in waters close to Russian territory, such as in the North Sea and the Mediterranean. This eased the Soviet anti-submarine efforts. However, as the SSBNs were successively modified to carry the longer range A-2 and A-3 versions of the *Polaris*, then the *Poseidon,* and finally the 4,000 nm range *Trident C-4,* the covert strategic strike base could operate at ever greater distance, to include the mid-Atlantic and Pacific oceans. This complicated the Soviet ASW problem enormously and virtually guaranteed the survivability of the undersea base.[303]

As mentioned in Chapter II, the SSBN force was not the only mobile base associated with US global attack forces. Using the same principles as the SSBN force, SAC's Looking Glass program established a permanent airborne command post in the air above the continental United States. Three dispersed squadrons of specially configured EC-135 aircraft rotationally deployed single aircraft in shifts that assured continuous overhead coverage. Looking Glass was later followed by the National Emergency Airborne Command Post—a squadron of four specially configured B-747 airliners that would serve as an airborne base for the president or other national leadership in time of war. One of these planes was maintained on alert at all times, ready to fly at a moment's notice. In time of war the aircraft could stay aloft for three days, and with special preparations, as long as seven days.[304]

As the foregoing discussion makes clear, the focus of global attack forces in the Cold War/Garrison Era was on emergency war operations—that is, global nuclear war with the Soviet Union. True, during the Vietnam War, some of the older models of the B-52 were taken off of nuclear alert and modified to carry either 84 500-pound or 42 750-pound bombs their cavernous bomb bays, as well as an additional 24 750-pound bombs on underwing pylons. These conventional B-52s were capable of delivering devastating pulses of combat power, and were used quite effectively against suspected North Vietnamese arms caches and hideouts, often inflicting huge losses on the Communist forces.[305]

Throughout the Cold War, however, using global attack forces to launch conventional attacks was a niche mission, as indicated by the poor performance by SAC mission planners during Operation *Linebacker II*, the intense 11-day bombing campaign over Hanoi and Haiphong during December 1972. During the first several days of the campaign, after augmenting the modified conventional B-52s with planes drawn directly from the nuclear warfighting fleet (which had less

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[303] Norman Polmar, *Ships and Aircraft of the US Fleet*, 18th edition, (Annapolis, MD: Naval Institute Press, 2004), p. 63.

[304] "E-4B NEACP," found online at http://www.tonyrogers.com/weapons/e4b_neacp.htm.

[305] "B-52 *Stratofortress*."

conventional bomb capacity and less capable electronic warfare systems), SAC planners in Omaha employed predictable and unimaginative tactics which contributed to 15 of the bombers being shot down. It was not until theater air officers who had been hardened by years of fighting against the North Vietnamese integrated air defense took over mission planning that loses went down.[306] Still, the performance of the conventionally-modified B-52s in the earlier part of the war and the ultimate success of *Linebacker II* suggested the important contributions long-range global attack forces could make to conventional campaigns.

A New Strategic Reinforcement System

The Cold War emergence of an extensive "peacetime" exterior basing network led to important changes in the way US combat forces expected to project power. During World War II, the United States and its allies were uncertain over the pace, location, and sequence of their successive offensives into enemy-held or enemy-controlled territory. They therefore built a Global Expeditionary Movement and Maneuver System capable of moving large numbers of forces to the point of attack; forcing a penetration into hostile territory; creating an operational lodgment; steadily reinforcing the attacking units; sustaining their attacks beyond an initial lodgment; and then moving or repositioning forces for other attacks.

In contrast, during the Cold War, the United States maintained large numbers of combat forces along an established and well-defined defensive perimeter. These forces were sustained by and through a robust theater logistics and basing infrastructure. As a result, the requirement to project intact, ready-to-fight US combat units into contested theaters was replaced by a requirement to deliver reinforcements rapidly to forward-based, ready-to-fight combat garrisons. Accordingly, as the Garrison Era evolved, the World War II Global Expeditionary Movement and Maneuver System was gradually transformed into a new Strategic Reinforcement System (SRS) whose primary initial focus was on the reinforcement of forward-based forces located along the European Central Front and the Demilitarized Zone between North and South Korea.

Without doubt, however, the priority of focus was on the reinforcement of US forces located along the inner German border. So important was the European reinforcement mission that it had its own name: Return of Forces to Germany, or REFORGER. As the Garrison Era wore on, US planners began to experiment with new ways to speed the REFORGER process. The start points for these efforts were the World War II airlift and sealift fleets.

Airlift

The shape of the new Strategic Reinforcement System was perhaps most affected by the dramatic postwar improvements to US strategic airlift capabilities. Indeed, the central role of airlift was probably assured by a key event just one year into the era. In early 1948, the Air Force's Air Transport Command merged with the much smaller Naval Air Transport Service to form the new Military Air Transport Service (MATS). Shortly thereafter, the Soviet Union reacted to US and British plans for German currency reform by cutting the overland road and rail

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[306] "Operation Linebacker II," found online at http://en.wikipedia.org/wiki/Operation_Linebacker_II.

links to West Berlin. President Truman had one of three options: he could abandon the West Berliners; he could go to war with the Soviets; or he could order an airlift to sustain the city. He chose the third option, tasking MATS planners with a job even they were uncertain could be done. However, using World War II transport aircraft and techniques honed during the India-China airlift over the Hump, during the next year MATS flew over 276,569 flights into the city, delivering 1.7 million tons of food and goods. Faced with this novel and successful effort, the Soviets abandoned their blockade of the city in May 1949.[307]

Not long thereafter, MATS faced yet another crisis. The outbreak of fighting in Korea in June 1950 required the formation of a 6,000-9,000 mile long Pacific air bridge to speed priority cargo and personnel to forward combat forces, and to return wounded troops to CONUS. Most cargo was initially delivered from the United States to bases on Japan and Okinawa, where it was then transshipped to Korea. The initial chaos involved in this transshipment process was resolved by creating a new Combat Cargo Command. Equipped with World War II C-47s and C-46s and a new transport called the C-119 *Flying Boxcar*, the Combat Cargo Command concentrated on delivering intra-theater lifts from Japan to Korea. MATS' longer-range C-54s—augmented first by converted DC-6 commercial airliners (under the designation C-118 *Liftmaster*) and later in the war by the new C-124 *Globemaster II*—delivered cargo from CONUS to Japan.[308] This split between intra- and inter-theater airlift responsibilities resulted in a distinction between *tactical* and *strategic* airlift that remains to this day.

The sheer distances involved in supporting US forces in Korea overwhelmed MATS' strategic airlift capabilities. As a result, it was forced to augment its own fleet of transports with civilian contract carriers. So successful was this effort that President Truman signed an executive order in March 1952 creating the Civil Reserve Airlift Fleet (CRAF). From its inception, the CRAF was organized to allow the US civil air fleet to shift quickly from normal commercial operations to supplementing military airlift in times of war. To induce participation in the program, commercial carriers that agreed to assign passenger and cargo freighters to the CRAF were allowed to compete for peacetime DoD transport business.[309]

In 1963, the Defense Department introduced a three-stage CRAF activation plan. Stage I, or Committed Expansion, could be activated by the head of MATS (with the approval of the Secretary of Defense) when the military airlift fleet was unable to meet simultaneously both its deployment and other airlift requirements. Stage II, an Airlift Emergency, could be activated by the Secretary of Defense during a major crisis that was short of all-out war. When reaching Stage III, a general National Emergency, the President or Congress would order a full mobilization of most of the nation's civil air fleet. However, over the entire course of the Garrison Era, the CRAF

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[307] See "The Berlin Airlift of 1948," found online at http://mars.wnec.edu/~grempel/courses/germany/lectures/36airlift.html.

[308] Leary, "Strategic Airlift: Past, Present, Future."

[309] Congressional Budget Office, *Moving US Forces: Options for Strategic Mobility* (Washington, DC: Congressional Budget Office, 1997), found online at http://www.cbo.gov/showdoc.cfm?index=11& sequence=3.

was never activated. Instead, MATS simply continued to contract additional services as needed.[310]

After the Korean War, both strategic and tactical airlift took a back seat to the development of tanker aircraft. Although the hundreds of KC-97s and KC-135s built during the 1950s were dual-capable tanker and cargo aircraft, their SAC aerial refueling mission took priority. As a result, US strategic airlift capacity declined dramatically during the 1950s as many of the aging World War II C-54s were retired. Their loss was partly offset by the purchase of 50 huge C-133 *Cargomasters*, the largest aircraft in the world at the time. Each of these giant planes was capable of transporting 50 tons of cargo more than 2,000 miles, and lighter cargo loads even farther. However, the 50 planes could not match the total cargo capacity of a much larger C-54 fleet. Tactical airlift faired a little better during the decade, with the old World War II-era C-46s and C-47s being replaced by hundreds of more capable C-119s and the new C-123 *Provider*, which was capable of delivering cargo to short, austere runways.[311]

In the early 1960s, the House Armed Services Committee sounded an alarm over the nation's declining airlift capabilities. As a result, the Congress quickly approved funds for 30 all new C-130 tactical transports, 30 interim C-135 strategic air transports (KC-135s modified for a dedicated cargo-carrying role), and advance procurement funds for an entirely new strategic airlifter—the jet-powered C-141 *Starlifter*. This impressive new strategic airlifter had a quick-change rear compartment that could be configured with a floor with rollers to handle palletized cargo gear; a flat floor for vehicles; seats for paratroopers or passengers; or rigging for stretchers. It could carry over 31 tons of cargo, or 154 paratroopers, over an unrefueled range of 4,000 miles. It also established a precedent. After the C-141, all strategic airlifters were jet-powered, while tactical airlifters remained powered by turbo-props.[312]

Nearly 300 C-141s were ultimately delivered to the Air Force's newly renamed Military Airlift Command (MAC), after which the Air Force shifted production to an even larger, more capable strategic airlifter, the C-5A *Galaxy*. This huge aircraft, longer than a football field, was designed to carry "outsized" military cargo and the heaviest combat equipment in the US inventory. Unfortunately, however, the plane was hamstrung by technical delays and cost overruns; the Air Force ordered 115 of them for $3 billion and ultimately received only 81 for $5 billion. However, once it did arrive, it was the most capable strategic airlifter in the world, capable of carrying over 100 tons of cargo nearly 3,000 nm. In addition, it had a unique roll-on/roll-off design, with huge doors in the rear and back of the plane's fuselage, which facilitated the rapid loading and unloading of combat vehicles and palletized cargo.[313]

The steady improvements in the US strategic airlift fleet changed the meaning of the term *rapid global transport*. In 1967, over a 30-day period, 413 C-141 and C-133 sorties lifted 10,355 men

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[310] Congressional Budget Office, *Moving US Forces: Options for Strategic Mobility*.

[311] "Airlift Cargo Aircraft."

[312] Leary, "Strategic Airlift: Past, Present, Future;" "Airlift Cargo Aircraft."

[313] Leary, "Strategic Airlift: Past, Present, Future;" "Airlift Cargo Aircraft."

of the 101st Airborne Division, along with 5,100 tons of their equipment, from Fort Campbell, Kentucky to Bien Hoa, South Vietnam. Later, from October 14 to November 14, 1973, 567 C-5 and C-141 sorties delivered 22,385 tons of ammunition and cargo from the United States to Israel, which was fighting for its life in the Yom Kippur War. By the early 1980s, the US fleet of C-141s and C-5s could carry an impressive 30 million ton-miles per day (30 MTM/D).[314]

Given the ever-increasing level to which US war plans had come to rely on strategic airlift, however, even this tremendous capacity was nowhere near sufficient. In 1981, a Congressionally-Mandated Mobility Study (CMMS) set a goal of 66 MTM/D—enough to transship 19,000 and 8,000 tons of cargo a day from the United States to Europe and the Persian Gulf, respectively. In response, the Reagan Administration ordered that 270 C-141s be modernized. In the process, the planes would be stretched to carry more cargo and be given an air-to-air refueling capability. It also ordered 50 improved C-5B *Galaxies* as well as 60 new KC-10 aircraft (a cargo/tanker version of the intercontinental-range DC-10 cargo freighter). Finally, it approved a plan to install large cargo doors and strengthened floors on 19 Boeing 747 commercial cargo freighters assigned to the CRAF. Despite these moves, by the end of the Garrison Era, the daily throughput capacity of the strategic airlift fleet had been raised to just 48.5 MTM/D—just 75 percent of the Congressionally-approved goal. Achieving the full 66 MTM/D target would depend on whether or not Congress approved the replacement of the C-141 fleet with an entirely new, more capable (and more expensive) strategic airlifter.[315]

Although short of its wartime goal, MAC's airlift capacity of 48.5 MTM/D far exceeded the airlift capacities of any other global power, and gave the United States an unequaled ability to reinforce its forward garrisons or to shift forces rapidly over transoceanic distances.

Sealift

The evolution of the US sealift program during the Transoceanic Era took a much different direction than the airlift program. The United States ended the Second World War with over 5,000 merchant ships. Obviously, the Defense Department could not afford to keep that many ships in commission after the war. At the same time, however, the Defense Department could not allow the fleet to atrophy as it had done after both the Spanish-American and First World Wars. The rapid reinforcement of European forward garrisons depended on a ready and capable sealift fleet. Consequently, the Merchant Ship Sales Act of 1946 split the difference: it outlined the procedures to sell excess US merchant ships and created the National Defense Reserve Fleet (NDRF), a fleet of mothballed ships that could be activated to meet shipping requirements during national emergencies. At its peak, the NDRF consisted of 2,277 ships laid up at 12 ports or anchorages throughout the United States. This huge surplus of ships dampened any inclination or need to recapitalize or modernize the US strategic sealift fleet for some time. Indeed, some World War II ships remained in the NDRF after the year 2000.[316]

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[314] Leary, "Strategic Airlift: Past, Present, Future."

[315] Leary, "Strategic Airlift: Past, Present, Future;" Norman Polmar, *Ships and Aircraft of the US Fleet*, 14th edition (Annapolis, MD: US Naval Institute Press, 1987), p. 24.

[316] "National Reserve Defense Fleet," found at http://www.marad.dot.gov/Programs/NDRF.html.

When activated, NDRF ships were controlled by the Naval Ocean Transportation Service, which was re-designated the Military Sealift Transportation Service (MSTS) in 1949. One year after the MSTS was formed, after three previous abortive attempts, the Army succeeded in transferring all of its remaining oceangoing cargo ships and troop transports to the MSTS, creating for the first time a single common US command for the transport of cargo and troops by sea.[317] However, as the Garrison Era progressed, the transoceanic movement of *troops* gradually shifted to military and commercial airlift. The MSTS thus oversaw the gradual retirement of large purpose-built ocean-going troop transports and began to focus on ships optimized for the delivery of heavy combat equipment such as tracked vehicles, rolling stock and engineering equipment, and break-bulk cargo such as fuel, construction materials and supplies.[318]

The NDRF worked well during the first three decades of the Cold War/Garrison Era, supporting the emergency shipping requirements in several wars and crises through the mid-1970s. During the Korean War, 540 vessels were broken out to support military forces. Over 600 additional ships were reactivated from 1951-1953 to address a worldwide merchant tonnage shortage. From 1955 to 1964 another 600 ships were used to store grain for the Department of Agriculture. In 1956, a tonnage shortfall resulting from the temporary closure of the Suez Canal led to the activation of 223 NDRF cargo ships and 29 tankers. Finally, throughout the Vietnam conflict, the MSTS returned 172 NDRF vessels to service rather than requisition or lease commercial vessels.[319]

Assisting the MSTS in its duties after 1965 was the Army's Military Traffic Management and Terminal Service. As demonstrated as early as the 1846 Mexican War, shipping war material via the sea required a shore-based transportation and port infrastructure to speed the delivery of equipment to a sea port of embarkation (SPOE) and its loading aboard ship, as well as its offloading at a sea point of debarkation (SPOD) and its injection into the local transportation network for final delivery. The Military Traffic Management and Terminal Service, renamed the Military Transportation Management Command in 1974, served as the DOD's single global port manager, responsible for pre-deployment transportation planning, contracting, port customs clearance and documentation, cargo load planning, and vessel loading/discharging at both SPOEs and SPODs. It maintained a presence in all US SPOEs as well as 22 global terminals and ports, most in Europe, Japan, and Korea.[320]

By the end of the Vietnam War, many of the ships in the NDRF began to reach the end of their service lives, and those that remained were generally obsolete or in disrepair. By the mid-1970s, the newly named Military Sealift Command maintained only 30 tankers and 27 dry cargo ships in a ready status. These 27 cargo ships were capable of moving about one division's worth of

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[317] Norman Polmar, *Ships and Aircraft of the US Fleet*, 14th edition, p. 24.

[318] Today, the successor to the MSTS, the Military Sealift Command, retains only two troop transports in its Ready Reserve Fleet., or RRF. The RRF will be discussed later in the report. See "Ready Reserve Fleet" at http://www.nvr.navy.mil/stat_12.htm.

[319] "National Reserve Defense Fleet."

[320] See "Surface Deployment and Distribution Command," found at http://www.globalsecurity.org/military/agency/army/mtmc.htm

equipment. Another 145 ships in the NDRF were earmarked for activation in time of crisis, but it was becoming progressively more costly to maintain them and time-consuming to prepare them for service. Moreover, the new generation of post-Vietnam military vehicles like the M1 tank and the Bradley fighting vehicle were uniformly heavier and bulkier than the vehicles they replaced, and very difficult to transport on these World War II-designed cargo ships.[321]

To address these problems, in 1976 the Carter Administration carved a new Ready Reserve Fleet (RRF) out of the residual NDRF—a smaller fleet of ships that were to be partially reconditioned and ready to be put into service in pre-planned time increments of four, five, ten, or 20 days. In addition, the RRF would be augmented by some newer Roll-on/Roll-off (RO/RO) ships and other special ships specifically designed to transport heavy military rolling stock and other large and bulky equipment. Costs to recondition older ships and to purchase new ships were paid for, in part, by the sale of obsolete NDSF ships to scrappers.[322]

The creation of the RRF ended three decades of benign neglect of the US sealift fleet and spurred a number of improvements. The aforementioned 1981 CMMS set a sealift shipping requirement of 4.6 million deadweight tons (DWT) of dry cargo capacity (i.e., ammunition, supplies, spare parts, food, vehicles; construction materials, and equipment). This planning figure reflected the fact that, despite the ever growing strategic airlift capacity, US defense planners assumed that 95 percent of the dry cargo and 98 percent of the bulk liquids and fuels required to sustain forward combat operations in Europe, the Persian Gulf, and the Pacific would continue to move by sea. Indeed, in recognition of sealift's vital strategic role, in 1984 then-Secretary of the Navy John Lehman formally added strategic sealift to the Navy's other three primary functions of strategic deterrence, sea control and power projection.[323]

With this strong political support, the RRF began to expand and gain in capacity and capability. In addition to the aforementioned maritime prepositioning ships, the RRF saw the addition of new RO/RO ships, LASH (Lighter Aboard Ship) barge carriers, and ultra heavy-lift float-on/float-off (FLO/FLO) ships.[324] The RRF also received eight Fast Sealift Ships (FSSs). These ships were former high-speed merchant vessels capable of steaming at 33 knots. They were converted into a RO/RO configuration, with each ship having 185,000 square feet of vehicle space. These eight ships alone could transport nearly enough equipment to outfit an Army mechanized infantry division. They were anchored in US eastern seaports, ready for activation and loading in 96 hours.[325]

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[321] Coffey, "Defending Europe Against Conventional Attack."

[322] Polmar, *Ships and Aircraft of the US Fleet*, 14th edition, p. 28; "National Reserve Defense Fleet;" and "Ready Reserve Fleet," found online at http://www.fas.org/man/dod-101/sys/ship/rrf.htm.

[323] See "Military Sealift Command," at http://www.globalsecurity.org/military/agency/navy/msc.htm.

[324] Polmar, *Ships and Aircraft of the US Fleet*, 14th edition, pp. 24, 283-87.

[325] See "Cargo—Fast Sealift-Support (FSS), Specialized," at http://www.nvr.navy.mil/stat_17.htm.

The Joint Deployment Agency and US Transportation Command

As the foregoing discussion indicates, US airlift, sealift, and surface transportation capabilities and capacities improved greatly over the course of the Garrison Era. However, for the first three decades of the era, these three complementary capabilities were not really part of an integrated rapid reinforcement *system*. The three different service transportation operating agencies—the Air Force's Military Airlift Command, the Navy's Military Sealift Command, and the Army's Military Traffic management Command—essentially ran independent operations. In 1978, a series of DoD-sponsored *Nifty Nugget* exercises focused on the rapid reinforcement of European garrisons in time of war helped to reveal the shortcomings in such a federated Strategic Reinforcement System. Indeed, the exercises revealed such serious problems in US reinforcement plans, capabilities, and procedures that many observers concluded that NATO had "lost" the simulated war. As a direct result of these exercises, the Defense Department began to take the steps necessary to assemble cohesive strategic reinforcement plans and systems. In 1979, the Joint Chiefs of Staff established the Joint Deployment Agency to integrate all transportation and wartime reinforcement procedures.[326]

This first step, while a good one, did not go far enough. The Joint Deployment Agency was not given the authority to direct the service transportation operating agencies or joint unified commanders to keep deployment data bases current, to take corrective action on identified problems, or even to follow their own strategic mobility plans. In other words, the service transportation operating agencies and unified commanders could ignore the JDA without consequence. By the mid-1980s, it was becoming increasingly apparent that the toothless JDA needed to be replaced by a more powerful joint entity to tackle the nagging problems that were still evident in transportation and deployment planning exercises. As a result, in 1987, President Reagan himself ordered the creation of a unified transportation command, which was subsequently named the US Transportation Command (TRANSCOM), a four-star led unified command with a headquarters in St. Louis, Missouri.[327]

The mission of TRANSCOM was to "provide global air, sea, and land transportation to meet national security needs." It would accomplish this mission by directing the actions of its three service components—the MAC, MSC, and MTMC. Although not apparent at the time, even this second step did not result in a fully functioning SRS. Under the terms of its implementing instructions and procedures, TRANSCOM's coordinating and directive authorities applied primarily during *wartime*. Moreover, the Air Force, Army, and Navy retained their single-manager charters for their respective transportation services. The net result was that the service component commands continued to operate pretty much independently during peacetime.[328] It remained to be seen how this independence would translate into wartime efficiency.

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[326] See "US Transportation Command," found at http://www.globalsecurity.org/military/agency/dod/transcom.htm.

[327] See "US Transportation Command."

[328] "US Transportation Command."

Land-based Prepositioned Equipment and Supplies

In any event, the evolving Cold War SRS included more than just sealift and airlift. Like any good transportation system, the SRS focused on developing systems and processes designed to deliver required or ordered goods as rapidly and efficiently as possible. Of course, one of the primary goals of the Soviet Union was to disrupt the SRS's ability to deliver US reinforcements and supplies from CONUS to US forward garrisons, especially those located along the Central Front in Europe. As the Soviet's ability to interdict the Atlantic sea lines of communication (SLOCs) with submarines and long-range strike aircraft became more of a threat over the course of the Cold War, a novel new type of strategic mobility program began to take shape. This program was known as the Prepositioning of Material Configured to Unit Sets (POMCUS).

The POMCUS program called for selected US combat units based in CONUS to have two complete sets of equipment. The unit would train with one set at its CONUS home base; another full set would be maintained in a special logistics base in Europe. In time of war, the unit would simply load its personal equipment and weapons on a commercial or military transport and be quickly flown to an airfield near the forward equipment site. Once there, the unit would withdraw its equipment and prepare it for combat. Obviously, only the most fiscally blessed of great powers could contemplate such a lavish scheme. However, given that the POMCUS facilitated reinforcement times that were much faster and less riskier than loading the unit aboard ship and transporting it across the Atlantic, US strategic planners felt the payoffs were well worth the costs.[329]

Over the course of the Garrison Era, the POMCUS program grew steadily in importance. In 1964, the Army activated a dedicated logistics unit, known as the Combat Equipment Group-Europe, to maintain the stored equipment sets and to issue the equipment during wartime. By the mid-1970s the Equipment Groups had its hands full; its storage sites contained enough equipment to outfit 2.33 heavy divisions.[330] However, after the Vietnam War, when US and NATO defense planners refocused their attention on the correlation of forces in Europe, they concluded that the Soviet Union and its Warsaw Pact allies had an advantage in early mobilization and combat force generation. Guided by the lessons learned in the *Nifty Nugget* exercises, in 1977 the United States and its NATO allies adopted a Long-Term Defense Program (LTDP) that set out a series of five-year goals designed to improve NATO command and control, mobilization, and reinforcement procedures. As part of the LTDP, the United States committed itself to staging six full division sets of equipment at supply bases in Germany.[331]

The LTDP also included provisions to increase the prepositioning of war reserve stocks, which included combat-essential items to replace expected wartime equipment losses and ammunition. Spurred by the heavy losses of materiel observed in the 1973 Yom Kippur War, the United

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[329] "Strategic Reserve Storage Activity Europe," found at http://www.globalsecurity.org/military/agency/army/srsae.htm.

[330] Dr. Kenneth J. Coffey, "Defending Europe Against Conventional Attack," *Air University Review*, January-February 1980.

[331] Untitled Congressional Budget Office report, found online at http://ftp.cbo.gov/ftpdocs/51xx/doc5189/ doc01-Part5.pdf.

States doubled its requirements for war reserve stocks. As a result, by 1978, there were more US war reserve stocks in Europe than at any time in history. However, the Army was still far below its stated requirements. For example, although the Army had nearly 700,000 tons of ammunition stockpiles in Europe, it was 600,000 tons short of its wartime goal.[332]

Over time, the costs associated with modernizing the airlift and sealift fleets, maintaining six full division sets, and increasing war reserve stocks proved too great even for the United States. As a result, the Army worked toward a cost-constrained target of 13 heavy brigade (4 1/3 divisions) POMCUS sets, with an "unfunded requirement" for six full divisions.[333] These 13 Army brigade sets would be augmented by a single brigade set of equipment stored inside caves in Norway to facilitate the rapid fly-in of a Marine Expeditionary Brigade to NATO's northern flank.[334] Using these equipment sets, the United States could rapidly reinforce its European garrisons via air—with no risk of interdiction by Soviet submarines—with 14 combat brigades, the equivalent of nearly five divisions.

Rapid Power-Projection in Theaters With No Forward Garrisons

The land-based prepositioning of unit sets proved so successful that it inspired an innovative variation: the prepositioning of equipment on ships. By prepositioning equipment on ships, the US could improve its power-projection and reinforcement timelines associated with theaters other than Europe. Accordingly, in July 1963, three World War II *Victory* cargo ships were modified to allow the long-term storage of equipment in their holds. They were to be the first of a planned force of 19 ships that would form a Floating Forward Depot. Each of the 19 ships was to be loaded with the equipment for a 2,100-man infantry battle group. However, vociferous objections by the Navy and Marine Corps, as well as the subsequent demands of the Vietnam War, led to the program's demise.[335]

However, the attraction of maritime prepositioning refused to die. Secretary of Defense Robert S. McNamara suggested that in addition to the funding the new C-5 *Galaxy* strategic airlift aircraft, the Congress should also fund 30 large Forward Deployed Logistics (FDL) ships crammed with equipment. During times of crisis, the FDLs could quickly transport equipment to a nearby port. The C-5s would then fly the troops needed to man the equipment to an airfield close to the port, where they could "marry up" with their equipment and accomplish their mission. However, the Congress, already weary of the war in Vietnam, refused to fund the ships on the grounds that it would lead to further US involvement in overseas conflicts.[336]

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[332] Coffey, "Defending Europe Against Conventional Attack."

[333] *Options for Strategic Military Transportation Systems*, p. 1.

[334] The Norway Air-Landed Marine Expeditionary Brigade (NALMEB), also called the Norway Air Landed Marine Air Ground Task Force (NALMAGTF), is the Marine Corps' only land-based prepositioned stock. See the description at http://www.globalsecurity.org/military/facility/nalmeb.htm.

[335] Salvatore R. Mercogliano, "Military Sealift Command: Ships That Wait," accessed online at http://www.usmm.org/msts/wait.html.

[336] Polmar, *Ships and Aircraft of the US Fleet*, 14th edition, pp. 25-27.

Congressional reluctance to fund maritime prepositioning programs disappeared after the Vietnam War. In 1977, the National Security Council reviewed the US global military posture and concluded that the country was ill-prepared to project power in theaters where there was little forward access, particularly the Persian Gulf. Planning for a new so-called Rapid Deployment Force was already well advanced by 1979, when the Shah of Iran was overthrown and replaced by an Islamic regime hostile to the United States. The loss of access to Iranian bases exacerbated an already difficult Southwest Asia access problem. Soon thereafter, President Carter announced the formation of the Rapid Deployment Joint Task Force (RDJTF), the forerunner of today's Central Command. The mission of the RDJTF was to "help maintain regional stability and the Gulf oil-flow westward" by deterring or defeating possible Soviet or Soviet proxy invasions of Southwest Asia, and preventing conflict among (or subversion and insurrection within) the states of the region.[337]

The RDJTF had an area of responsibility that included Egypt, Sudan, Djibouti, Ethiopia, Kenya, and Somalia in Africa; the People's Republic of Yemen, Oman, Saudi Arabia, Bahrain, Qatar, the United Arab Emirates, and Kuwait on the Arabian Peninsula; and Iraq, Iran, Afghanistan, and Pakistan in southwest and southern Asia. Faced with the challenge of being able to project forces to any one of these countries when needed, RDJTF planners could not afford to erect land-based prepositioning sites in every country. But by stealing and updating the previously discarded concepts of a Floating Forward Depot and FDLs the planners could create a smaller number of mobile prepositioning sites, and move them to a threatened state. The revived concept was called the *Near-term* Pre-positioning Ships (NTPS) program, signaling its eventual expansion.[338]

Soon thereafter, after receiving a strong endorsement in the aforementioned 1981 Congressionally Mandated Mobility Study, the Afloat Prepositioning Force (APF) was considerably expanded. The Maritime Prepositioning Force (MPF) program consisted of three squadrons of commercial ships, manned and operated by civilian contract mariners from the Military Sealift Command. Each of the squadrons was pre-loaded with the equipment, supplies, and ammunition to support a single Marine Expeditionary Brigade (MEB) in sustained combat for 30 days. With squadrons located in the Mediterranean, on Diego Garcia, and on Guam, at least one MPF squadron would be within 10-14 days steaming time from any port in Europe, Africa, in the Indian Ocean, or along the western Pacific littoral. These ships are augmented by two Aviation Support Ships operated by the MSC (T-AVBs), one maintained on each coast of the United States. Each T-AVB carries an Intermediate Maintenance Activity (IMA) for fixed- and rotary-wing Marine Corps aviation units. The MPF ships and T-AVBs were joined by ships carrying ammunition for the Air Force and Army and supplies for the Defense Logistics Agency.

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[337] "The Carter Doctrine and the Creation of a New Force," found online at http://www.historyofwar.org/ articles /weapons_rdf.html.

[338] Major Douglas A. Darling, USMC, "Maritime Prepositioning Forces: Are They What They Seem?" Marine Corps Command and Staff College, 1989, found online at http://www.globalsecurity.org/military/ library/report/1989/DDA.htm.

In addition, some ships served as floating gas stations, carrying fuel that could be pumped to forces ashore.[339]

World War II amphibious landing ships were optimized for the forcible entry mission. In contrast, all maritime prepositioning ships required secure access to a port and nearby airfield to discharge their cargos. Although the ships were ostensibly capable of off-loading their cargo equipment "in-stream," the ships were optimized for pierside offloads in a secure port in benign combat environments. Like the NTPS concept, the personnel assigned to a MPF MEB would fly to a nearby secure airfield, often on leased commercial aircraft, to prepare their equipment for combat. As explained in Marine Corps doctrine:

> MPF operations are a *strategic deployment option*, the salient requirement of the operation is a secure area. In addition there must be adequate strategic airlift, off-load forces, arrival airfield, port/beach, and a road network between the port/beach and the airfield…*MPF deployment operations are essentially logistical in nature* (emphasis added).[340]

Mobility Support Forces

The SRS was augmented by two important dedicated mobility support forces: the Air Force's aerial refueling fleet and the Navy's combat logistics fleet. Both helped to increase the strategic and operational mobility of US air and naval forces, and to diminish their reliance on forward land bases during peacetime and war.

Recall that the aerial tanker force was originally developed to support the bombers of the Strategic Air Command. However, over the course of the Garrison Era, the tanker force also assumed the important mission of supporting the tactical aircraft operated by the Air Force, Navy, and Marine Corps. The first use of aerial tankers in this role occurred on May 29, 1952, when 12 F-84 fighter-bombers were refueled during a mission from Itazuke, Japan to Sariwon, North Korea. As this first mission demonstrated, aerial refueling both extended the range of tactical fighters and enabled the Air Force to base its fighter-bombers farther away from the front lines, making them less vulnerable to direct attack. In a similar way, aerial refueling allowed aircraft carriers to stand farther out to sea, beyond the range of enemy shore-based defenses. Navy and Marine Corps fighters were supported by Air Force tankers as well as special-purpose, carrier-based tankers. These carrier-based tankers substituted a drogue system that could be reeled into the tanker aircraft for the rigid refueling boom common on Air Force tankers. Naval aircraft had an extendable refueling probe which required naval pilots to fly the probe into the drogue for refueling.[341]

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[339] See "Maritime Prepositioning Force," at http://www.msc.navy.mil/PM3/mpf.asp; and Mercogliano, "Military Sealift Command: Ships That Wait."

[340] *Operational Handbook 7-6*, Maritime Prepositioning Force (MPF) Operations (Quantico, VA: Marine Corps Development and Education Command, June 1987), pp. 1-1 – 1-3, ES-2.

[341] "Aerial Refueling."

Aerial refueling also allowed jet fighter-bombers to make rapid transoceanic flights, greatly reducing the number of required intervening ferry base stops and cutting the time necessary to reinforce forward air units. Indeed, if need be, US fighter-bombers could travel directly from the United States to their forward main operating bases in Europe fully armed and capable of defending themselves on the trip. Aerial tankers also extended the range of later strategic and tactical airlifters, providing even more responsiveness and flexibility in forward resupply operations. As a result, during the Vietnam War and after, one of the most important considerations for US air operations was the number of tankers needed to support expected flight operations, and the number of bases needed to support them.[342]

The Navy's Cold War combat logistics forces were optimized to keep US carrier battle groups at sea for indefinite periods. This led to the development of special-purpose station ships and shuttle ships. The station ships—Fast Combat Support Ships and Replenishment Oilers—would accompany battle groups and serve the immediate replenishment needs of the battle group's carrier and escorts. To perform this mission, these ships were "triple-product" ships capable of simultaneously carrying fuel, munitions, and dry stores They, in turn, were replenished by a dedicated shuttle fleet which cycled between forward naval logistics bases and the battle groups. The shuttle fleet consisted of three different types of "single product" ships—oilers, ammunition ships, and combat store ships. By the end of the Garrison Era, the Navy's goal for its combat logistics force was for 15 shuttle ships (one for each of its deployable carriers) and ten, 3-ship Underway Replenishment Groups.[343]

A move that had important implications for the combat logistics force was the Navy's shift to large, nuclear-powered aircraft carriers. After the Navy commissioned its first nuclear-powered carrier, the *USS Enterprise*, CVN-65, in 1961, it commissioned only two more conventionally-powered carriers before shifting completely over to nuclear powered ships. The nuclear reactors on later CVNs had fuel cores with at least 13-year service lives (800,000 to 1,000,000 nms of steaming time). This allowed CVNs to trade their former fuel bunkers for stores and aviation fuel, allowing them to carry almost 3,000 tons of aviation ordnance and up to 3.5 million gallons of jet fuel. As a result, US nuclear-powered carriers gained considerable freedom of action. For example, between August and October 1964, the *Enterprise*, accompanied by two nuclear-powered escorts, steamed around the world in 64 days without refueling or replenishing. Moreover, with support from the Navy's combat logistics forces, the ships could operate virtually independent of land bases; in 1980, in response to tensions in the Persian Gulf, the carrier *Dwight D, Eisenhower* stayed at sea continuously for 152 days.[344]

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[342] "Aerial Refueling."

[343] Polmar, *Ships and Aircraft of the US Fleet*, 14th edition, pp. 110, 294-303.

[344] Polmar, *Ships and Aircraft of the US Fleet*, 14th edition, pp. 82-89; "USS Dwight D. Eisenhower," found online at http://en.wikipedia.org/wiki/USS_Dwight_D._Eisenhower.

A DIMINISHING REQUIREMENT FOR FORCIBLE ENTRY FORCES AND RAPID CONSTRUCTION BASES

Over the course of the Cold War/Garrison Era, ready US access to a global basing structure gradually made *all* of its combat forces and operations more and more access dependent. Just as access to a global naval basing infrastructure removed any incentive for the British Royal Navy to develop efficient underway replenishment operations in the interwar period, access to a large global basing structure largely removed the incentive for the US armed forces to maintain the capabilities needed either to seize or establish forward naval operating bases or to create access ashore. The need for a robust theater forcible entry capability, or for large logistics sea bases, or for other capabilities needed to sustain operations in theaters with no forward bases diminished greatly.

Accordingly, as the Cold War unfolded, the size of both US amphibious landing and parachute forces declined substantially. Indeed, with regard to the amphibious landing forces, it was not at all clear that they would even be maintained. Because of the development of the atomic bomb, many defense planners in the late 1940s declared amphibious operations to be obsolete. Indeed, the size of the amphibious fleet was excluded from the JCS's immediate postwar planning guidance.[345] By 1949, only 60 amphibious ships remained in commission, down from the wartime high of over 2,500 ships.[346] However, General Douglas MacArthur's amphibious masterstroke in Inchon—conducted with hastily re-commissioned amphibious ships—helped to convince US political and military leaders that a small amphibious forcible entry capability should be maintained as a hedge against the possibility that United States might once again be forced to seize forward bases.

From 1951 through 1967, OSD generally expected the Navy to maintain a capability to lift two full Marine division-wing teams (Marine Amphibious/Expeditionary Forces, or MEFs) on amphibious ships—one on each coast of the continental United States—although the number dipped to one and one-third division for a time in the late 1950s. After Vietnam, "amphibious lift" was increasingly described in terms of a mix of MEF and Marine Expeditionary Brigade (MEB) equivalents, with the average lift requirement being between a MEF plus a MEB, and four MEBs. After the amphibious lift requirement fell to 1.15 MEF lifts in the Carter Administration, it rebounded and steadied at the requirement to lift a MEF plus MEB, a goal that remained in effect through the end of the era.[347]

Although amphibious landing capabilities were generally less valued during the Cold War/Garrison Era, the Navy and Marine Corps made three important improvements to their amphibious assault capabilities. First among them was the development of both helicopters and

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345 Michael M. McCrea, Karen N. Domabyl, Alexander F. Parker, *The Offensive Navy Since World War II: How Big and Why?* (Alexandria, VA: Center for Naval Analysis, July 1989), p. 17.

346 "Ship Force Levels, 1945-1950," found online at http://www.history.navy.mil/branches/org9-4.htm#1945.

347 Robinson, *Integrated Amphibious Operations Update Study* (DoN Lift 2+)—*A Short History of the Amphibious Lift Requirement* (Alexandria, VA: The Center for Naval Analysis, July 2002), p. 2; see also McCrea, Domabyl, Parker, *The Offensive Navy Since World War II: How Big and Why?* p.18.

vertical take-off and landing (VTOL) jet aircraft. The former spawned the idea of *vertically enveloping* an enemy defending a beach. Unlike airborne troops, helicopter-borne forces could deliver intact small units precisely where needed on a battlefield. These forces were immediately ready to attack or defend without the major assembly and reorganization problems associated with mass parachute drops. Marines envisioned helicopters landing forces immediately behind a defended beach and attacking it from the rear, in the process opening up a high speed avenue of approach for surface assault forces.[348]

Although originally envisioned as a means to offset the threat of nuclear attack, the successful helicopter movements of troops in Korea helped to spur the subsequent vision of helicopter air assaults in both the Marines and Army.[349] For the Marines, this led to two immediate ship developments: the conversion of World War II CVEs into helicopter carriers, leading to the development of the LPH, the first purpose-built "big-deck" amphibious assault ship optimized to support vertical envelopment/air assault operations; and the development of the new Landing Platform Dock (LPD), which combined the floodable well deck of the World War II LSD with new helicopter landing facilities.[350]

Later, the appearance of vertical take-off and landing (VTOL) tactical jet aircraft like the Marines' new AV-8A *Harrier*, led to the development of even bigger and more versatile amphibious "big decks" (first LHAs, next LHDs). At over 40,000 tons full-load displacement, these new ships had about the same dimensions as a World War II *Essex*-class CV but a much larger displacement, giving them the ability to carry a large, mixed squadron of helicopters, or a composite squadron including both helicopters and tactical aircraft, or a wing of just VTOL fighters.[351]

The second big development in postwar amphibious forces was their greatly improved speed of advance, a key determinant of a convoy's vulnerability to submarine attack. With the development of high-speed Soviet attack submarines, naval planners concluded that amphibious task forces would have to steam at 20 knots to survive any transoceanic movement. As a result, after the Korean War all amphibious ships were designed to sustain this speed.[352]

Finally, the Navy and Marines introduced new craft for ship-to-shore surface assaults. World War II amphibious tractors with open troop compartments were replaced by new Landing Vehicles Tracked, Personnel (LVTPs). Later models of these new armored amphibious personnel carriers with enclosed troop compartments could generally travel at about seven knots on water

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[348] For a contemporary explanation of the thinking behind Marine vertical envelopment, see Lynn Montross, *Cavalry of the Sky: The Story of US Marine Combat Helicopters* (New York, NY: Harper & Brothers, 1954). See also Matthew Allen, *Military Helicopter Doctrines of the Major Powers, 1945-1992* (Westport, CT: Greenwood Press, 1993).

[349] See "Amphibious Warfare: Cold War Era," at http://www.exwar.org/Htm/8000PopE7.htm; and Freidman, *US Amphibious Ships and Craft*, Chapter 12.

[350] Freidman, *US Amphibious Ships and Craft*, Chapter 12.

[351] Freidman, *US Amphibious Ships and Craft*, Chapter 12.

[352] Freidman, *US Amphibious Ships and Craft*, Chapter 11.

and 40 miles per hour on land, providing marines with a means to cross a stretch of water and a beach and to move inland quickly. In addition, high-speed landing craft riding on cushions of air were developed to deliver tanks and other heavy equipment ashore. These new landing craft could travel across a sandy beach to disgorge their cargo on solid, trafficable ground, further speeding the landing forces' transition from ship-to-shore to inland movement.[353]

Despite these improvements, the Cold War/Garrison Era's condition of assured access made it increasingly difficult for the Marines to justify the resources needed to maintain a major amphibious forcible entry capability. As a result, more often than not, the capabilities of the actual amphibious fleet normally fell below the stated operational lift requirement. Moreover, the appearance of the aforementioned maritime prepositioning ships, which were much cheaper to build and operate than amphibious warships, offered a seemingly more cost-effective and attractive option to Navy and Defense Department officials anxious to save money. They made the job of devoting resources to the amphibious fleet even more difficult.

Airborne forcible entry capabilities suffered a similar fate. Although the results of US airborne operations during World War II had been decidedly mixed, the postwar Army leadership had a high percentage of former paratroopers, ensuring that the Army would maintain some sort of airborne forcible entry capability. However, three things worked to limit the demand for airborne forces. First, with the development of jet transport aircraft, airborne forces were forced to discard the glider, which had been their primary delivery platform for vehicles and artillery. Second, as implied above, the appearance of the helicopter offered a seemingly more efficient means for forcible entry from the air. And third, as with the amphibious landing forces, conditions of assured access made the need for an airborne assault capability appear superfluous. As a result, by the end of the Cold War/Garrison Era, the Army's 18 active divisions included only one airborne division and one air assault (helicopter air-landed) division.

With access to superb harbor facilities in Europe and the Pacific from the very beginning of the Garrison Era, the demand for rapid base construction forces also dropped. However, the late era requirement to project power into Southwest Asia under far less favorable access conditions sparked a modest comeback for these capabilities. For example, each of the three MPF squadrons carried the equipment to construct an expeditionary air field. In addition, the Defense Department introduced a much more modest variation of the Mulberry seabased artificial harbor, which eventually became known by its acronym, JLOTS—short for Joint Logistics Over-the-Shore program. The JLOTS program aimed to provide US commanders with an ability to load and unload ships without the benefit of fixed port facilities. Like the Mulberry harbor, the JLOTS were "designed for operations in friendly or non-defended territory, and, in time of war, during phases of theater development in which there is no opposition by the enemy."[354] To support this capability, the Military Sealift Command maintained auxiliary crane ships (ships specifically designed to offload cargo ships "in stream" with onboard cranes); barge carriers; and an assortment of elevated causeways, "side-warping tugs," and powered causeway ferries.

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[353] Freidman, *US Amphibious Ships and Craft*, Chapter 11.

[354] See "Joint Logistics Over-the-Shore (JLOTS)," at http://www.globalsecurity.org/military/ops/jlots.htm.

However, these capabilities were considered a last resort, and were not exercised frequently, or in anything other than small operations.[355]

ASSURED ACCESS MAKES ITS MARK

The foregoing discussion should make plain the fundamental differences in how US military planners approached the concept of strategic mobility in the mature Oceanic and Transoceanic phases of national security policy. The World War II GEMMS was an *access-insensitive* system, reflecting the basic conditions of uncertain theater access. It was designed to simultaneously support penetrations of defended territory, inter- and intra-theater movement of forces, and sustained logistics support in *contested forward theaters*. In sharp contrast, the Cold War Strategic Reinforcement System was an *access-sensitive* garrison reinforcement system heavily dependent on the availability of deep water ports, bases, and airfields in *established forward theaters*.

The distinction between the World War II GEMMS and the Cold War SRS is best explained by envisioning expeditionary power-projection operations as involving four basic steps: the *deployment* of combat units; the *employment* of combat units; the *sustainment* of these units in combat; and the *reconstitution and redeployment* of forces. A force designed for uncertain access like the World War II GEMMS considers the first two steps—the deployment and employment of combat units—as one seamless step, requiring that the units be transported and inserted in a *ready-to-fight condition*. In other words, the units are capable of conducting long-range operational maneuvers and transitioning from deployment to direct combat operations with little pause.

A force designed primarily for assured access garrison reinforcement missions like the Cold War's Strategic Reinforcement System considers the deployment and employment steps as being separate and distinct. This allows the 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 then ready for combat. In other words, most forces transported by the SRS are *not* in a ready-to-fight condition when they first arrive in a distant theater.

A comparison between the Service Expeditionary Posture's ultimate GEMMS and the Garrison Era Posture's ultimate SRS is instructive. By the end of World War II, the Seabased Operational Maneuver Fleet could lift 13 division equivalents. These seabased assault forces could be augmented by an additional five airborne divisions, meaning the US could use up to 18 divisions for "access-insensitive" assaults out of a combined Army and Marine force structure of 96 divisions (nearly 19 percent). By the end of the Cold War, the vestigial amphibious landing fleet could lift less than three brigades, and the Army maintained less than four airborne brigades, meaning the US could muster about two division equivalents for access-insensitive assaults out of a combined force structure of 32 Army, Army National Guard, and Marine Divisions (six

[355] "Joint Logistics Over-the-Shore," a Military Sealift Command PowerPoint presentation found online at http://www.lic.eustis.army.mil/FMs/Lesson%208.ppt#1.

percent).[356] Moreover, the ratio of heavy (amphibious) to light (airborne) forcible entry forces changed significantly, from 2.6:1 at the end of World War II to 1:1.33 at the end of the Cold War.

At the same time, the loss in US forcible entry capabilities was made up for by a dramatic increase in ready-to-fight theater forces and rapid-reinforcement forces. Ready-to-fight forces included four Army heavy divisions, four separate brigades, and two armored cavalry regiments along the inner German border and another complete heavy division in Korea. All of these units were in stationed at main operating bases close to their expected wartime areas of operations, in a high state of readiness. While they did not arrive in ready-to-fight condition, the SRS could augment these forward-based forces with nearly seven division equivalents of rapid reinforcement forces, using its 13 POMCUS brigades; the NALMEB; three MPF brigades; and three rapid reinforcement brigades arriving on eight FSSs. The seven division equivalents of rapid reinforcement forces represented 21 percent of the total US division force structure.

A New Planning Focus: RSOI

As this discussion makes plain, the strategic aim of the Strategic Reinforcement System was to speed up the time it took to feed reinforcements into an ongoing fight. The first step was to decrease the deployment timeline of the rapid reinforcement units transported by the SRS. However, because the SRS was generally geared to deploy personnel by air and equipment by prepositioning or sea, an equally important second step was to minimize the time necessary to ready them for combat—a process that became known as reception, staging, onward movement, and integration (RSOI). As described in joint doctrine:

> 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.[357]

Depending on the method of prepositioning and the condition of the equipment, this process might take up to a week or longer. Naturally, then, given the priority operational requirement to reinforce rapidly forward garrisons or crisis response forces, reducing the time necessary to conduct RSOI became a key focus of service plans, exercises, and experimentation.

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[356] The 1990 ground combat force structure consisted of 18 active Army divisions, three active Marine Corps divisions, ten National Guard divisions, and one reserve Marine division. For a recap of the Army and National Guard divisions, see "1990 Divisions," at http://www.globalsecurity.org/military/agency/ army/division.htm.

[357] Joint Pub 4-01.8, *Joint Tactics Techniques, and Procedures for Joint Reception, Staging, Onward Movement, and Integration*, available on the JDTC homepage at www.jdtc.transcom.mil. See also "RSOI" at http://www.jdtc.jfcom.mil/ DeploymentFAQ/faqpage11.htm.

IMPROVING AND EXPANDING THE GLOBAL C3I NETWORK

The Cold War/Garrison Era also saw important improvements in the US global C3I network. Starting in the 1960s, US planners introduced a new World-Wide Military Command and Control System (WWMCCS) that incorporated and exploited the emergence of computers and automated date processing. As first envisioned, the WWMCCS would give the President and Secretary of Defense a new, rapid means to receive warning and intelligence information, assign military missions, provide direction to the unified and specified commands, and give the Joint Chiefs of Staff an equally powerful means to coordinate the global operations of US military forces. The system was designed to continue functioning even after a nuclear exchange between the United States and the Soviet Union. The directive establishing the system stressed five essential system characteristics: survivability, flexibility, compatibility, standardization, and economy.[358]

WWMCCS was created at a time when the individual services were the dominant players in the US defense establishment, with a high degree of budget autonomy. Their approach to WWMCCS was to fund their individual service command and control requirements and only then to worry about interoperability. As a result, in its early years the WWMCCS included nearly 160 different computer systems, using 30 different general purpose software systems. One study concluded that the early WWMCCS was "more a federation of self-contained subsystems than an integrated set of capabilities."[359]

In 1967, however, WWMCCS communications failures contributed to the mistaken Israeli attack on the *USS Liberty* during the Arab-Israeli War. These led to important changes in the management and subsequent development of the system. In 1971, primary staff responsibility for all WWMCCS-related computer and data processing systems was assigned to a new Assistant Secretary of Defense for Telecommunications, and the Chairman of the JCS was assigned responsibility for all WWMCCS operations. This division of responsibility gradually led to a more cohesive, interoperable system called the WWMCCS Inter-computer Network (WIN). The WIN ultimately consisted of mainframe computer systems at geographically separate locations, interconnected by a dedicated wide-band communications network. This system linked all of the disparate service command and control systems into a fully functioning global command and control network. The system was continually updated and improved until the end of the Cold War.[360]

Remote Space Bases Support the WWMCCS

Visionary thinkers had long anticipated the exploitation of space. In 1865, for example, Jules Verne published a novel entitled, "From the Earth to the Moon." However, the development of long-range rocketry during World War II helped to catalyze efforts to exploit space for military

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[358] See "WWMCCS World-Wide Military Command and Control System," found online at http://www.fas.org/nuke/guide/usa/c3i/wwmccs.htm.

[359] "WWMCCS World-Wide Military Command and Control System."

[360] "WWMCCS World-Wide Military Command and Control System."

purposes. The Navy, for example, had learned first-hand the advantages that high-flying naval aircraft enjoyed in maritime surveillance and reconnaissance. It was not that much of a stretch for Navy planners to want to establish eyes on the ultimate high ground—outer space.[361]

Initial US moves to occupy this high ground were accelerated after the Soviet Union lofted Sputnik in 1957 and after high-flying U-2 reconnaissance aircraft were shot down over Russia, China, and Cuba. Fear that the Soviet Union would exploit space to gain a strategic advantage over the United States as well as the pressing need to be able to peer behind the Iron Curtain were powerful incentives to establish remote, mobile space bases consisting of constellations of similar spacecraft. The first bases included low earth orbiting optical and electronic reconnaissance and weather satellites. These low-earth orbiting systems were later augmented by medium- and high-altitude orbiting satellites that performed special electronic and communications surveillance. Communications satellites in geosynchronous orbits allowed instantaneous global communications with global attack forces, and later tactical forces. To overcome the aforementioned problem of ordering a nuclear retaliation based on ground-based radar data alone, special early warning satellites designed to spy and recognize the flaming plumes of missile launches were placed on orbit.[362]

The primary focus of these new space-based C3I forces was on the pre- and post-conflict phases of nuclear war with the Soviet Union.[363] It is certainly true that space-based forces did support tactical combat operations. Weather satellites in polar orbits designed to provide weather reports to global attack forces ultimately provided timely and accurate global weather coverage to tactical forces (as well as civilians).[364] Communications satellites designed to command and control strategic attack forces were modified over time to provide direct support to employed forces, and were augmented by systems specially designed for tactical use, such as the Navy's Fleet Satellite Communications System.[365] In the 1970s, the Tactical Exploitation of National Capabilities (TENCAP) program was initiated to allow tactical users to exploit the intelligence from strategic reconnaissance sites.[366] Finally, late in the era, the Global Positioning System (GPS) constellation promised to provide US forces with instantaneous positioning and timing measurements.[367] Unquestionably, however, during the Cold War space forces were designed primarily to augment the *strategic* C3I network.

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[361] "From the Sea to the Stars," found online at http://www.history.navy.mil/books/space/Chapter0.htm.

[362] For a good overview of US military space programs, see "Military Space Programs," found online at http://www.fas.org/spp/military/program/index.html.

[363] Watts, *The Military Use of Space: A Diagnostic Assessment*.

[364] Data from the Defense Meteorological Satellite Program was not declassified until 1972! See "Defense Meteorological Satellite Program," found online at http://www.fas.org/spp/military/program/met/dmsp.htm.

[365] Satellite communications channels were diverted to use of operational forces during the Vietnam War. "The History of US Military Satellite Communications Systems," found at http://www.aero.org/publications/crosslink/winter2002/01.html.

[366] See "TENCAP," at http://www.fas.org/spp/military/program/sigint/tencap.htm.

[367] The first GPS satellite was orbited in 1978. The full 24-spacecraft constellation was not completed until 1994. See "Global Positioning System (1994)," found online at http://msl.jpl.nasa.gov/Programs/gps.html.

A Proliferation of C3I Facilities

The move into space did not mean the end of terrestrial C3I facilities. Better to say that space-based C3I forces helped to slow the growth of a burgeoning global C3I basing network. In addition to the numerous Distant Early Warning Line and the Ballistic Missile Early Warning System sites erected north of the Artic Circle, the United States and Canada co-developed the PINETREE radar warning line, a series of radars along the Canadian-US border.[368] The United States also emplaced nuclear-detection seismic arrays in Norway and Turkey, and erected an extensive undersea Sound Surveillance System (SOSUS) to monitor the movement of Soviet submarines. SOSUS data was collected and analyzed and/or transmitted to ocean surveillance centers from special-purpose Naval Facilities (NavFacs) located in such places as Keflavik, Iceland; Antigua; Barbados; Puerto Rico; Argentia, Newfoundland; Brawdy, United Kingdom; and the Grand Turks.[369]

Similarly, space-based communications did not entirely supplant terrestrial long-range communications networks; the current US ground-based High Frequency Global Communications System requires 15 sites scattered around the world, in places like Keflavik, Iceland; the Azores; Sigonella, Italy; and Yokota, Japan. Whenever possible, US base planners attempted to locate the sites at existing bases. However, they sometimes demanded special remote sites such as the high-frequency array located on Ascension Island.[370]

Moreover, space-based C3I forces demanded forward support bases of their own—primarily to provide command and control the satellites themselves and to gather the data collected from space. For example, the Air Force developed a Satellite Control Network (AFSCN) consisting of Mission Control Complexes (MCCs), Remote Tracking Stations (RTSs), Automated Remote Tracking Stations (ARTSs), and test facilities located around the world. These facilities maintained US C3I satellites in their optimum orbits and ensured that spacecraft and their payloads performed as designed.[371] These command and control sites were in addition to special downlink facilities such as the Defense Support Program sites located in Australia and Germany.[372]

As can be seen, then, global C3I requirements became an important demand signal for the Cold War/Garrison Era exterior basing structure.

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[368] See "PINETREE Lines," at http://en.wikipedia.org/wiki/Pinetree_Line.

[369] Harkavy, "Thinking About Basing," p. 15; and "SOSUS," at http://en.wikipedia.org/wiki/SOSUS. For a good description of how SOSUS effected the Cold War undersea competition between the US and Soviet submarine fleets, see Cote, Jr., *The Third Battle: Innovation and the U.S. Navy's Silent Cold War Struggle with Soviet Submarines*.

[370] "USAF High-Frequency Global Communications System," found online at http://wiki.radioreference.com/index.php/USAF_High_Frequency_Global_Communications_System.

[371] See "Ground Support," at http://www.fas.org/spp/military/program/support/ground.htm.

[372] Harkavy, "Thinking About Basing," p. 15.

SECURITY RELATIONSHIPS AND LEGAL AGREEMENTS COME TO THE FORE

In leading the global ideological struggle between free nations and communist totalitarianism, the United States was forced to overcome its long-standing antipathy towards "entangling alliances." Indeed, if anything, the Cold War/Garrison Era was an era of entangling alliances. The first two major alliances entered into by the US government were the aforementioned 1947 Rio Pact (which eventually committed the United States to the defense of 24 Central and South American countries), and the North Atlantic Treaty Organization (which expanded from the original 12 signatories to 15). The United States also signed two additional mutual defense treaties: the 1951 ANZUS Pact, with Australia and New Zealand;[373] and the follow-on 1954 Southeast Asia Treaty Organization (SEATO), a mutual defense pact signed with Britain, France, Australia, New Zealand, Thailand, Pakistan, and the Philippines.[374] In addition, the United States entered into three bi-lateral defense agreements, with Japan, South Korea, and Taiwan.

Although the United States was not a member of the Central Treaty Organization (CENTO), which included the United Kingdom, Iraq, Turkey, Iran, and Pakistan, American pressure, along with promises of military and economic largesse, were key in the negotiations leading to its formation. To avoid alienating Arab states, US strategists chose not to become a full time member of the organization. However, in 1958, the United States joined the military committee of the alliance.[375] As can be seen, then, during the Cold War/Garrison Era, the US extended its defensive perimeter over the territory of numerous states located on the frontier between the free world and the Soviet Empire.

An Explosion of SOFAs

As discussed earlier, in return for its pledge to protect countries from Soviet aggression or other outside attack, the United States gained powerful leverage to negotiate forward basing access, which resulted in a rapid expansion of the number of foreign exterior bases in the US global basing network. In the process, Status of Forces Agreements between the United States and host basing states—which outlined the rights of US personnel living or operating in a foreign country—became very important. The United States eventually developed three generic types of SOFAs: those that offered US personnel administrative and technical staff status under the Vienna Convention on Diplomatic Privileges, commonly referred to as an A&T SOFA; a "mini" status-of-forces agreement, often used for short-term visits of US forces, like those in-country to participate in a combined exercise; and a full-blown, permanent status-of-forces agreement for countries where there was a permanent US military presence.[376]

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[373] See "ANZUS," found at http://en.wikipedia.org/wiki/ANZUS_Pact.

[374] See "SEATO," found at http://en.wikipedia.org/wiki/SEATO.

[375] "Central Treaty Organization," accessed online at http://en.wikipedia.org/wiki/Baghdad_Pact.

[376] "Status-of-Forces Agreements."

The choice and detail of a SOFA depended upon the nature and duration of US military activity within the host country as well as the host country's prevailing internal political situation. However, by the end of the Cold War, the United States had standing status of forces agreements of some kind with approximately 40 countries.[377]

Host Nation Support

Host nation support is the term now used to describe the financial contributions provided by allies who agree to maintain forward-based and forward-deployed US military forces on their soil. As mentioned earlier, these contributions were essential in the relatively rapid expansion of the US exterior basing network observed after 1949, as well as its continued maintenance thereafter.[378] Host nation support was often referred to as "offset payments" early in the Cold War/Garrison Era. In return for the security provided by the United States, host countries agreed to pay for the costs of the bases and the costs for the national labor force that ran the base infrastructure. In addition, host countries were often asked to pay the US government a sum equal to the amount of money forward-based troops and their families spent in the host nation.[379]

These offset payments were a source of continued friction throughout the Cold War. Foreign governments compelled to make offset payments insisted they were neither rent nor payment for US protection. For their part, American diplomats insisted they not be considered occupation costs. In places like Germany, Japan, and South Korea, the Americans tended to see the payments as simple fairness, since the US security umbrella allowed these countries' economies to flourish. To the Germans, Japanese, and South Koreans on the other hand, these payments often seemed like a punishment.[380]

So contentious were these payments that they contributed to the downfall of at least one German government after it unsuccessfully petitioned the US to decrease them. Indeed, the payments continued to be a sticking point in the US-German relationship until the West German offset program was officially ended in 1976. Thereafter, all offset payments were replaced by formal Host Nation Support (HNS) Agreements, which were renegotiated periodically. However, these new HNS Agreements continued to provide important financial support to the US exterior basing network. For example, when the Cold War ended, Japan contributed $6 billion annually in support of US exterior bases—amounting to 70 percent of the total costs of the exclusive, shared, and participating bases located on Japanese soil.[381]

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[377] "Status-of-Forces Agreements."

[378] See "Host Nation Support Vital to Maintaining Alliances, Fighting Threats," found online at http:// canberra.usembassy.gov/hyper/ 2000/0222/epf204.htm.

[379] Baker, *America Soldiers Overseas*, pp. 67-68.

[380] Baker, *America Soldiers Overseas*, pp. 68-69.

[381] Baker, *America Soldiers Overseas*, pp. 67-68.

AN ABRUPT—AND UNEXPECTED—VICTORY

The Garrison Posture adopted during the Transoceanic Era was the most expansive US "peacetime" global military posture in the nation's history. It was based on the extensive American campaign basing structure erected during World War II. The posture's expansive combination of exterior bases and forward-based forces, along with substantive forward-deployed forces, global attack, strategic mobility and logistics, and global C3I forces, all supported by a substantial supporting security and legal frameworks, defined a leasehold empire that literally spanned the globe. Owing to the enduring nature of the Soviet threat, the posture was remarkably stable. It was also remarkably successful—having contained the advance of communism as well as the Soviet Empire—without a destructive "hot war."

Three decades into the Cold War, however, events were set into motion that led to its abrupt end. Just as a light bulb often burns brightest just before it burns out, during the period between 1979 (the Soviet Invasion of Afghanistan) and 1985 (the end of the first Reagan Administration), tensions between the United States-led and Soviet-led coalitions reached levels unseen since the 1962 Cuban Missile Crisis. At that point, however, Mikhail Gorbachev was elected General Secretary of the Soviet Union. Gorbachev pursued both political and economic liberalization as well as warmer relations and increased trade with the West. Ironically, his efforts to dismantle the Soviet command economy through his programs of *glasnost* (political openness), *perestroika* (economic restructuring), and *uskoreniye* (speed-up of economic development) produced the dissolution of the Soviet Union in just six short years.[382]

The symbolic end of the Cold War came even sooner. In March 1989, Hungary decided to hold free elections, and the Soviet Union declined to intervene. In June, the Poles followed suit, and voted the Communists out of power. In October, a celebration in East Germany commemorating the 40th anniversary of the founding of the German Democratic Republic saw 70,000 demonstrators demanding an end to the regime. To assuage its increasingly restive population, on November 9, 1989, the East German government lifted travel restrictions between East and West Germany, and began dismantling the Berlin Wall. The demolition of the Wall—erected in August 1961 and the enduring symbol of the disputed frontier between the Soviet Empire and the West—signaled the end of the 42-year long Cold War/Garrison Era, and the beginning of a new phase in national security policy.[383]

Using history as a guide, this new phase in national security policy would eventually result in a new US global military posture. However, the abrupt and unexpected victory in the Cold War caught US defense strategists and military planners by surprise. As a result, unlike during World War II, the US defense establishment had not given any thought to the size, scope, or nature of its "postwar" global military posture. In any event, the sudden psychological dislocation caused by the West's unexpected Cold War victory resulted in a period of strategic uncertainty that

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[382] See "History of the Soviet Union, 1985-1991," found online at http://en.wikipedia.org/wiki/Collapse_of_the_Soviet_Union.

[383] "The End of the Cold War," found at http://www.nebraskastudies.org/1000/stories/1001_0140.html.

argued against making any precipitous changes to the existing US global military posture.[384] Indeed, immediately after the dismantling of the Berlin Wall, the Joint Chiefs of Staff still believed the Soviet Union would remain the most serious threat facing the United States in the 1990s.[385] As a consequence, the 1990s was characterized by relatively cautious US posture adjustments.

These adjustments are the subject of the next chapter.

[384] The uncertainty that existed in the early years following the end of the Cold War is well captured in John Lewis Gaddis, "Toward the Post-Cold War World," *Foreign Affairs,* Spring 1991, pp. 102-22.

[385] Lorna S. Jaffe, *The Development of the Base Force 1989-1992* (Washington, DC: Joint History Office, Office of the Chairman of the Joint Chiefs of Staff, July 1993), p. 2.

VII. ADJUSTING TO THE "POST-COLD WAR ERA": 1990-2001

A CAUTIOUS SHIFT

The tentative nature of US defense posture adjustments in the decade following the demolition of the Berlin Wall is first explained by the unexpected end of the Cold War, which caught US strategists by surprise. It is also explained by two further things. First, the US military officers who helped to fight and win the Cold War were imbued with the same ideology of national preparedness that inspired the officers who fought and won World War II. As a result, one of their top priorities was to limit the extent of the expected post-Cold War demobilization. Indeed, the first postwar defense review—the so-called Base Force Review—was interested less in establishing an enduring national security strategy and more in establishing a floor below which the post-Cold War military should not be allowed to fall.[386]

Second, the 1990s presented a similar strategic challenge to the one that faced US defense strategists and planners between 1942 and 1947—before the Soviet threat had fully manifested itself. The full range of potential future national security threats was extremely broad; no single threat rose above the others, and many competed for strategic attention. Given the inherent uncertainty of the time, it is therefore unsurprising that 1990 US defense strategists acted precisely as did planners in this earlier period. That is, they tended to think about the future military posture first in terms of the previous strategic era. In other words, they remained more attracted to the comfortable assumptions of the past era than to new, less comfortable assumptions about the emerging one.

IMPACT OF THE ERA'S FIRST WAR ON US STRATEGIC THINKING AND THE US GLOBAL MILITARY POSTURE

The tendency of planners to view the future through the lens of the past was reinforced by the era's first major war. The 1990-91 Persian Gulf War, often referred to as Operation *Desert Shield* (the deployment and build-up of US and coalition forces)/*Desert Storm* (the combined combat operation to eject Iraqi forces from Kuwait), was conducted little more than a year after the fall of the Berlin Wall. It helped to mark the abrupt transition from one strategic era to another in a way that few events could. Heavy Army armored units that had for decades been based in Germany to guard against the possibility of a Soviet attack through the Fulda Gap were transferred from their European garrisons to Saudi Arabia to participate in the war—an event unthinkable even two or three years earlier. Moreover, the war's execution and outcome provided US defense planners with a future planning model with many comfortable links to

[386] The Base Force Review did anticipate the future regionalization of US defense problems. However, it was focused first on establishing the postwar demobilization target. For a wonderful description of the defense planning that occurred during and just after the end of the Cold War/Garrison Era, see Jaffe, *The Development of the Base Force 1989-1992.*

earlier Cold War planning models. Operation *Desert Shield/Desert Storm* thus helped to indelibly shape the direction of strategic thinking early in the new Post Cold War national security policy era.

Accordingly, the next few sections highlight the impact of Operation *Desert Shield/Desert Storm* on US strategic and military posture thinking in the 1990s.

Regionalizing the Cold War Military Problem

As its name implies, the *Bottom-up Review* (BUR), conducted by the first Clinton Administration in 1992-93, was ostensibly the first "clean-sheet" post-Cold War strategic/posture review.[387] Although the BUR cautioned against planning for the last war, it proceeded to do just that. In essence, it used Operation *Desert Shield/Desert Storm* to help explain and justify a regionalization of the Cold War military problem of forward defense along the inner-German border and the demilitarized zone that separated North and South Korea.

During the Cold War/Garrison Era, US defense planners worried that war would break out in one of two ways—an attempted Soviet invasion of Central Europe or (beginning in the 1970s) the Persian Gulf. Wherever the war started, planners anticipated that combat operations would quickly spread to the other theater, as well as the Pacific. As a result, the US military fully expected to conduct major combat operations in *at least* two widely separated theaters. In the new era, instead of preparing to fight a multi-theater war against the Soviet Union, the US military would prepare to fight two nearly-simultaneous "major regional contingencies" (MRCs). Thus the only real new wrinkle in the "new" defense thinking was that the two near-simultaneous MRCs would be "'short notice' scenario(s) *in which only a modest number of U.S. forces are in a region at the outset of hostilities*" (emphasis added).[388]

Certainly, the US military would confront more than just major regional contingencies. Among other things, they would assist US nonproliferation efforts by deterring the use of weapons of mass destruction—nuclear, chemical, and biological weapons—against the United States and its allies, and developing the capabilities to destroy WMD production facilities; participating in international peacekeeping operations; protecting fledgling democracies from subversion and external threats; and using military-to-military contacts to help foster democratic values in other countries.[389] Without doubt, however, the primary focus of defense planning—and the driving postwar force sizing and shaping construct—would be the requirement to fight and win two nearly-simultaneous major regional campaigns.

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[387] Secretary of Defense Les Aspin, *Report on the Bottom-Up Review* (Washington, DC: Office of the Secretary of Defense, October 1993), found online at http://www.fas.org/man/docs/bur/index.html.

[388] Aspin, *Report on the Bottom Up Review*.

[389] Aspin, *Report on the Bottom-Up Review*.

Shifting Back to an Expeditionary Posture

Given the emerging requirement to respond to major regional contingencies in theaters containing only modest numbers of US forces, the BUR (and the earlier Base Force) hinted at a gradual shift away from a posture that emphasized forward-*based forces* toward one that favored more forward-*deployed* forces, global attack forces, and surge deployments of forces based primarily in CONUS. The return to such an expeditionary posture would enable the United States to retain its regional influence while increasing its flexibility to respond to rapidly developing crises around the world.[390]

In support of the shift to a new expeditionary posture, the BUR announced several important changes in US military capabilities. First and foremost, it called for improvements to US strategic mobility forces. Second, it prescribed improvements to US carrier forces—mobile bases that could be quickly repositioned to respond to emerging crises in theaters with little basing infrastructure. Third, it advocated more prepositioning of equipment and supplies in forward theaters. Finally, it announced a shift in focus in US long-range bomber forces from nuclear war-fighting to the delivery of "smart" munitions. As should be evident, all of these moves were consistent with a gradual shift toward a more expeditionary posture.[391]

Another major indicator of an impending shift toward an expeditionary military posture was the BUR's explicit use of *forward presence requirements* to justify post-Cold War force levels, particularly for US carrier and amphibious forces. As explained in the BUR's final report:

> Sizing our naval forces for two nearly simultaneous MRCs provides a fairly large and robust force structure that can easily support other, smaller regional operations. However, our overseas presence needs can impose requirements for naval forces, especially aircraft carriers that exceed those needed to win two MRCs. The flexibility of our carriers, and their ability to operate effectively with relative independence from shore bases, makes them well suited to overseas presence operations, especially in areas such as the Persian Gulf, where our land-based military infrastructure is relatively underdeveloped. For these reasons, our force of aircraft carriers, amphibious ships, and other naval combatants is sized to reflect the exigencies of overseas presence, as well as the warfighting requirements of MRCs.[392]

In other words, the BUR anticipated that forces that could initially operate without the presence of forward bases would be especially valuable in the future security environment.

Exploiting an Emerging Military Technical Revolution

Operation *Desert Shield/Desert Storm* also suggested that fighting and winning two simultaneous MRCs from an expeditionary posture would be made easier by the culmination of a revolution in war five decades in the making. In 1943, three separate tactical engagements occurred: a German

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[390] Jaffe, *The Development of the Base Force 1989-1992*, and Aspin, *Report on the Bottom-Up Review*.

[391] Aspin, *Report on the Bottom-Up Review*.

[392] Aspin, *Report on the Bottom-Up Review*.

U-boat sank an allied merchant ship with an acoustical homing torpedo; a US Navy patrol plane sank a German U-boat with an air-dropped acoustical homing torpedo; and the German air force attacked and sank allied warships using radio guided bombs. Together, these events augured a new guided weapons warfare regime that ultimately was to transform *conventional* warfare between opposing states.[393]

Guided weapons are weapons or munitions that actively correct their flight path or trajectory. They come in two basic types: those that home on a signature given off by their target; and those that home on a specific three-dimensional point in space. These weapons changed munitions that mostly missed into munitions that mostly hit, regardless of whether or not their targets were maneuvering or range to target. Instead of having to mass platforms in order to either fire or drop enough unguided weapons to ensure a target's destruction, an attacking force armed with guided weapons needed only to drop or fire enough weapons to saturate a target's defenses, since a single "leaker" might destroy or neutralize any target.[394]

In the mid- to late-1970s, US military strategists concluded that guided weapons could revolutionize conventional warfare, and they raised the pursuit of guided weapons to a national strategic priority.[395] By the mid-1980s, both US and Soviet exercises and experiments led Soviet military theorists to conclude that "terminally guided weapons systems…and new electronic control systems make it possible to increase (by at least an order of magnitude) the destructive power of conventional weapons, bringing them closer…to weapons of mass destruction in terms of effectiveness."[396] These results shook Soviet military theorists, who believed the appearance of such conventional *reconnaissance strike complexes* augured a new "military technical revolution." In their view, the culmination of this revolution would mean that "close battle"—the earmark of operations in the unguided weapons warfare regime—would no longer be decisive at the operational level of war.[397]

Although guided weapons made up a relatively small percentage of the total number of weapons dropped during *Desert Storm* (approximately seven percent), their contributions to the impressive US victory appeared to confirm the conclusion of Soviet military theorists. After the

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[393] Much of my thinking on the Guided Weapons Warfare Regime has been shaped by discussions with Barry D. Watts, and especially from reading his *Six Decades of Guided Weapons: An Assessment of Progress and Prospects* (Washington, DC: Center for Strategic and Budgetary Assessments). I used the manuscript dated July 22, 2004 for this report.

[394] Definition of guided weapons developed in Watts, *Six Decades of Guided Weapons: An Assessment of Progress and Prospects*, Chapter I.

[395] See the comments made by then-Under Secretary of Defense William Perry in Michael G. Vickers and Robert C. Martinage, *The Revolution in War* (Washington, DC: Center for Strategic and Budgetary Assessments, December 2004), p. 8. See also the comments in the same volume made by Andrew Marshall, Director of the Office of Net Assessment, p. 11.

[396] Mary C. FitzGerald, "The Impact of New Technologies on Soviet Military Thought," in Roy Allison, ed., *Radical Reform in Soviet Defense Policy: Selected Papers from the Fourth Congress for Soviet and East European Studies* (New York, NY: St Martin's Press, 1992, pp. 103-109.

[397] Watts, *Six Decades of Guided Weapons: An Assessment of Progress and Prospects*, Chapters I and II.

war, Admiral J.T. Howe, then-Commander-in-Chief, US Naval Force Europe, spoke for many Navy officers when he said:

> *Desert Storm* demonstrated the necessity for…guided munitions. Laser guided bombs (and their advanced successors such as inertially-aided munitions), [the Stand-off Land Attack Missile] and the [Tomahawk Land Attack Missile] have all proven their worth, both militarily and politically. We need to maintain the technological edge these weapons give, both through continued research and development, preplanned product improvement (P3I), and *in maintenance of sufficient munitions in our arsenal to cope with likely future contingencies* (emphasis added).[398]

Said another way, if the most "likely future contingencies" referred to by Admiral Howe were indeed going to be conventional MRCs, a more aggressive pursuit of guided weapons would make it much easier to crack the key military problem outlined in the BUR—winning two nearly-simultaneous campaigns in widely separated theaters. By arming forward-deployed, global attack, and rapid-deployment forces with guided weapons, the United States could "rapidly halt" initial enemy advances and "…minimize the territory and critical facilities that an invader can capture." Once the enemy's "attack had been stopped and the front stabilized," US and allied efforts would focus on building up combat forces and logistics support in the theater while reducing the enemy's capacity to fight—again by guided weapons bombardment. After the theater build up, the US would conduct a counter-offensive to restore the *status quo ante*.[399]

In other words, by fully exploiting the guided weapons warfare revolution, the US armed forces could perform the old Cold War/Garrison Era territorial defense mission more efficiently and more rapidly in the emerging post-Cold War world—and without the need for forward-based defense forces.[400] Accordingly, guided weapons warfare became one of the key hallmarks of US conventional campaigns during the 1990s. During four of five military operations conducted between 1995 and 1999, the percentage of conventional guided weapons employed ranged between 69 and 100 percent of all weapons fired or dropped; in the fifth, the percentage was "only" 30 percent—but still four times greater than Operation *Desert Storm*.[401]

Building Joint Multidimensional Battle Networks

Of course, the improvement in American battlefield performance evident in the first Persian Gulf War and throughout the 1990s was not due solely to guided weapons. Equally important were the improved quality of the men and women resulting from the 1973 decision to shift toward an all-volunteer armed force; the signing of the Goldwater-Nichols Act of 1986 which mandated

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[398] In "The United States Navy in 'Desert Shield/Desert Storm'," found at http://www.history.navy.mil/wars/dstorm/index.html.

[399] Aspin, *Report on the Bottom-Up Review.*

[400] See the case made in Christopher J. Bowie, Fred L. Frostic, Kevin N. Lewis, John Lund, David Ochmanek, Philip Propper, *The New Calculus* (Santa Monica, CA: the RAND Corporation, 1993).

[401] Vickers and Martinage, "*The Revolution in War,* p. 16.

improved joint coordination; and the development of new sensor, information, and targeting systems vital to the effective employment of guided weapons.

In this regard, the combination of increased emphasis on joint interaction and development of a new generation of interoperable communications and information systems led to the dramatic improvement in US telecommunications networking and military command and control. Indeed, the development and exploitation of Internet-related technologies in the US C3I network led to an entirely new concept called network centric warfare (NCW). NCW envisioned inter-connected communications networks with standardized machine-to-machine, man-to-machine, and man-to-man interfaces allowing the rapid sharing of information between strategic, operational, and tactical users, resulting in shared awareness and increased "speed of command."[402]

Information found on the Cold War WWMCCS, which was based on the operation of proprietary mainframe computers, could neither be easily entered nor accessed by users, and the software could not be modified to quickly accommodate changing mission requirements—characteristics in violation of new NCW principles. As a result, just as NCW began to catch hold and the world-wide web and associated applications became both more powerful and less expensive, the WWMCCS system architecture was becoming increasingly unresponsive, inflexible, and expensive to maintain. In 1992, the Assistant Secretary of Defense for Command, Control, Communications, and Intelligence therefore terminated all further attempts to modernize the WWMCCS, and instead outlined a vision for a new web-based Defense Information Infrastructure comprising a Non-classified Internet Protocol Router Network (NIPRNET) and a Secret Internet Protocol Router Network (SIPRNET).[403]

NCW and the shift to a web-based common operating environment were both central to a new post-*Desert Storm* concept called Command, Control Communications, Computers, and Intelligence (C4I) for the Warfighter. C4I for the Warfighter was described as both a vision and roadmap for creating "joint networks and joint systems that are fully interoperable horizontally across air, sea, space and ground environments." The first step toward this vision was the new Global Command and Control System (GCCS), which replaced the WWMCCS Inter-computer Network in 1996. One explanation of the new GCCS called it an "infosphere (information sphere) of software and hardware that will link systems together during operations. An infosphere consists of distributed global networks, computer hardware and software, space-based C2 support, and other related support systems."[404]

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[402] Vice Admiral Arthur K. Cebrowski, USN, and John J. Garstka, "Network-Centric Warfare: Its Origins and Future," *Proceedings*, January 1998, found at http://www.usni.org/Proceedings/Articles03/PROmayo 02.htm. For a thorough explanation of network centric warfare, See "Network Centric Warfare: Department of Defense Report to Congress," found at http://www.dod.mil/nii/NCW.

[403]"WWMCCS World-Wide Military Command and Control System," and Vickers and Martinage, *The Revolution in War*, p. 50.

[404] See "GCCS—Global Command and Control Systems," found online at http://www.fas.org/nuke/guide/usa/c3i/gccs.htm.

Consistent with the theme of C4I for the Warfighter, the GCCS would aim to support both the strategic as well as the operational and tactical levels of war, and to allow for both the "push" of information toward users as well as the "pull" of information from the users. It was designed to aid in threat identification and assessment; strategic planning; course of action development; execution planning, implementation, and monitoring; risk assessment; and the development of common tactical pictures.[405] It was also designed to provide better targeting data for guided weapons. As such, the GCCS would be a central part of a broader "Revolution in Military Affairs" based on more and better guided weapons, better sensors, better information, and improved networking of (joint) forces.[406]

Together, C4I for the Warfighter and GCCS pointed the way toward a new interoperable, web-based network of networks, consisting of interconnected sensing, planning, and targeting networks, which would be specifically designed to improve joint shared awareness, to employ guided weapons in and from the air, ground, and sea, and to apply precise battlefield effects. These new *Joint Multidimensional Battle Networks* would be the uniquely American incarnation of the "reconnaissance strike complexes" first envisioned by the Soviets.

Shifting the Focus of Space-based C3I Forces

Because the evolving military strategy required that these new Joint Multidimensional Battle Networks be established in theaters where there were few forward-based or forward-deployed forces, they would need to be assembled rapidly and have the capacity to support joint operations with little established forward infrastructure. This naturally led planners to look to space-based C3I forces to help solve these daunting requirements.

The contributions made by space-based combat support forces to terrestrial operations forces during *Desert Storm* were so substantial that it is often referred to as the first "Space War." Satellite communications provided critical support at all levels of command; weather satellites aided strike planning; and the new (but incomplete) Global Positioning System (GPS) constellation provided up to 20-hours per day of three-dimensional positioning data and 24 hours of two-dimensional positioning data.[407] Most importantly, however, "national technical means," the Cold War codeword for space-based strategic support systems, provided direct support to operational commanders in a way unheard of in the Cold War/Garrison Era. National reconnaissance satellites provided the operational commanders with an unprecedented view of Iraqi defenses and force movements, and helped to guide the coalition air campaign that drubbed Iraqi strategic and tactical targets for several weeks prior to the initiation of the ground assault. As another example, the Defense Support Program (DSP), a constellation of infrared sensing satellites designed and employed during the Cold War to give the US national leadership early warning of a Soviet ICBM attack against the US homeland, was used to give coalition forces

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[405] "GCCS—Global Command and Control Systems."

[406] See James R. Fitzsimonds and Jan M. van Tol, "Revolutions in Military Affairs," *Joint Forces Quarterly*, Spring 2004, pp. 24-31.

[407] See for example "Desert Storm Hotwash," prepared by the Air Force Space Command, found online at http://www.gwu.edu/~nsarchiv/NSAEBB/NSAEBB39/document7.pdf.

early warning of Iraqi Scud missile attacks and to cue US tactical ballistic missile defense systems such as the *Patriot* missile.[408]

Not surprisingly, then, *Desert Storm* helped to spur a radical shift of focus for US space forces, away from their Cold War pre- and post-conflict strategic intelligence and support missions and toward support of US conventional power-projection operations.[409] Perhaps no other event better signified this shift in focus than the declassification of the National Reconnaissance Office (NRO) in 1992, just one year after *Desert Storm*.[410] During the Cold War, acknowledging the existence of the NRO—which was responsible for building and operating the secret US space-based ISR network focused on the Soviet Union—was grounds for a jail sentence. With the fall of the Soviet Union, however, the NRO came out in the open, primarily to fight a declining post-Cold War budget share. Its rationale for a continued piece of the defense budget pie was its increasing support to US joint campaigns.[411] Similarly, to gain Congressional support for the program, the DSP's replacement—the new space-based infrared system (SBIRS)—was designed from the ground up as a dual-role tactical and strategic missile warning system.

As far as its impact on US combat operations, however, nothing came close to the completion of the GPS constellation in 1994. At the start of *Desert Storm*, there were only 4,500 GPS receivers in all of the US armed forces.[412] After the war, receivers were added to nearly every ship and aircraft in the US inventory and to thousands of vehicles. Ground troops were given hand-held receivers, and GPS chips were embedded in US communications systems. The proliferation of GPS receivers improved every type of tactical operation—including navigation across deserts and through jungles, night attacks, aerial refueling, all-weather air drops of supplies, mine-laying and clearing, combat search and rescue, and even synchronization of frequency-hopping radios. It also spawned a new generation of "blue force (friendly) tracking devices," which minimized the chance of "blue-on blue" fratricide—US forces mistakenly firing on one another [413]

The maturation and reliability of GPS also greatly accelerated the US embrace of guided weapons warfare by spurring the development of a new generation of *all-weather* guided weapons such as the air-dropped Joint Direct Attack Munition (JDAM). Prior to the development of GPS-guided weapons, most air-dropped guided weapons had electro-optical or laser guided guidance systems which generally could be employed only in clear weather. GPS-guided weapons could be employed in any type of weather, depriving an adversary the option of moving forces under cover of clouds, rainstorms, or sand storms without their being detected and engaged effectively. Moreover, GPS-guidance systems became increasingly small and cheap,

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[408] Vickers and Martinage, *The Revolution in War;* Watts, *The Military Use of Space: A Diagnostic Assessment*, p. i.

[409] Watts, *The Military Use of Space: A Diagnostic Assessment*, p. i.

[410] Melissa Healy, "Secret Spy-in-the-Sky Agency Disclosed," *Los Angeles Times*, 19 Sep. 1992, p. A2.

[411] "NRO Goes Public to Fight for Budgets," *Military Space*, October 5, 1992, p. 2.

[412] "Desert Storm Hotwash."

[413] Vickers and Martinage, *The Revolution in War*, pp. 45-46.

allowing their incorporation into munitions as small as a 155 mm artillery shell or a 250-pound small-diameter bomb.[414]

"Conventionalizing" Global Attack Forces

The collapse of the Soviet nuclear threat and the development of GPS guided munitions also spurred moves to "conventionalize" US global (nuclear) attack forces. During the Cold War, the key focus for US global attack forces was on emergency war operations—strategic nuclear war against the Soviet Union. After the fall of the Berlin Wall, both the steadily diminishing threat of a nuclear exchange with Russia and Operation *Desert Storm* helped to highlight the powerful contribution the US long-range bomber force might make in the post-Cold War world. As discussed earlier, among the initial shots during Operation *Desert Storm* were 35 conventional air-launched cruise missiles fired by seven long-range, B-52H bombers—the backbone of the Cold War nuclear bomber force—on a nonstop, round-trip strike mission from Barksdale Air Force Base in Louisiana. Fittingly, the weapons were former nuclear attack missiles modified to perform conventional attack missions.[415]

Operation *Desert Storm* thus augured an impending shift in focus for the long-range bomber force from the nuclear to the conventional global attack mission. Indeed, in 1992, both the Strategic Air Command and Tactical Air Commands were disestablished and all US "dual-role" long-range bombers were assigned to the new Air Combat Command (ACC), the Air Force's new single force provider for bombers, fighters, reconnaissance, battle management, and electronic-combat aircraft.[416] Under the ACC, all bombers quickly became focused primarily on conventional attack. The B-1 bomber made its conventional combat debut in Operation *Desert Fox*, a series of US and British air raids on suspected Iraqi WMD facilities in December 1998.[417] Even the secret B-2 stealth bomber, designed for hunting mobile Soviet ICBMs during the Cold War, was converted into a conventional attack system, capable of penetrating heavy air defense. It made its debut during Operation *Allied Force* (OAF), the combined campaign to eject Serbian forces from Kosovo. During a 78-day air campaign conducted from March through June 1999, B-2 bombers flying nonstop combat sorties from Whiteman Air Force in Missouri, each carrying up to 16, 2000-pound GPS-guided weapons, destroyed 33 percent of all designated Serbian targets over an eight-week period.[418]

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[414] Vickers and Martinage, *The Revolution in War*, pp. 45-46.

[415] The weapons fired were Conventional Air-Launched Cruise Missiles (CALCMs), a modification of the nuclear-tipped Air-Launched Cruise Missile (ALCM). See "AGM-86C Conventional Air-Launched Cruise Missiles," at http://www.fas.org/nuke/guide/usa/bomber/calcm.htm.

[416] See "Air Combat Command," at http://en.wikipedia.org/wiki/Air_Combat_Command.

[417] See "Operation Desert Fox," found online at http://en.wikipedia.org/wiki/Operation_Desert_Fox.

[418] See "Factsheets: B-2 Spirit," found online at http://www.af.mil/factsheets/factsheet.asp?fsID=82.

Converting the Cold War Strategic Reinforcement System into a New Strategic Military Transportation System

Being able to win two future MRCs quickly would rest heavily on the maturation and culmination of the guided weapons warfare revolution, the emergence of Joint Multidimensional Battle Networks, and the conventionalization of US global attack and C3I forces. However, as the US reassumed an expeditionary posture, equally important would be ability to transport large expeditionary forces quickly to a first MRC, and then to "swing" forces rapidly to the second.

Operation *Desert Shield/Desert Storm* demonstrated the potential magnitude of the problem. This expeditionary power-projection operation involved the deployment and sustainment of two Army corps, two Marine Expeditionary Forces, 28 Air Force tactical fighter squadrons, and over 100 US Navy ships. In support of this effort, TRANSCOM moved nearly 504,000 passengers, 3.7 million tons of dry cargo, and 6.1 million tons of petroleum products to Southwest Asia from bases from all over the world.[419] The two-MRC strategy would require a post-Cold War Strategic Military Transportation System (SMTS) capable of rapidly repeating a similar Herculean effort in another, distant theater.[420]

Successfully accomplishing this massive undertaking would require more than a single guiding hand *in wartime*. For example, despite the evident improvements to the strategic sealift fleet made by the Military Sealift Command during the 1980s, the fleet suffered from several problems during *Desert Shield/Desert Storm*. Only 14 of the first 41 RRF ships activated for service reached their loading ports on time, causing delays in the delivery of equipment and supplies to the Persian Gulf. Problems were compounded by the fact that RRF ships were old, generally incapable of handling containers, and ill-suited for the transport of bulky, outsized combat vehicles. As a result of these problems, *Desert Storm* logisticians were initially forced to rely more heavily on airlift than expected, and later had to charter over 300 foreign-flagged ships to support the massive transport of equipment and supplies in support of combat operations to eject the Iraqis from Kuwait.[421] This experience suggested that the only way to get the new SMTS fully ready for the next war would be to give TRANSCOM more authority to highlight problems and to enforce changes to programs and procedures during peacetime.

Consequently, on 14 February 1992, the Secretary of Defense changed TRANSCOM's mission. In the future, it would "provide air, land, and sea transportation for the Department of Defense, both in time of peace and time of war." Consistent with this new mission, all three of the service components would fall under TRANSCOM's combatant command authority in peacetime. In effect, these changes gave TRANSCOM the power and authority to act as DOD's sole manager for US strategic mobility plans and programs.[422]

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[419] "US Transportation Command."

[420] See *Options for Strategic Military Transportation Systems* (Washington, DC: Congressional Budget Office, September 2005), p. 1.

[421] See "Logistics Fixes That Took Root;" and Eric Schmitt, "US Insists it is Batter Prepared to Ship Arms and Equipment to Gulf This Time," *New York Times*, January 20, 2003.

[422] "US Transportation Command."

Further related organizational changes occurred. In 1992, when the aforementioned Air Combat Command was stood up, the Military Airlift Command and the Strategic Air Command were both disestablished. While SAC's bombers were transferred to the Air Combat Command, its aerial tankers were assigned along with Air Force air transport assets to the new Air Mobility Command (AMC), which became the Air Force Component to TRANSCOM. To improve the efficiency of US "global reach," all US air mobility assets were controlled by a single Tanker Airlift Control Center established near the TRANSCOM headquarters near St. Louis.[423]

These new organizational changes were among the final steps in a decades-long effort to combine all US strategic mobility assets under a single manager, and to make create a cohesive and integrated Strategic Military Transportation *System*.

Incorporating *Desert Storm* Campaign Bases Into the Exterior Basing Network

Like the Spanish-American War and the Second World War before it, another important shaping function of Operation *Desert Storm* was reflected in the assimilation of its campaign basing network into the post-Cold War exterior basing posture. Recall that throughout most of the Cold War/Garrison Era the United States had maintained a minimal presence in Southwest Asia and the Persian Gulf. The only substantial permanent US presence in the Gulf was provided by the Navy's Middle East Force (MIDEASTFOR)—a modern "fleet station" established in 1949. Operating out of a participating Royal Navy base in Manama, Bahrain, the small MIDEASTFOR consisted of a command ship and two or three small combatants.[424]

When Bahrain became a sovereign state in 1971, the US Navy worked out an agreement with the Bahraini government to take over the British piers, radio transmitters, warehouses, and other facilities, thereby converting the Manama naval base into an exclusive US site. However, the base's footprint remained minimal. Before the first Persian Gulf War, no more than 100 sailors were stationed at the base, and port visits by Navy ships other than the MIDEASTFOR were relatively rare.[425] The only other permanent US access agreement in the area was with Oman, which in 1975 offered use of Masirah Island in the Gulf of Oman to US forces.[426]

The ouster of the Shah of Iran and his replacement by a radical Islamic regime violently opposed to the United States spurred efforts to improve US access in the region, leading to the aforementioned creation of a Rapid Deployment Joint Task Force and the first maritime prepositioning programs. It also stimulated further efforts to gain access agreements in the region. For example, in 1981, the United States negotiated a ten-year "facilities access" agreement with Oman that granted the United States limited participating and shared access to the air bases on Masirah. Oman also agreed to allow the Air Force to preposition war reserve

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[423] See "Air Mobility Command," at http://www.globalsecurity.org/military/agency/usaf/amc.htm.

[424] See "Manama [Juffair], Bahrain," found at http://www.globalsecurity.org/military/facility/manama.htm.

[425] "Manama [Juffair], Bahrain."

[426] See "Masirah," found at http://www.globalsecurity.org/military/facility/masirah.htm.

material inside the country and granted US participating access to other Omani air bases. The presence of US personnel was kept at an absolute minimum, with access to and security of the sites handled by Omani forces. Nevertheless, Masirah became an important logistics transshipment point for US naval forces operating in the Persian Gulf region throughout the 1980s, as well as an important support base for strategic airlift operations.[427]

Operation *Desert Shield*/*Desert Storm* changed the scope and character of US presence in the Gulf initially by the erecting of a substantial campaign basing network to support coalition operations against Iraq. After the war, the United States signed a comprehensive base access agreement with the government of Kuwait which allowed the US military access to permanent exclusive, shared, and participating bases in order to monitor and to contain further aggression by Iraq. Today, 16 such bases remain in Kuwait.[428]

The United States also built on the long-standing relationships with its two key pre-war partners, Bahrain and Oman. During Operations *Desert Shield/Desert Storm*, Bahrain served as the primary coalition naval base as well as a coalition air base. In 1992, Bahrain signed a defense cooperation agreement with the United States that allowed the Navy to expand the exclusive naval base in Manama to serve as the support facility for its newly established 5th Fleet. The agreement also gave the US military participating access to Bahraini military facilities, and gave the United States permission to preposition military supplies and equipment in the country. As the new 5th Fleet command moved ashore, the Navy's permanent presence ashore rose to around 1,200 sailors.[429] Meanwhile, Oman and the US renewed their ten-year facilities agreement, with the government of Oman agreeing to a substantial upgrade of the facilities on Masirah, as well as to expanded shared and participating access to Omani air and naval bases.[430]

Elsewhere in the region, the United States maintained air force units at Saudi bases after the war, but persistent operational restrictions levied by the Saudis spurred the Air Force to pursue alternative basing sites. These efforts were rewarded in 1996, when Qatar authorized the prepositioning of a US Army combat brigade equipment set as well as other US war reserve material, and approved the construction of a huge new shared air base at Al Udeid. In addition, Qatar approved the building of a state-of-the-art Combined Air Operations Center (CAOC) at the base that would be capable of coordinating air activities throughout Southeast Asia.[431] The US military also gained participating access to naval and air facilities in the United Arab Emirates, as well as numerous other locations throughout the area.[432]

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[427] See "Masirah," found at http://www.globalsecurity.org/military/facility/masirah.htm.

[428] See "Kuwait Facilities," found at http://www.globalsecurity.org/military/facility/kuwait.htm.

[429] "Manama [Juffair], Bahrain."

[430] "Masirah."

[431] See "Al Udeid Air Base, Qatar," found at http://www.globalsecurity.org/military/facility/udeid.htm.

[432]See "US Central Command Facilities," found at http://www.globalsecurity.org/military/facility/ centcom.htm.

Heralding a Shift to a New National Security Policy Era and Posture

As the foregoing review hopefully makes plain, despite their Cold War ties, post-*Desert Shield/Desert Storm* developments clearly pointed toward both a new national security policy era as well as a new global military posture. The era would resemble the Transoceanic Era in that the United States fully would continue to be engaged in all regions of the world, and would confront threats overseas before they could form and pose a threat to the US homeland. However, instead of a garrison posture with large numbers of troops permanently housed on foreign exterior bases, most future overseas US expeditions would originate from bases in the continental United States or exterior *sovereign* bases and end in theaters where there would be few forward-based forces. While moving to emerging theaters of operation, US forces would be supported by increasingly capable (conventional) global attack forces and a global C3I network focused on operational and tactical support to the warfighter. Moreover, while these expeditions would continue to be supported by an exterior basing network, individual overseas bases and installations would increasingly represent "coaling stations" for US forces on their way toward another theater. Indeed, instead of being viewed as the most likely scene of future combat operations, Europe was steadily being transformed into a "strategic trampoline" for forces moving to either Africa or to Southwest Asia—to perform the same role played by Brazil during World War II.

In other words, although the United States was entering into a new national security policy phase perhaps best called the *Second Transoceanic Era,* its new global defense posture would be more similar to the one assembled during the Oceanic Era, the essence of which was perhaps best captured by Winston Churchill before the United States had erected its extensive wartime campaign base structure. Writing in 1942, Churchill observed that:

> The whole power of the United States, to manifest itself, depends on the power to move ships and aircraft across the sea. Their mighty power is restricted; it is restricted by the very oceans which have protected them; the oceans which were their shield, have now become both threatening and a bar, a prison house through which they must struggle to bring armies, fleets, and air forces to bear upon the common problems we have to face.[433]

Said another way, the United States would be reverting back to an expeditionary posture. However, while this emerging new posture would have many similarities with that of the earlier Service Expeditionary Era, the character of future US power-projection operations would be different in at least two key ways: their emphasis on guided over unguided weapons and their exploitation of new *Joint* Multidimensional Battle Networks. Together, these two things would naturally force further service interdependencies and improved joint operations, a thought well captured by one military officer, who wrote:

> Virtually all intelligence and operational estimates suggest that war in the 21st century will require interdependence among land, sea, and aerospace forces. The services report that precision weapons will so expand the range and capabilities of systems that the tactical deadly zone, once a

[433] Benjamin W. Labaree, et al., *America and the Sea: A Maritime History* (Mystic, CT: The Museum of America and the Sea, 1998), p. 9.

> few hundred meters, could extend beyond 200 kilometers by 2020. Operational exclusion zones, designed to deny access to land, sea, and aerospace forces, might reach 2,000 kilometers. Each is likely to be flooded with an admixture of technologically sophisticated and relatively crude precision and area-fire weapons (including weapons of mass destruction) linked by communication systems from state-of-the-art to relatively primitive…*Thus service interdependence will be necessary at the low and high end of the conflict spectrum* (emphasis added).[434]

Indeed, the new emphasis on joint interdependent operations in the Second Transoceanic Era suggests the name for its associated military posture: the *Joint Expeditionary Posture*.

IMPEDIMENTS FOR MORE RAPID CHANGE

Some defense experts believe the first decade of the Second Transoceanic Era was characterized by unduly cautious and slow strategic change, which helps to explain the tentative shift to a new Joint Expeditionary Posture. Other experts counter that strategic conservatism can be a virtue during the sometimes turbulent transitions that occur between strategic eras. Regardless of where one falls between these two views, the lack of more rapid change in the early years of the evolving Post-Cold War Era is explained by the very same things that hampered US strategists between 1942 and 1947: the lack of a new adversary or clear national security problem to help guide the shape of a national security strategy and posture; strategic conservatism; too great a reliance on the planning assumptions of the previous strategic era; and a focus on maintaining force structure rather than changing force types and mixes. In hindsight, it was also hindered by initial snap judgments about an impending revolution in warfare—just as post-World War II planners were hampered by initial judgments about the impact of atomic weapons on warfare. Together, all these factors helped to impede a more dramatic initial shift in the post-Cold War military posture.

Why Fix What Isn't Broke?

For example, regionalizing the Cold War territorial defense problem focused the US military on the "traditional" military problem of defeating a cross-border invasion of a country friendly to the United States by a hostile "regional aggressor" armed with tanks, armored personnel carriers, tactical fighter bombers, and naval forces consisting primarily of small surface combatants and submarines. By doing so, it signaled that future combat operations would be conducted in four phases immediately familiar to officers who had fought and won the Cold War: halt the invasion; build up US combat power in theater while reducing the enemy's; decisively defeat the enemy; and provide for post-war stability.[435]

Regionalizing the Cold War planning problem thus ensured that little substantive change would come to the US defense program beyond shaving force structure and the total numbers of

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[434] Lieutenant Colonel Autulio J. Echevarria II, "Interdependent Maneuver for the 21st Century," *Joint Forces Quarterly*, Autumn 2000, p. 11.

[435] Aspin, *Report on the Bottom-Up Review*.

weapons systems. After all, weapons and systems designed for fighting along the inner German border were likely to be just as relevant against regional aggressors fielding combined-arms, mechanized forces like Saddam Hussein's Republican Guards. More importantly, however, it made US defense planners lazy; they had little new thinking to do other than concentrating on winning regional wars as efficiently as possible.

Misreading the Impact of the Guided Weapons Warfare Revolution: a New Focus on Rapid Decisive (Conventional) Operations

Just as US defense planners in the late 1940s concluded that the atomic revolution would change the rules of future warfare against global powers, US defense planners in the 1990s concluded that guided weapons and integrated joint battle networks would change the rules of future warfare against regional adversaries wedded to unguided weapons warfare. Rather than thinking about what changes in adversary behavior that US dominance in the emerging guided weapons warfare regime might induce, US defense planners instead focused on how US dominance would help the US to win future conventional campaigns more quickly and less bloodily.

As a result, effecting "rapid halts" of conventional enemy invasions and achieving quick victories became the driving goals of US strategic planning during the 1990s. Indeed, fighting and winning quick campaigns became such an obsession for US defense planners that it was eventually codified in joint operational concepts and doctrine. The culmination of these efforts was a joint warfighting concept entitled *Rapid Decisive Operations (RDO)*, the essence of which emphasized:

> …situational understanding, immediate response capability, speed, and massing of effects rather than forces. Distinguished from traditional operations, this approach usually will not focus on seizing and occupying territory in the battlespace except for a limited purpose, such as to generate an otherwise unobtainable opportunity for precision engagement, to secure a key decisive point, or to protect the civilian populace. Forces inserted for these purposes would have the capability to be quickly withdrawn and employed elsewhere. An RDO campaign typically will be characterized by immediate, continuous, and overwhelming operations to shock and paralyze the adversary, destroy their ability to coordinate offensive and defensive operations, fragment their capabilities, and foreclose their most dangerous options.[436]

Ironically, although the operational *execution* of the 1989 invasion of Panama provided the conceptual model for rapid decisive operations, the *planning* for that operation was anything but rapid, taking nearly six months to complete.[437] In any event, achieving rapid victories in two widely separated theaters became the *sine qua non* of post-*Desert Storm* joint strategic planning; worrying about or preparing for unexpected or non-traditional military challenges received a low priority.

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[436] See "Rapid Decisive Operations," found at http://www.globalsecurity.org/military/ops/rdo.htm.

[437] Ronald H. Cole, "Grenada, Panama, and Haiti: Joint Operational Reform," *Joint Forces Quarterly*, Autumn/Winter 1998/99, pp. 59-61.

A Case Study: Planned Changes to the Strategic Military Transportation System

The reluctance to think about or tackle new defense challenges was evident in the first post-Cold War strategic mobility reviews—the Bush Administration's 1992 *Mobility Requirements Study* (MRS) and the Clinton Administration's subsequent *MRS Bottom-Up Review Update* (MRS BURU). Tellingly, both studies reflected the same Cold War planning assumptions that influenced the development of the two-MRC strategy; that is, the United States normally would be assisting an ally threatened by a direct cross-border attack, and the US armed forces would most often "be fighting as the leader of a coalition, with allies providing some support and combat forces." As such, the strategy implicitly rested upon a presumption of *assured regional access*.

As a result, both studies placed much higher emphasis on improving the *mobility* (movement) *of reinforcements* rather than on the *operational maneuver of US forces.* This perspective is captured in the Secretary of Defense's 1996 Annual Report to Congress:

> In the post-Cold War era, the drawdown of U.S. troop strength overseas and the increasing number of unstable situations abroad combine to place a high value on mobility forces…Mobility forces would be key to the *deployment and sustainment* of U.S. forces in any MRC. Should a conflict erupt with little warning, the United States would want to respond promptly and with sufficient strength *to help indigenous forces halt the aggression and restore the peace* (emphasis added).[438]

The emphasis on mobility of reinforcements was also plain in the studies' key recommendations. With regard to strategic airlift, the studies concluded that the SMTS's total airlift capacity could be reduced from the ultimate Cold War target of 66 million ton-miles per day to a target of approximately 50 MTM/D. To hit this new target, the studies recommended that the aging C-141 force be replaced with 120 new C-17 strategic airlifters capable of delivering outsized and oversized cargoes directly to expeditionary airfields and that the Civil Reserve Aircraft Fleet be expanded. With regard to strategic sealift, the studies recommended that the overall fleet be divided into surge sealift and sustainment sealift fleets. The surge sealift fleet would consist of the eight Fast Sealift Ships converted during the 1980s and 11 new Large Medium-speed Roll-on/Roll-off ships (LMSRs), each capable of transporting 350,000 square feet of cargo (about twice the capacity of the largest vessels used to support *Desert Storm*) at 24 knots.[439] The sustainment fleet would expand its organic RO/RO force to 35 ships through the purchase or leasing of available commercial ships, and the readiness of the entire RRF would be raised by replacing RRF ships kept in inactive status with ships in "reduced operating status." These ships

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[438] William J. Perry, Secretary of Defense, *1996 Annual Defense Report to Congress* (Washington, DC: Office of the Secretary of Defense, 1996), Chapter 21, found online at http://www.defenselink.mil/ execsec/adr96/chapt_21.html.

[439] Schmitt, "US Insists it is Batter Prepared to Ship Arms and Equipment to Gulf This Time;" and "Cargo-Fast Sealift Support (FSS)-Specialized."

would have skeleton crews assigned to conduct maintenance and to keep the ships ready for activation.[440]

The studies also looked at all US prepositioning programs. As far as these programs went, the studies recommended that:

- The Army's land-based pre-positioning program should be modified and reduced to retain four brigade sets of equipment in Germany; one brigade set in Italy; two brigade sets and divisional support equipment in Southwest Asia; and one brigade set of Army equipment in Korea. Moreover, the Marine Corps should retain a brigade's worth of equipment in Norway;

- The Army should create its own maritime prepositioning force—a Combat Prepositioning Force (CPF) consisting of a squadron of eight LMSRs carrying an Army "2x2" brigade set consisting of two armored and two mechanized battalions, augmented with additional supplies and ammunition for follow-on Army units;

- The Navy should create an expanded Logistics Prepositioning Force (LPF), including the two aforementioned Marine Corps Aviation Support Ships berthed in the United States, several container ships stationed in forward theaters carrying Air Force and Navy ammunition and supplies; and several tankers modified by the Defense Logistics Agency to serve as Offshore Petroleum Distribution Systems for joint forces operating ashore; and

- The Navy and Marines should add an additional ship to each of the three Maritime Prepositioning Force squadrons to carry the equipment for a naval construction (Seabee) battalion, an expeditionary airfield, and a field hospital;[441]

Note that all of these improvements assumed the ready availability of forward airfields or deep-draft, prepared ports in benign conditions. This assumption was wholly consistent with a strategy that emphasized reinforcing allies, and mandated a continued priority on the rapid reception, staging, onward movement, and integration process of US reinforcements arriving in a distant theater.

The assumption of assured forward access was also readily apparent in the outcome of the *Integrated Amphibious Operations and USMC Air Support Requirements Study,* now commonly referred to as the DoN Lift II Study. After the study, Navy and Marine planners recommended that the battle fleet's amphibious lift requirement be set at three Marine Expeditionary Brigades, which was only slightly less than the final Cold War goal, established in an era where the requirement to seize forward access was remote, at best. However, soon thereafter, in

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[440] Jon D. Klaus, *Strategic Mobility Innovation: Options and Oversight Issues* (Washington, DC: Congressional Research Service (order code RL32887), dated April 29, 2005).

[441] Klaus, *Strategic Mobility Innovation: Options and Oversight Issues.*

anticipation of lower post-Cold War defense budgets, the Secretary of the Navy decided to establish a lower, "fiscally constrained goal" of 2.5 MEB amphibious lift.[442]

In other words, one of the first posture moves made by DoN leadership during the Second Transoceanic/Joint Expeditionary Era was *to reduce* the Department's ability to conduct naval maneuver and forcible entry operations from the sea—both critical capabilities for transoceanic power-projection and important guarantors of US operational independence and freedom of action within the context of a new expeditionary posture. This decision reflected the still-entrenched Cold War assumptions about assured forward access—reinforced by the ready access to land bases negotiated during Operation *Desert Shield/Desert Storm*; the priority placed on the transoceanic garrison reinforcement mission; and Navy antipathy toward building up the fleet's capability to conduct large-scale combined arms attacks from the sea.

Updating the Cold War Global Basing Network

The development of the force and posture necessary to implement the two-MRC strategy was tested and guided by several key potential scenarios. These scenarios included, among others, a repeat of *Desert Storm*; a Chinese cross-strait invasion of Taiwan; and a North Korean invasion of South Korea. A reduced Cold War basing network, augmented by the incorporation of *Desert Storm* campaign bases into the permanent network, looked to be a good fit for these planning contingencies. Moreover, to protect its continuing regional interests and to reassure allies that the United States would remain globally engaged in the post-Cold War world, successive US administrations—both Republican and Democrat—announced their intention to keep approximately 100,000 military personnel based in both Europe and Asia.[443]

The net result was that the United States would retain, virtually without change, its Cold War Pacific military posture, consisting of an Army division and an Air Force tactical fighter wing based in South Korea; a division in Hawaii; a brigade in Alaska; a carrier battle group and an amphibious ready group based in Japan; and a Marine Expeditionary Force on Okinawa.[444] In Europe, the drawdown of Cold War garrisons would be dictated by the 100,000-personnel goal, which in force structure terms translated into an Army corps consisting of the major parts of two divisions and two reinforced Air Force tactical fighter wings.[445] While this drawdown would trigger a consolidation of European exterior bases, it would not result in a major shift in the locations or operations of US bases.

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[442] Robinson, *Integrated Amphibious Operations Update Study (DoN Lift 2+)—A Short History of the Amphibious Lift Requirement*. See especially pp. 24-29. See also Lieutenant Colonel Robert C. Dickinson, Jr., USMC, "What is the Right Strategic Sealift Mix to Deploy, Equip, Supply, and Sustain Contingency and Expeditionary Forces," Executive Research Project S16, Industrial College of the Armed Forces, National Defense University, 1993, found online at http://www.ndu.edu/library/ic6/93S16.pdf.

[443] See for example the 1996 remarks made by Anthony Lake, National Security Advisor to President Clinton, at http://www.mtholyoke.edu/acad/intrel/lakeapec.htm.

[444] Aspin, *Report on the Bottom-Up Review*.

[445] Aspin, *Report on the Bottom-Up Review*.

Guided by the requirement to base "only" 200,000 forces in Europe and Asia, the total number of forward-based forces dropped dramatically. By 1998, the number of US forces based overseas was cut by almost 300,000 personnel, dropping the total number of troops stationed abroad to 235,000, including 109,000 in Europe, 93,000 in Asia, and 23,000 in the Persian Gulf.[446] Most of those cuts were Army and Air Force personnel leaving bases in Germany, although the aforementioned 1991 decision of the Philippines government to revoke US access to the superb facilities at Subic Bay Naval Base and Clark Air Force Base resulted in a slight reduction in the number of troops based in the Pacific.[447]

In any event, although the initial shape of its post-Cold War basing network would change little beyond the addition of Southwest Asian bases, because of the demobilization or relocation of forces to the continental United States, the US military was able to close down approximately 60 percent of its foreign exterior military bases. Simply stated, the initial post-Cold War US global basing network was largely a shrunken version of the Cold War network.[448]

Operational Impediments

In addition to the foregoing structural impediments for change, during the 1990s US military planners had to contend with the distraction of managing the post-Cold War demobilization. While the post-Cold War demobilization was neither as sharp nor steep as the post-World War II demobilization, it occurred during a period of frenetic global activity quite unlike that faced by US strategic planners between 1945 and 1950. Freed from the requirement to prepare for full-scale war against the Soviet Union, US leaders employed the military for a variety of tasks, and operational tempo (optempo) for all of the armed forces climbed dramatically. Over the 1990s, the United States fought a major war and conducted several follow-on punitive raids against Iraq; conducted armed interventions in Somalia, Bosnia, and Kosovo; and committed armed forces to a range of lesser contingencies. During this period, the term *expeditionary* gradually infused the lexicon of all of the services—much to the chagrin of the Marines, who believed they had cornered the expeditionary market during the First Transoceanic Era.

Three of the services made organizational or operational adjustments to account for the sudden post-Cold War spike in optempo. Their general approach was to create a sustainable rotational base to allow them to better support the more frequent deployments, overseas expeditions, and power-projection operations emanating from CONUS. Not surprisingly, the Navy and Marine Corps had the fewest changes to make; they simply updated the rotational patrol and scouting model they developed during the Cold War. For its part, the Air Force adopted a variation of the same model. In the mid- to late-1990s, as part of its new Aerospace Expeditionary Force (AEF)

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[446] Colonel Stephen Schwalbe, "Overseas Military Base Closures," *Air & Space Power Chronicles Online*, January 4, 2005, found online at http://zfacts.com/metaPage/lib/Overseas-Military-Base-Closures.pdf.

[447] John Shimcus, "Changes in the Forward Deployment of the United States' Military and the Effects on the Transatlantic Alliance," found online at http://www.nato-pa.int/default.asp?SHORTCUT=922.

[448] Schwalbe, "Overseas Military Base Closures." Note: recall that the figures found in Figure 1 were consolidated numbers; each base included all satellite facilities within a 25-mile radius. The baseline for the 60 percent reduction included every individual overseas facility and site.

concept, the Air Force organized its forces into ten AEFs and adopted a rotational pattern in which two were always ready for immediate deployment. In contrast, the Army made no major organizational adjustments. It resisted calls to shift to a brigade-based rotation base, which would have increased its pool of available deployable units, preferring instead to retain its Cold War, division-based organization.[449]

In any event, faced by the twin problems of managing both a postwar demobilization and an unprecedented postwar optempo, US military leaders were continually distracted from any long-term strategic planning.

EARLY OBJECTIONS TO THE EVOLVING POSTURE

As the Second Transoceanic Era progressed, however, more defense strategists outside the Defense Department began to object to the overall direction of US strategic thinking and the evolving global military posture. These objections can be grouped into two major, inter-related categories: increasing uncertainty over future access to foreign exterior bases, due to both diplomatic and operational reasons; and increasing doubts about a Strategic Military Transportation System that focused almost exclusively on movement, rather than maneuver, of US forces.

Questioning the Assumption of Assured Theater Access

Two key outside bodies were the first to question the Defense Department's assumption of assured forward access, and therefore its entire conception of power-projection. These were the 1997 National Defense Panel (NDP) and the subsequent US Commission on National Security in the 21st Century.

Despite being four years deeper into the Joint Expeditionary Era, the second Clinton Administration's 1997 QDR substantially reaffirmed the first administration's 1993 Bottom-Up Review with relatively minor revisions. It substituted the term "Major Theater Wars" (MTWs) for MRCs, but otherwise agreed both with the BUR's two-war force planning and sizing construct and its emphasis on "increasing the capability of U.S. forces to halt or control an adversary in the initial phases of a conflict by incorporating new operational concepts and advanced technologies such as extended-range precision strikes and information operations." Its major change from the BUR was its conclusion that the joint force had to have additional forces to handle "smaller scale contingencies" (SSCs), which the BUR had counted as "lesser-included" force packages drawn from forces dedicated to fighting MTWs. In other words, the QDR merely tweaked the BUR's focus on rapidly defeating "traditional" military invasions of allied territory

[449] The most famous of these calls was perhaps a book written by an active duty Army officer, Douglas A. MacGregor, entitled *Breaking the Phalanx: A New Design for Landpower in the 21st Century* (Washington, DC: Center for Strategic and International Studies, 1997).

rather than attempting a more pointed reappraisal of the assumptions made just after the end of the Cold War.[450]

As part of the 1997 QDR process, the Congress formed and tasked the independent NDP to critique the Defense Department's review and to provide its own alternative strategic assessment of the pace and scope of DoD change. The NDP was troubled by DoD's failure to question the basic assumptions made in the midst of the turbulent inter-era transition between the First and Second Transoceanic Eras, and especially those that impacted on the new posture. In particular, they worried that "to the extent that the QDR views major theater warfare as a traditional force-on-force challenge, this view inhibits the *transformation of the American military to fully exploit our advantages as well as the vulnerabilities of potential opponents*" (emphasis added). They also worried that the two-MRC/MTW construct "may have become a force-protection mechanism—a means of justifying the current force structure—especially for those searching for the certainties of the Cold War era," rather than a strategy appropriate for expected future challenges.[451]

In this regard, the NDP believed that DoD's QDR underestimated the challenge of gaining forward access in the future. As they wrote in their final report:

> For nearly a half a century, the U.S. military has relied upon access to forward basing and forward bases as a key element in its ability to project power…However, U.S. forces' long-term access to forward bases, to include air bases, ports, and logistics facilities cannot be assumed. Access may be granted or denied for any number of political or military reasons. Moreover, U.S. forces may find themselves called upon to project power in areas where no substantial basing structure exists.[452]

From an operational perspective, the NDP was particularly concerned with the threat that guided weapons and weapons of mass destruction posed to future forward 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 standoff ranges. So, too, do they threaten access to strategic geographic areas [of importance to the United States].[453]

The NDP thus directly challenged two of the key assumptions then driving post-Cold War Defense Department planning. These assumptions were: future power-projection operations

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[450] *The National Defense Panel: Assessment of the May 1997 Quadrennial Defense Review*, found online at http://www.defenselink.mil/topstory/ndpassess.html.

[451] *The National Defense Panel: Assessment of the May 1997 Quadrennial Defense Review.*

[452] National Defense Panel, *Transforming Defense: National Security in the 21st Century* (Washington DC: National Defense Panel, 1997). The Panel's final report can be found on the Defense Strategy Review Page online at http://www.comw.org/qdr/97qdr.html.

[453] National Defense Panel, *Transforming Defense: National Security in the 21st Century*, p. 12.

could count on assured forward access; and the United States would retain its monopoly and dominant lead in the guided weapons warfare regime over time.

The subsequent US Commission on National Security in the 21st Century echoed and expanded upon the NDP's objections to DoD's thinking. This bipartisan commission, co-chaired by former Senators Gary Hart and Warren Rudman, and with respected members across the political spectrum, was "initiated out of a conviction that the entire range of U.S. national security policies and processes required examination in light of new circumstances that lie ahead."[454]

Whereas the NDP primarily challenged DoD's thinking about traditional power-projection *operations*, the Commission challenged its focus on traditional military *threats*. Indeed, the Commission's findings were, in hindsight, remarkably prescient and insightful about the likely strategic conditions in the first several decades of the 21st century. As indicated by the following extended excerpt from the Commission's report, the members identified a new range of threats facing the United States in the coming century:

> As a result, for many years to come Americans will become increasingly less secure, and much less secure than they now believe themselves to be. That is because many of the threats emerging in our future will differ significantly from those of the past, not only in their physical but also in their psychological effects. While conventional conflicts will still be possible, the most serious threat to our security may consist of unannounced attacks on American cities by sub-national groups using genetically engineered pathogens. Another may be a well-planned cyber-attack on the air traffic control system on the East Coast of the United States, as some 200 commercial aircraft are trying to land safely in a morning's rain and fog. Other threats may inhere in assaults against an increasingly integrated and complex, but highly vulnerable, international economic infrastructure whose operation lies beyond the control of any single body. Threats may also loom from an unraveling of the fabric of national identity itself, and the consequent failure or collapse of several major countries.
>
> Taken together, the evidence suggests that threats to American security will be more diffuse, harder to anticipate, and more difficult to neutralize than ever before. Deterrence will not work as it once did; in many cases it may not work at all. There will be a blurring of boundaries: between homeland defense and foreign policy; between sovereign states and a plethora of protectorates and autonomous zones; between the pull of national loyalties on individual citizens and the pull of loyalties both more local and more global in nature.[455]

In this world of diffuse and uncertain threats, the United States would find it increasingly difficult to maintain a major exterior basing network, primarily because the fundamental

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[454]U.S. Commission on National Security/21st Century, found online at http://www.au.af.mil/au/awc/awcgate/nssg.

[455] U.S. Commission on National Security/21st Century, *New World Coming: American Security in the 21st Century: Phase I Report*, published September 15, 1999, found online at http://govinfo.library.unt.edu/nssg/Reports/NWC.pdf.

condition of the future security environment would be of "uncertain neutrals and doubtful allies." As the Commission wrote:

> Political changes abroad, economic considerations, and the increased vulnerability of US bases around the world will increase pressures on the United States to reduce substantially its forward military presence in Europe and Asia. In dealing with security crises, the 21st century will be characterized more by episodic "posses of the willing" than the traditional World War II-style alliance systems. The United States will increasingly find itself wishing to form coalitions but increasingly unable to find partners willing and able to carry out combined military operations.[456]

As a consequence, and in line with the NDP's thinking about new threats to forward bases, the US military would have to change the way it projected power. In this regard, the Commission wrote that:

> Fundamental to US national security strategy is the need to project US power globally with forces stationed in the United States, and those stationed abroad and afloat in the forward presence role. Owing to the proliferation of new defense technologies in the hands of other states, effective power projection will become *more difficult for the U.S. armed forces in the 21st century. US forces must therefore possess greater flexibility to operate in a range of environments, including those in which the enemy has the capability to employ weapons of mass destruction.* US forces must be characterized by stealth, speed, range, accuracy, lethality, agility, sustainability, reliability and be supported by superior intelligence in order to deal effectively with the spectrum of symmetrical and asymmetrical threats we anticipate over the next quarter century (emphasis added).[457]

Importantly, given these conditions, the Commission concluded the 21st century military needed to be able to "deploy rapidly, be employed immediately, and prevail decisively in expeditionary roles, prolonged stability operations, and major theater wars."[458]

Back to the Future: A Return to the GEMMS?

The requirement for expeditionary forces *to be employed immediately* on arrival in a theater was a theme first raised by the prestigious Defense Science Board (DSB), which in August 1996 published the results of a Task Force on Strategic Mobility. The Task Force conducted a thorough review of the future requirements for US strategic mobility forces and recommended that future mobility enhancements focus on several key areas, including: shaping the entire joint

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[456] U.S. Commission on National Security/21st Century, *Seeking a National Strategy: A Concert for Preserving Security and Promoting Freedom: The Phase II Report on a US National Security Strategy for the 21st Century*, published April 15, 2000, found online at http://www.au.af.mil/au/awc/awcgate/nssg/phaseII.pdf.

[457] U.S. Commission on National Security/21st Century, *Seeking a National Strategy: A Concert for Preserving Security and Promoting Freedom: The Phase II Report on a US National Security Strategy for the 21st Century.*

[458] U.S. Commission on National Security/21st Century, *Seeking a National Strategy: A Concert for Preserving Security and Promoting Freedom: The Phase II Report on a US National Security Strategy for the 21st Century.*

force for rapid response and minimizing the footprint of expeditionary forces ashore; improving the joint force's deployment architecture, planning, infrastructure and flow; improving information support for joint deployment planning and execution; improving lift and prepositioning capabilities; and improving the protection of forces entering the theater.[459]

In essence, the Task Force report was an indictment of the MRS and MRS BURU, in that it explicitly questioned their assumptions of assured access to theater ports and airfields. As the Task Force pointedly noted, 96 percent of all cargo delivered during Operation *Desert Shield/Desert Storm* over the sea went through just two seaports, and 78 percent of all cargo delivered by airlift went through just five airfields. Although Iraq failed to attack these facilities, allowing a smooth uninterrupted delivery of the allied invasion force, the Task Force questioned whether future adversaries would be as accommodating.[460]

The Task Force hammered home two key themes. First, future joint power-projection operations should strive to minimize the buildup of cargo, equipment, ammunition, or personnel at the sea and air ports of debarkation (POD) in a contested theater. Doing so would serve two purposes: it would help to avoid a supply backlog at a POD and decrease the vulnerability of US forces to attack. Second, joint planners had to rethink the whole issue of conducting RSOI in a contested theater. This second point was made when the report stated that "…the hand-off of personnel, equipment, and material from [US Transportation Command] to the [Regional Combatant Commander] at points of debarkation appears to be the 'critical seam' where disruption of the deployment flow is most likely to occur."[461]

These themes were both prescient and visionary. Taken together, they suggested that the Cold War Rapid Reinforcement System and the evolving post-Cold War SMTS needed to be reshaped and expanded to support the *global transoceanic maneuver* and *subsequent movement of combat forces* into theaters with little developed infrastructure or against an enemy intent on denying the United States both access and operational freedom of action. This further implied that the US military needed to improve the SMTS's ability to support the global expeditionary maneuver of *intact, ready-to-fight combat forces.* In other words, the DSB was recommending that US planners to "go back to the future" and build a modern version of the Global Expeditionary Maneuver and Movement System developed during World War II. It is important to note that when suggesting a return to a GEMMS, the DSB Task Force on Strategic Mobility did not suggest that future operations could be mounted *without* forward land bases. Instead, they prudently focused on *minimizing the footprint of US forces* at these bases to the greatest extent possible.

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[459] Defense Science Board, *Report of the Defense Science Task Force on Strategic Mobility* (Washington, DC: Undersecretary of Defense for Acquisition and Technology, August 1996), as cited Klaus, *Strategic Mobility Innovation: Options and Oversight Issues*, pp. CRS-7 – CRS-8.

[460] DSB, as cited in Klaus, *Strategic Mobility Innovation: Options and Oversight Issues*, p. CRS-8.

[461] DSB, as cited in Klaus, *Strategic Mobility Innovation: Options and Oversight Issues*, p. CRS-8.

A Re-emerging Need for Operational Maneuver

The findings of the Defense Science Task Force on Strategic Mobility struck a chord with both Army and Marine planners. With regard to the Army, soon after the fall of the Berlin Wall and Operation *Desert Shield/Desert Storm*—and extending throughout most of the 1990s—Army thinkers engaged in a broad experimental and conceptual development process designed to identify the "Army After Next" (AAN).[462] The essential purpose of the AAN project was to develop new ways of thinking about projecting ready-to-fight Army combat units over long ranges. The result was a concept that became known as *operational maneuver from strategic distances,* or the projection of intact combat forces directly into a Joint Operations Area from locations outside a theater. The aim of these operations would be to "…achieve a deployment momentum that not only permits rapid seizure of the initiative but also never relinquishes it,"[463] a goal clearly in line with the DSB's thinking.

The AAN Project explored both air- and seabased technological alternatives for conducting operational maneuver from strategic distances. The project's proponents for aerial maneuver options, led by Major General Robert H. Scales, Jr., drew most of the attention from observers both inside and outside the Army. These observers believed "new vertical maneuver warfighting concepts" such as *air mechanization* operations involving the air landing of small, mobile armored combat units deep in the enemy's rear would provide a high degree of mobility at the operational and tactical levels of war and enable a force to both disperse and regroup quickly.[464] These operations would allow future Army units to perform "simultaneous, distributed, noncontiguous operations" involving units that would "*fight upon arrival* at multiple, austere entry points" (emphasis added).[465]

However, other Army planners and concept developers assigned to the AAN project were well aware of Service Expeditionary Posture adopted during the Oceanic Era and World War II, when operational maneuver from strategic distances was conducted by intact combat units being delivered to a fight *aboard amphibious ships*. It is not surprising, then, that the key recommendation made by two of the foremost strategists associated with the AAN project was that the Army should pursue a new type of Shallow Draft High Speed Ship, or SDHSS, as the best 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

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[462] There is a rich source of materials on the Army After Next project on the web. For a summary overview of the project, see "Army After Next," at http://www.sourcewatch.org/index.php?title=Army_After_Next.

[463] Brigadier General Huba Wass de Czege and Lieutenant Colonel Zbigniew M. Majchrzak, US Army (ret), "Operational Maneuver From Strategic Distances," *Combined Arms Center Military Review,* May-June 2002. p. 17. The article can be found online at http://usacac.army.mil/CAC/milreview/English/ MayJun02/MayJun02/wass.pdf.

[464] Andrew Koch, "Boost for Sea-Basing Concept," *Jane's Defense Weekly,* August 13, 2003.

[465] Major General Robert H. Scales, Jr., USA, ret., "Operational Maneuver in 2015," an undated PowerPoint presentation.

> 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 10-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.[466]

In other words, they argued that while light air-landed forces had their place, "access-insensitive" heavy forces from the sea—delivered in ready-to-fight condition—would likely play a much more decisive role in the future.

Although piqued over the Army's renewed interest on power-projection from the sea after nearly five decades of disinterest, the Marines implicitly endorsed the Army's assessment, if from a slightly different perspective. They justified the increasing utility for naval expeditionary maneuver because of a "worldwide breakdown of order"—referred to by Marines as "chaos in the littorals"—and a reemerging requirement for a viable joint forcible entry capability:

> To influence events overseas, America requires a credible, forwardly deployable, power-projection capability. In the absence of an adjacent land base, a sustainable forcible entry capability that is independent of forward staging bases, friendly borders, overflight rights, and other politically dependent support can only come from the sea. The chaos of the future requires that we maintain the capability to project power ashore against all forces of resistance….[467]

Two new operational concepts—*Operational Maneuver From the Sea (OMFTS)* and *Ship-to-Objective Maneuver (STOM)*, published in 1996 and 1997, respectively—captured Marine thinking. These two complementary concepts attempted to explain the advantages of naval maneuver and seabased forcible entry in the emerging Joint Expeditionary Era.[468] Both described how intact combined arms units could conduct attacks against important *inland* objectives directly from ships at sea, thinking of the beach as just another phase line to track the attacking force's progress. In this regard, both concepts explicitly rejected the idea of making landings directly against or across defended beaches, and instead embraced the model espoused and practiced so effectively by General Douglas MacArthur during the World War II Southwest Pacific campaign and again at Inchon: that is, to use the sea as maneuver space in order to *attack an enemy from a position of exterior advantage*. Or, in different terms: to use the sea to land

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[466] Wass de Czege and. Majchrzak, "Operational Maneuver From Strategic Distances," p. 17.

[467] *Operational Maneuver From the Sea (OMFTS)* (Quantico, VA: Marine Corps Combat Development Command), p. 2.

[468] *OMFTS;* and *Ship-to-Objective Maneuver (STOM)* (Quantico, VA: Marine Corps Combat Development Command). These two concept papers can be found online at the website for N75, Office of the Chief of Naval Operations for Expeditionary Warfare, found at http://www.exwar.org/Htm/ConceptDocs/NADPGR/navyusmc.htm.

forces where the enemy was weak, and then to push rapidly inland toward critical centers of gravity or operational targets.[469]

The Marines followed up OMFTS and STOM with two additional concepts—*Maritime Prepositioning Force (MPF) 2010 and Beyond* and a companion concept entitled *Seabased Logistics*, published in 1997 and 1998, respectively. Three new themes were central to both new concepts, and all were congruent with recommendations of the DSB Task Force on Strategic Mobility. First, the future MPF should be *access insensitive*; that is, it should no longer be tied to a requirement to offload in a secure, deep-draft port. Second, Marine units supported by future MPF squadrons should arrive in a Joint Operations Area in *ready-to-fight* condition with any RSOI activities already complete—just like the units carried onboard amphibious assault ships. Third, after landing their embarked forces, the ships in the future MPF squadron should continue to provide sustained seabased logistics support for Marine forces operating ashore, with the aim of minimizing the logistics footprint ashore.[470]

This third requirement made the point that *MPF 2010 and Beyond* and *Seabased Logistics* were aiming for more than just "RSOI at sea" and the injection of ready combat units into a developing fight. After supporting their insertion, the MPF ships would keep the supplies necessary to sustain the units fighting ashore on ships at sea rather than moving them ashore and creating vulnerable "iron mountains" of supplies. This was an intriguing thought. In essence, the Marines wanted *to extend the idea of "underway replenishment" to units maneuvering ashore*; the MPF(F) ships would serve as the station ships for freely maneuvering ground combat units, and would themselves be replenished by shuttle ships operating from distant intermediate support bases. In so doing, the MPF ships would serve as "a seabased conduit for logistics support" of forces operating ashore, and thereby facilitate their indefinite sustainment without the need to move supplies ashore. Seabased support of units fighting ashore would be made possible because reduced supply demands of smaller units operating ashore and new network-based, automated logistics systems would allow for "in-stride sustainment" of units ashore. [471]

Moreover, once their mission was complete, Marine combat units would return to the MPF ships to prepare for follow-on operations "without requirement for extensive material maintenance or replenishment at a strategic sustainment base" located on land somewhere in the theater. This latter capability was naturally derived from the requirement for joint forces to be prepared to fight two "nearly simultaneous" major combat operations, and for Marine forces to be able to "swing" quickly from a major combat operation in one theater to a major combat operation in

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[469] For a good synopsis of how these concepts might influence future amphibious operations, see Christian Lowe, "Beyond the Beach," *Armed Forces Journal*, January 2005, pp. 20-25.

[470] See *Maritime Prepositioning Force 2010 and Beyond* (Washington. DC: Headquarters, US Marine Corps, December 30, 1997), found at http://www.fas.org/man/dod-101/sys/ship/docs/mpf-2010.htm; Lieutenant General J.E. Rhodes, USMC, and RADM G.S. Holder, USN, *Seabased Logistics* (Marine Corps Combat Development Command and Navy Doctrine Command, May 12, 1998), found online at https://www.mccdc.usmc.mil/futures/concepts/sealog.pdf.

[471] For a thorough discussion of these concepts, read *Maritime Prepositioning Force 2010 and Beyond; Seabased Logistics.*

another theater. In practical terms, it meant that future MPF ships would need to have an onboard seabased intermediate maintenance capability for both major air and ground combat items, and be big enough for the embarked Marine units to spread out their gear to conduct post-combat maintenance from the first war and pre-combat operational checks and combat loading for the second.[472]

Importantly, however, the Marines did not see these new seabased capabilities as competing with or replacing amphibious assault ships. The Marines wished to keep separate the forcible entry and the assault follow-on/seabasing roles, with amphibious ships focused on the former, and future maritime prepositioning forces focused on the latter.

TASK FORCE HAWK AND MRS 2005: FOSTERING A GROWING URGENCY FOR CHANGE

In March 1999, only days after the commencement of Operation *Allied Force* (OAF)—the combined operation to eject Serbian forces from Kosovo—General Wesley Clark, the Supreme Allied Commander for NATO, requested the deployment of an Army Apache attack helicopter battalion. The intent of this request was to complement NATO's ongoing medium-altitude tactical air attacks against Serb forces in Kosovo with low-altitude rotary wing attacks.[473] The subsequent episode supported the deliberations of the NDP, the US Commission on 21st Century National Security, and the DSB Task Force on Strategic Mobility. It vividly demonstrated both the difficulties in achieving political access in the Joint Expeditionary Era as well as the inability of the US Strategic Military Transportation System (and the Army) to conduct rapid expeditionary movement of forces to austere locations.

With regard to political access, General Clark originally wanted to deploy the *Apache* unit to Macedonia, which had better roads and airfields and terrain that was less challenging. However, the Macedonian government, already overwhelmed by the problem of dealing with Kosovar refugees, declined to grant NATO access to its territory. General Clark was thus forced to seek access in Albania, which was not a member of NATO. While the Albanian government ultimately agreed to Clark's request, negotiations took some time to complete; it was not until the twelfth day of OAF combat operations that the *Apache* battalion was given the green light to start moving.[474]

Experts in the SMTS confidently predicted the move would take just ten days to complete. In the end, however, the move took nearly twice as long.[475] The first units to arrive found there were no roads that they could drive on; everything was under mud. Engineers needed to bring in rocks to lay the foundation for both a road network as well as a foundation for the helicopter base itself.

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[472] *Maritime Prepositioning Force 2010 and Beyond; Seabased Logistics.*.

[473] Benjamin S. Lambeth, "Task Force Hawk," *Air Force Magazine*, February 2002, found online at http://www.afa.org/magazine/Feb2002/0202hawk.asp.

[474] Lambeth, "Task Force Hawk."

[475] Lambeth, "Task Force Hawk."

Moreover, the deployment of these early-arriving engineer units, as well as follow-on units, was complicated because the area in which the base was to be erected was also the center of a large humanitarian effort to care for Kosovar refugees that were crossing the Albanian border.[476]

Further complicating the operations was the Army's embarrassing failure to adapt to the new strategic conditions of the Joint Expeditionary Era or even to the findings of their own Army After Next program. During the Cold War, the Army seldom deployed *ad hoc*, task-organized combat units, instead preferring to deploy either intact combat brigades or divisions. However, the unique requirements for the OAF mission demanded just such an *ad hoc* organization. To account for the possible threat of Serbian ground or air attacks into a non-NATO country, in addition to 24 *Apache* helicopters, the resulting Task Force Hawk grew to include a tank company; a mechanized infantry company; an anti-tank company; a platoon of Multiple Launch Rocket Launchers; an intelligence platoon; a military police platoon; a 155mm howitzer battery; a construction engineer company; a short-range air defense missile section; 26 UH-60 and CH-47 helicopters; diverse support units; and a brigade task force headquarters, numbering a total of 5,350 personnel.[477]

The Army wanted to move this impressive self-contained combat force into Albania by air. However, the C-130 tactical airlift fleet was incapable of lifting the large, heavy, and outsized combat vehicles and helicopters that belonged to Task Force Hawk. The burden thus fell on the new C-17 fleet, which was designed to carry heavy, outsized loads into forward austere airfields. It finally took more than 500 C-17 sorties to move the Task Force into place. But this huge effort proved to be for nothing; the Task Force never flew a single combat mission during the nearly 80 days of OAF.[478]

The experience of Task Force Hawk was quite sobering for the Army's leadership. The Army's Chief of Staff, General Eric Shinseki, declared, "Our heavy forces are too heavy and our light forces lack staying power. Heavy forces must be more strategically deployable and more agile with a smaller logistical footprint, and light forces must be more lethal, survivable, and tactically mobile. Achieving this paradigm will require innovative thinking about structure, modernization efforts, and spending."[479]

However, while squarely facing the Army's own failure to adapt, General Shinseki also fairly noted that the Strategic Military Transportation System, dependent as it was on prepared airfields, ports, and developed theater infrastructure, was ill-suited to the task of moving equipment and personnel to austere locations, much less intact combat units in ready-to-fight condition. The forward operating site that made the most tactical sense and that was approved by the Albanian government had poor rail connections, a shallow port, and relatively small airfields

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[476] Comments by General Eric K. Shinseki, Army Chief of Staff, in "Analyses" Task Force Hawk," found online at http://www.pbs.org/wgbh/pages/frontline/shows/future/experts/taskforce.html.

[477] Lambeth, "Task Force Hawk."

[478] Lambeth, "Task Force Hawk."

[479] Lambeth, "Task Force Hawk."

that could not accommodate the Air Force's C-5 heavy airlifter. Moreover, moving Task Force Hawk was beyond the tactical capabilities of the tactical air transport force.[480] It would make little sense to transform the Army along the lines described by General Shinseki absent concomitant changes in America's ability to transport combat units, troops, equipment, and supplies to austere theaters.

Juxtaposed against the real world experiences of Task Force Hawk was the unhappy outcome of the Mobility Requirements Study for 2005 (MRS 2005), chartered in 1998 by the Deputy Secretary of Defense. MRS 2005, conducted by the Joint Staff and the Office of the Secretary of Defense, reviewed the number and mix of *mobility* systems required to support two simultaneous major theater wars in 2005. Conducted over a two-year period, it was trumpeted as the most comprehensive post-Cold War mobility study yet made.[481]

In hindsight, MRS 2005 was instead a damning example of post-Cold War institutional inertia and service resistance to change, and a ringing endorsement of the NDP's conclusion that the two-MRC/MTW construct would not produce the required capabilities for 21st century "expeditionary interventions and stability operations." Indeed, the study represented a giant step backward from the previous good work done by the DSB Task Force on Strategic Mobility, and it simply ignored the implications of Task Force Hawk. The study mulishly focused on the *rapid reinforcement mission* for major combat operations occurring nearly simultaneously in Southwest Asia (i.e., Iraq) and Northeast Asia (i.e., North Korea), the two most geographically separated theaters with a high perceived likelihood for conflict. As envisioned first in the BUR and reaffirmed in the 1997 QDR, both projected combat operations involved defeating cross-border invasions of friendly countries and both assumed forward access.[482]

A key finding of the study was that the projected requirement for airlift—amounting to 51.1 million ton miles per day (MTM/D)—was higher than either the then-current capabilities (44 MTM/D) or the planned requirement developed in previous post-Cold War mobility studies (49.7 MTM/D). Study participants concluded an expanded force of 176 C-17s, a C-5 fleet with 65 percent mission availability, and a Civil Reserve Aircraft Fleet capable of contributing 20 MTM/D would be sufficient to meet the expanded requirement. In addition, the study concluded that US strategic sealift capabilities were generally sufficient. However, the study paid little attention to the problem of delivering cargo to countries with airfields as few and as poor as Albania, or to theaters with denied, damaged, or austere ports.[483]

Luckily, however, the unhappy experience with Task Force Hawk appears to have heightened the sense among senior US political leaders that they would have to force the US military to reexamine its assumptions about the global expeditionary movement and maneuver of its forces. Indeed, the pressing need to change DoD's thinking became a theme of the 2000 presidential

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[480] Lambeth, "Task Force Hawk."

[481] Klaus, *Strategic Mobility Innovation: Options and Oversight Issues*, p. CRS-3.

[482] Klaus, *Strategic Mobility Innovation: Options and Oversight Issues*, p. CRS-3.

[483] Klaus, *Strategic Mobility Innovation: Options and Oversight Issues*, p. CRS-4.

campaign. In a 1999 speech, then-candidate Bush proclaimed it was time to "transform" a military still wedded to Cold War planning assumptions into one better prepared for emerging 21st century national security challenges. Central to this transformation was a desire to better shape the US global posture for the emerging requirements of the Second Transoceanic Era. As explained by Bush: "Our forces in the next century must be agile, lethal, readily deployable and require a minimum of logistical support. *We must be able to project our power over long distances, in days or weeks rather than months*" (emphasis added).[484]

Implicit in candidate Bush's call for a reexamination of US expeditionary movement and maneuver capabilities was a need to reexamine *all components* of the evolving US global military posture. As the foregoing historical review hopefully makes clear, changing any one of the components—be it making changes to the exterior basing network, changing the ratio of forward-based to forward-deployed forces, changing the apportionment of global attack forces and regional action forces, or shifting priorities in strategic mobility forces—would automatically trigger required adjustments in the other components. His call for improvements in the way the US projected power over long distances thus suggested that broader changes to the US global military posture should also be forthcoming.

With President Bush's subsequent inauguration in January 2001, these changes would come sooner rather than later.

[484] Ronald Brownstein, "Success in Afghanistan Clouds Military Transformation Plan," *Los Angeles Times*, December 12, 2001, found online at http://www.globalsecurity.org/org/news/2001/011212-attack03.htm.

VIII. 2001-?: A SECOND GLOBAL DEFENSE POSTURE REVIEW

Between 2001 and 2006, US strategic thinking became progressively less influenced by the Transoceanic Era/Cold War, and progressively more aligned with the Second Transoceanic Era. Indeed, in light of the momentous shift in US strategic thinking that occurred between 2001 and 2006—and which continues today—the 1990s can be seen as just the first transitory stage between two radically different national security policy phases.

In hindsight, the Bottom-Up Review and the 1997 QDR might best be thought of as the modern-day equivalents of JCS Plans 570/2 (completed in 1943) and 570/40 (completed in 1945), general global posture plans that were made before the outlines of the next strategic era had fully formed and before the exact nature of the threats facing the nation were fully understood. As did these earlier two efforts, the BUR and the 1997 QDR ultimately rested on planning assumptions far more in line with the previous strategic era than with the new one.

Taking this historical analogy further, the 2001 QDR can be seen as the modern-day equivalent of JCS Plan 570/83 (completed in 1947). Like this earlier plan, although the 2001 QDR suffered from an under-appreciation of the new era's emerging national security threats (having been completed before the attacks of September 11th, it still marked a clear break with the planning assumptions of the past. Also like JCS Plan 570/83, the 2001 QDR would spark a thorough reappraisal of all DoD planning models and to lead to a new global military posture much different than the one that characterized the previous strategic era.

This reappraisal was reflected in a series of new national strategies and a formal Global Defense Posture Review which together culminated in the 2005-06 QDR—the first true strategic review of the Second Transoceanic Era. The purpose of this chapter is to highlight the key results of the 2001 QDR and to chart the course of the changes it spurred, particularly with regard to the evolving Joint Expeditionary Posture.

THE 2001 QUADRENNIAL DEFENSE REVIEW

The 2001 Quadrennial Defense Review was led by Secretary of Defense Donald Rumsfeld, picked by President Bush to be change agent for the broad defense transformation he had promised during the presidential campaign. Importantly, Secretary Rumsfeld considered the 2001 QDR as only the first of many steps along a long pathway of institutional change.[485] From his perspective, the primary purpose the 2001 QDR would be to challenge the Office of the Secretary of Defense, Joint Staff, and all four services to first think differently about future national security challenges and opportunities. Said another way, Secretary Rumsfeld would use

[485] The notion that the 2001 QDR was just the first step in a continuous process of change is well captured in Donald Rumsfeld's second QDR, completed in 2006. See Donald Rumsfeld, Secretary of Defense, *Quadrennial Defense Review Report* (Washington, DC: Office of the Secretary of Defense, February 6, 2006). See also Henry, "Transforming the US Global Defense Posture," p. 35.

the 2001 QDR to begin breaking the comfortable Cold War planning and force development assumptions that still held sway inside the Pentagon more than a decade after the "war" had ended.[486]

At first glance, after nine months of hard work, and despite all of the strong talk about the need to "transform" the joint force, the "new" QDR strategy appeared little more than a repackaging of the Democratic force planning and sizing construct adopted in the BUR in 1993 and reaffirmed in the 1997 QDR. Like these earlier documents, the focus of the 2001 QDR remained on defeating "traditional" military opponents. Indeed, having endorsed a strategy of "swiftly defeating attacks against US allies and friends in any two theaters of operations in overlapping timeframes," the new Republican strategy appeared to have made little change other than substituting the term "major combat operations" for the BUR's "major regional contingencies" and the 1997 QDR's "major theater wars."[487]

However, the 2001 QDR augured more change than at first evident. The QDR made clear that Secretary Rumsfeld intended to move beyond the "threat-based, two-MTW construct to a future, transformed force."[488] In this regard, the QDR advanced three key arguments to help to set a foundation for real change. First, the 21st century military needed to be better prepared to deal with "the defining characteristics" of the Joint Expeditionary Era—which Rumsfeld considered to be surprise and uncertainty. Second, in line with the thinking of both the NDP and the US Commission on National Security in the 21st Century, the 21st century military would need to change fundamentally the way it projected power around the globe. And third, the first two requirements would naturally force the United States to adjust its global defense posture.

A Move Towards Capabilities-Based Planning

Consistent with these arguments, Rumsfeld pushed for a shift from what he called Cold War-style "threat-based planning" to "capabilities-based planning." Although the identity of future adversaries might be unclear, US defense planners should be able to "…anticipate the capabilities an adversary might employ to coerce its neighbors, deter the United States from acting in defense of its allies or friends, or directly attack the United States or its deployed forces." In line with his thinking, Rumsfeld wanted the joint force development process to be partially decoupled from the MRC/MTW/MCO planning scenarios developed during the 1990s and instead be guided by a small set of emerging operational challenges. By focusing on *how an adversary might fight* rather than *who the adversary might be*, Rumsfeld hoped the joint force

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[486] Dr. Robert Herman, General Larry Welch, co-chairs, *DSB Summer Study on Transformation: A Progress Report, Volume I* (Washington. DC: Office of the Under Secretary of Defense for Acquisition, Technology, and Logistics, February 2006), p. 5.

[487] Rumsfeld, Secretary of Defense, *Quadrennial Defense Review Report* (Washington, DC: Office of the Secretary of Defense, September 30, 2001), p. 21.

[488] Rumsfeld, *2001 Quadrennial Defense Review Repot,*. p. 18.

development and planning process would gain a broader strategic perspective and lead to new, transformational US defense capabilities.[489]

Accordingly, the 2001 QDR outlined six specific future operational challenges that were to guide the capabilities-based transformation planning for future service and Joint force capabilities. One of these challenges included protecting critical bases of operation in the US homeland, on allied territory, and for expeditionary power-projection operations from attack; another was projecting power in severe anti-access and area-denial environments.[490] In other words, Rumsfeld wanted military planners to be as concerned with overcoming an enemy's A2/AD defenses and gaining and maintaining forward access and advance bases as they were in defending those they had. Tellingly, however, these operational challenges were more aligned with the NDP's vision of future warfare than with that of the US Commission on National Security; that is to say, the challenges were very focused on conflicts against "traditional" military opponents.

A New Force Sizing and Planning Construct

Consistent with a turn toward capabilities-based planning, Rumsfeld also began adjusting the post-*Desert Shield/Desert Storm* two-MRC/MTW/MCO force sizing construct by shifting "the focus of US force planning from optimizing for conflicts in two particular regions—Northeast and Southwest Asia—to building a portfolio of capabilities that is robust across the spectrum of possible force requirements, both functional and geographical."[491] Soon after the 2001 QDR was published, he introduced what is now commonly referred to as the "1-4-2-1" metric. This new construct called for a military force large enough and properly shaped to defend the homeland from attack ("1"); deter adversaries in four critical regions—Europe, Southwest Asia, the East Asian Littoral, and Northeast Asia—simultaneously (the "4"); to swiftly defeat enemies in two of the four regions in overlapping timeframes with minimal reinforcements ("2"); and to win one of the two conflicts "decisively" by forcing a regime change ("1").[492]

Although the "1-4-2-1" planning metric retained the requirement for a military large enough to respond to two MCOs, it introduced the idea that the two MCO objectives—and associated force packages—need not be identical. It also expanded the number of critical planning regions from the three associated with the late Cold War and post-*Desert Storm* worlds to four, and it implied a more substantial reliance on forward-*deployed* rather than forward-*based* forces.

A Global Posture Review

Of course, as has been discussed, in keeping with a shift from forward-based to forward-deployed forces, the QDR also announced a broad reorientation of the US global military

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[489] Rumsfeld, *2001 Quadrennial Defense Review Report*, p. 13; and Henry, "Transforming the US Global Defense Posture," p. 35.

[490] Rumsfeld, *2001 Quadrennial Defense Review Report*, p. 30.

[491] Rumsfeld, *2001 Quadrennial Defense Review Report*, p. 17.

[492] Vice Admiral Mike Mullen, "Global Concept of Operations," *Proceedings*, April 2003, found online at http://www.usni.org/proceedings/Articles03/PROmullen04.htm.

posture. The strategic aims of this posture reorientation were to improve the ability of US forces to conduct transoceanic expeditionary power-projection operations and to improve US operational independence and global freedom of action. Consistent with these aims, the Global Defense Posture Review would have four key goals. These were to:

- Develop a *basing system* that provides greater flexibility for US forces in critical areas of the world, placing emphasis on additional bases and stations beyond Western Europe and Northeast Asia;

- Provide *temporary access to facilities in foreign countries* that enable US forces to conduct training and exercises in the absence of permanent ranges and bases;

- Redistribute *forces and equipment* based on regional deterrence requirements; and

- Provide *sufficient mobility, including airlift, sealift, prepositioning, basing infrastructure, alternative points of debarkation, and to develop new logistics concepts of operations* designed to support "expeditionary operations in distant theaters against adversaries armed with weapons of mass destruction and other means to deny access to US forces."[493]

Achieving these four goals would accelerate and complete the transition from the First Transoceanic Era's Garrison Posture to the a new, more flexible global defense posture for the Second Transoceanic Era.

9/11 AND OPERATION ENDURING FREEDOM: PROVIDING AN EXTERNAL STIMULUS FOR CHANGE

As attested to by the failure of MRS 2005 to question comfortable Cold War planning assumptions about assured forward access and the changing nature of power-projection, institutional resistance to change remained alive and well in the US defense establishment. Without a sharp external prompt from Congress or a galvanizing event jolting enough to convince the Joint and service bureaucracies that they needed to embrace and accept a need to change, it is not at all certain Rumsfeld could have successfully overcome the forces marshaled against change.

However, on September 11, 2001, as the ink was literally drying on the 2001 QDR, the United States was rocked by a direct attack on US territory by al Qaeda, a radical Islamic organization virulently hostile to the United States and dedicated to the establishment of an Islamic Caliphate. Less than a week later, the military found itself fighting a new "Global War on Terror" (GWOT) and planning for the war's first campaign in a distant, inhospitable country in a theater with few US forward bases.

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[493] Rumsfeld, *2001 Quadrennial Defense Review Report,* p. 26.

The 9/11 attacks and the quickly mounted counterattack—Operation *Enduring Freedom* (OEF; the invasion of Afghanistan)—helped to underscore, in a way no commission finding or QDR could, the three basic strategic conditions of the Joint Expeditionary Era: first, the United States would confront continuing uncertainty over where its next fight would be; second, future US power-projection operations would normally require the expeditionary deployment, employment, and sustainment of joint air, ground, and naval forces from the United States to distant theaters; and third, the United States would have to work harder to gain both political and operational access to land bases in these theaters. Indeed, just as the NDP had first predicted, the US military found itself "called upon to project power in areas where no substantial basing structure exists."[494] The 9/11 attacks and OEF thus helped set into motion events that would help Rumsfeld to overcome most (but not all) institutional resistance to change. As was acknowledged in the recently published 2006 QDR, "the terrorist attacks of September 11 imposed a powerful sense of urgency to transforming the [Department of Defense]."[495]

Beyond its shaking of Cold War planning assumptions, Operation *Enduring Freedom* also provided powerful operational lessons of its own. The campaign was fought against an irregular army over inhospitable terrain using novel Joint Multidimensional Battle Networks which combined the power of guided weapons with highly distributed special operations forces embedded in foreign proxy forces. Nearly 60 percent of all weapons dropped during the campaign were guided weapons. More than half of these were low-cost, GPS-guided bombs that could be employed even in adverse weather and through obscurants such as smoke. Special operations forces identified the targets and employed these weapons with devastating effect; in one instance they called for 100 JDAMs over a period of 20 minutes—an average of five 2,000-pound bombs per minute—to annihilate front-line al Qaeda and Taliban forces.[496]

In 1972, US advisors embedded in conventional South Vietnamese units had similarly called upon US airpower to help defeat the invading North Vietnamese Army, armed with tanks, armored personnel carriers, and artillery.[497] However, the majority of weapons fired against the invading North Vietnamese Army were unguided weapons, requiring huge expenditures of ordnance. OEF suggested a new model of hybrid wars in which unconventional US battle networks employing guided weapons could confront non-nation state adversaries waging irregular warfare with a much smaller logistics tail than previously imagined.[498]

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[494] *The National Defense Panel: Assessment of the May 1997 Quadrennial Defense Review.*

[495] Donald Rumsfeld, Secretary of Defense, *Quadrennial Defense Review Report* (Washington, DC: Office of the Secretary of Defense, February 6, 2006), p. v, hereafter referred to as the *2006 QDR.* Some skeptics, however, would point out that there was little change to the DoD program after 9/11.

[496] Vickers and Martinage, *The Revolution in War*, pp. 17-18.

[497] For a good account of the so-called 1972 Eastern Offensive, see G.H. Turley, *The Eastern Offensive, Vietnam, 1972* (New York, NY: The Presidio Press, 1985).

[498] The term "hybrid wars" was first developed by Frank G. Hoffman, a defense analyst with the Center for Emerging Threats and Opportunities, in Quantico, Virginia.

THE 2002 NATIONAL SECURITY STRATEGY: A SHIFT AWAY FROM "TRADITIONAL" MILITARY CHALLENGES?

The 9/11 attacks and Operation *Enduring Freedom* apparently heightened President Bush's already keen sense that the Defense Department needed to change. The unconventional nature of the attack and the counterattack that followed caused him to question a key assumption of the 1990s "post-*Desert Storm* Era" (and to some extent, his own 2001 QDR): specifically, that the primary future national security threat facing the United States would be conventional state-on-state warfare. The President's new thinking was first outlined in a speech he gave at West Point in June 2002, in which he argued that in the future the United States would most likely be confronted by "shadowy terrorist networks" without nations to defend or by "unbalanced dictators." Against these threats, and as first argued by the US Commission on National Security/21st Century, the Cold War notions of deterrence and containment were unlikely to work. As a result, he argued, the United States needed to be prepared to take "preemptive action when necessary to defend our liberty and to defend our lives."[499]

The President's thoughts were soon codified in a new *National Security Strategy of the United States of America*, published in September 2002, just one year after the attacks of September 11, 2001. Most press coverage on the speech and strategy focused on how preemptive or preventive war might play in future American thinking. However, this focus failed to highlight the equally important point that the President was worrying much less about the traditional (i.e., state-on-state) conventional wars that had dominated US defense thinking during the Cold War and the 1990s, and much more on non-traditional threats (i.e., the threats immediately before the United States). As his strategy said, "America is now threatened less by conquering states than we are by failing ones. We are menaced less by fleets and armies than by catastrophic technologies in the hands of the embittered few."[500]

The strategy went on to say, "To support preemptive options we will continue to transform our military forces to ensure our ability to conduct rapid and precise operations to achieve decisive results."[501] Left unsaid, but strongly implied, was that such unilateral preemptive operations could not depend on uncertain neutrals and doubtful allies. In other words, a US president needed a new global military posture that maximized US global freedom of action.

Identifying New Challenges

Guided by this new strategy, by late 2002 Secretary Rumsfeld and his senior leaders were focusing increased attention on potential new non-traditional threats and challenges. They initially described these threats in terms of an emerging confluence of terrorism, state sponsorship of terrorism, and the proliferation of weapons of mass destruction enabled by

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[499] As cited in Lieutenant Commander Henry J. Hendrix II, US Navy, "Exploit Sea Basing," *Proceedings*, August 2003 p. 63.

[500] The Honorable George W. Bush, President of the United States, *The National Security Strategy of the Untied States of America*, (Washington, DC: The White House, September 17, 2002), found online at http://www.whitehouse.gov/nsc/nssintro.html.

[501] President George W. Bush, *The National Security Strategy of the Untied States of America, 2002,* Section V.

globalization.[502] Over time, however, they developed a conceptual framework that identified four different types of future security challenges for which the US military must be prepared to respond to:

- *Traditional challenges* involving state-on-state warfare with conventional air, sea, land, space, and special operations forces;

- *Irregular challenges* involving state and non-state actors employing "unconventional" methods, such as terrorism, insurgency, and civil war, to counter stronger state opponents;

- *Catastrophic challenges* involving terrorists or rogue states employing weapons of mass destruction, or WMD-like effects against the United States or its allies; and

- *Disruptive challenges* involving competitors employing "breakout technologies or methods" like directed energy or space weapons that canceled US traditional military superiority.[503]

Upon reflection, this conceptual framework describes the three logical reactions to the US monopoly in guided weapons warfare and its resulting dominant superiority in traditional conventional campaigns. Irregular challengers seek to avoid US superiority by denying the US a clear target; catastrophic challengers seek to deter or offset US guided weapons superiority with weapons of mass destruction; disruptive challengers seek to leapfrog US dominance by seeking an alternative revolution, perhaps one harnessing robotics, nanotechnology, or directed energy weapons; all seek to change the rules of the game which favor the US military in conventional one-on-one fights. In other words, while Secretary Rumsfeld implicitly accepted an enduring US superiority in the guided weapons warfare regime, he was more interested in planning for adversary reactions to that superiority rather counting on their acquiescence to it.

OA 2003: TAKING A STEP BACKWARD

At this point, however, the Defense Department took a step backwards. Although the US had initiated its first counter-offensive after the September 11 attacks in little more than three weeks, the President, Vice President, and Secretary of Defense Rumsfeld were dismayed by the apparent slow pace of US campaign planning and the inability to get *conventional* combat forces into the fight. One result was a Joint Staff planning effort called Operational Availability 2003 (OA 2003), which was to have enormous influence on the subsequent focus of defense transformation.

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[502] DoD, *Strengthening US Global Defense Posture*, p. 2.

[503] These four challenges were first presented formally in the *National Military Strategy of the United States of America: A Strategy for Today; a Vision for Tomorrow* (Washington, DC: Office of the Chairman of the Joint Chiefs of Staff, 2004). However, they were developed during 2003 and informed the deliberations leading up to *Strengthening US Global Defense Posture.* See Henry, "Transforming the US Global Defense Posture," p. 34.

The specific trigger for OA 2003 was a directive from Secretary Rumsfeld to the Joint Staff asking it to review and question the metrics being used for the long entrenched two-MCO planning problem. Accordingly, OA 2003 reexamined the planning metrics for overlapping MCOs in the Middle East and the Northeast Asian theaters—an apparent contradiction to the 2001 QDR, which had promised the Department would shift the focus of US force planning from optimizing for conflicts in these two theaters. Worse, although the 2002 *National Security Strategy* appeared to signal a clear turn away from planning for "traditional" military campaigns, this tasking would refocus the military's attention on the two-major combat operations scenario involving nation-state opponents.

OA 2003 occurred in 2002, after Operation *Enduring Freedom* in Afghanistan but before the March 2003 major combat operations phase of Operation *Iraqi Freedom* (the invasion of Iraq). In the event, the participating officers took into account lessons learned from OEF; improvements made to the Strategic Military Transportation System since the end of the Cold War; as well as the increasingly dominant US lead in the rapidly maturing guided weapons warfare regime.[504]

One of the original planning metrics developed for the BUR's "near-simultaneous" major regional contingencies was a 45-day delay between the first and second MCOs. 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. During OA 2003, allocation planning models suggested that the transition timing between the two MCOs could be reduced from 45 to 30 days, primarily because of the improvements recommended and implemented by the aforementioned mobility requirements studies (the MRS, MRS BURU, and MRS 2005): the procurement of 180 C-17 strategic airlifters; the addition of 11 LMSRs to the surge sealift fleet; the addition of approximately 30 RO/ROs to the sustainment sealift fleet; the expansion of the three MPF squadrons by one ship each; and the development of the Combat Logistics Force (CLF) with eight gas turbine-powered LMSRs. In addition, the widespread use of guided weapons in US campaign planning was thought likely to reduce the overall logistics demand for the second MCO.

However, the action officers participating in OA 2003 did not stop at considering the "swing time" required between the first and second combat operations. They began to think about how rapidly US forces could respond to and win the first major combat operation. In other words, they wanted to define, in specific planning terms, just how long the first "swift defeat" should take. This decision reflected, in part, the aforementioned joint obsession with achieving rapid victories in conventional campaigns as embodied in *Rapid Decisive Operations*. Indeed, the

[504] The information in this and the following paragraphs comes largely from a series of interviews the author conducted with participants of OA 2003 in preparation for this and other reports.

assumption that speed had an intrinsic value in war was supposedly a key part of Secretary Rumsfeld's view of the evolving nature of warfare.[505]

In any event, the officers involved in OA 2003 took the ideas found in the RDO concept and used them to establish notional planning guidelines for the pace and duration of America's future wars. Joint action officers concluded that the goal in all future wars should be for US joint forces to seize the initiative within the first ten days; to achieve all "swift defeat objectives" within 30 days; and then, in another 30 short days, to redeploy to another theater and do it all over again. Their thinking was based on professional judgment and "gut feel" backed up by decade-old analyses of war plans against potential "traditional" military opponents in Southwest Asia and Northeast Asia.

Secretary Rumsfeld, intent on fashioning a lighter, nimble, and more agile military, explicitly endorsed what is now known as the "10-30-30" metric, incorporating it in the subsequent Strategic Planning Guidance (SPG).[506] In hindsight, however, this metric appears to have worked against DoD's broader transformation efforts, for two reasons. First, "10-30-30" refocused the military on planning for traditional military campaigns instead of on failing states, "catastrophic technologies in the hands of the embittered few," or "irregular" campaigns like the one just fought in Afghanistan. In other words, just as the Bush Administration and Secretary Rumsfeld were starting to turn their attention away from traditional military challenges, this new SPG planning metric was keeping the military focused squarely on them. This caused one defense official to say, "I hate '10-30-30' because it forces us to get better at the things we are already good at and prevents us from dealing with irregular warfare where we are weak."[507]

Second, and even more damning, was the impact it had on joint campaign planning. It is one thing to set up planning timelines for force movement, such as, "by 2015 the joint force should have a Global Expeditionary Maneuver and Movement System capable of moving *v* number of forcible entry brigades, *w* access-insensitive reinforcement brigades, and *x* access-sensitive reinforcement brigades to theater *y* within *z* days." It is entirely another to endorse the planning timeline as stipulated in the "10-30-30" metric—specifically, that US forces plan to win two conventional wars in 90 days. The former can sensibly be used to plan improvements to US mobility and maneuver capabilities; the latter essentially *mandates a short war mentality in US defense strategy, plans, and operations*.

If history is any guide, such a short war mentality is often a recipe for later problems. As was argued by a retired British general in a recent monograph prepared for the Association of the US Army's Institute for Land Warfare:

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[505] Secretary Rumsfeld's (and General Tommy Frank's) emphasis on speed is well captured in Michael R. Gordon and General Bernard E. Trainor, *Cobra II: The Inside Story of the Invasion and Occupation of Iraq* ((New York: Pantheon Books, 2006), Chapters 1 through 3.

[506] See Greg Jaffe, "Battle Lines: Rumsfeld's Push For Speed Fuels Pentagon Dissent," *Wall Street Journal*, May 16, 2005.

[507] Jaffe, "Battle Lines: Rumsfeld's Push For Speed Fuels Pentagon Dissent."

> …over the last hundred years military establishments and their political masters have underestimated the length and costs of their campaigns and have frequently had little idea of the actual nature of their undertakings. A common factor in this appears to be the desire that campaigns should be short, decisive and cheap, and therefore with less risk but a greater likelihood of popular support—to be "home by Christmas." This delusion has often been reached irrespective of the historical evidence and the analysis of current capabilities to the contrary.[508]

In any event, the incorporation of "10-30-30" into the SPG placed strategic speed above all things. It should therefore have come as no surprise that so-called "Phase IV operations"—that is, operations that occur *after* the "major combat operations" phase of any campaign—would receive much less attention in US war planning.

OPERATION IRAQI FREEDOM AND THE "TURKISH LESSON"

Service and Joint emphasis on traditional military challenges, increased strategic speed, and short wars was clearly reflected, at least initially, in the planning and run up to the 2003 invasion of Iraq. As two recent histories of Operation *Iraqi Freedom* (OIF) reveal in excruciating detail, this emphasis greatly hindered US military plans and operations once it found itself in an unexpected and messy insurgency.[509]

However, it would take some time for these troubles to reveal themselves fully. In the meantime, the Turkish Parliament's aforementioned refusal to allow the US 4th Infantry Division access to Turkish territory, which denied the United States a major northern axis of attack into Iraq, was an eye-opener for many defense planners. Although it appears unlikely that an attack from the north would have materially affected the outcome of the major combat operations phase of OIF or the insurgency that followed, the Turkish refusal unquestionably put a monkey wrench in US war planning.[510]

Because Turkey had long been a reliable US ally, its refusal to grant US access both surprised and greatly troubled US planners. They were used to dealing with political access problems. For example, Montenegro had denied Task Force Hawk access during Operation *Allied Freedom.* That said, it had taken only 12 days to negotiate access in nearby Albania. Moreover, the United States had good success in negotiating access to support Operation *Enduring Freedom*. However, given the high priority that US planners had put on gaining Turkish access to mount an attack into Iraq, their failure in doing so—and the lack of a suitable alternative northern access option—cause more and more officers to pay increased heed to the admonitions about future access first

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[508] Major General Jonathan B.A. Bailey, British Army, ret., "'Over By Christmas': Campaigning, Delusions, and Force Requirements," AUSA Institute of Land Warfare, Land Warfare Paper 51W, September 2005, p. v.

[509] These two books are Gordon and Trainor, *Cobra II: The Inside Story of the Invasion and Occupation of Iraq;* and Thomas E. Ricks, *Fiasco: The American Military Adventure in Iraq* (New York: The Penguin Press, 2006).

[510] For a thorough discussion on the impact of Turkey's refusal to allow the 4th ID to launch attacks from its soil, see *On Point: The United States Army in Operation Iraqi Freedom,* found online at http://www. globalsecurity.org/ military/library/report/2004/onpoint/index.html.

made by the NDP and US Commission on National Security/21st Century. As one active duty admiral said in April 2003:

> With all due respect to our friends, our partners, our allies in Turkey, we got a lesson, we got a glimpse of the future…where Turkey was able to…significantly alter our war plan in that they denied access. And we can be unhappy with the Turks, we can rant and rave, we can lament all we want about that situation, but it is in my view a benchmark for the future because nations that we have to deal with around the world…relative to our power have very little power. But they do have the power of access and they will use that power of access to serve their interest…[511]

As late as August 2001, many officers and defense analysts likely would have written these remarks off as a self-serving interpretation of events made by a Navy officer to justify an increased "market share" of future defense dollars. However, in 2003, the remarks were endorsed by many analysts. The "Turkish Lesson" was a clear reminder that in a world not marked by a major ideological struggle or a common international perception of a mortal threat, basing access could be neither assumed nor guaranteed.

This was the very same lesson learned by an earlier generation of US strategists and planners between 1943 and 1949, after Denmark refused to grant the US postwar basing rights in Greenland; Portugal refused to grant US postwar basing rights in the Azores; and Iceland revoked America's World War II basing rights. As one military officer then wrote:

> In almost all foreign nations there is a great public sentiment against the granting of …base rights to the United States or any other country. The concession of rights that might be regarded as "sovereign" would in many countries become a political issue of major importance. The fact that we have built or improved new fields in those countries for war purposes by no means gives us the right, and in many cases does not even give us an equitable claim, to the occupation and use of such fields for military or commercial purposes….[512]

In truth, however, the Turkish Lesson was also germane even during periods when the world was divided into two competing ideological camps. During the Cold War, when push came to shove, host nation interests *always* trumped US access desires. Indeed, compared to similar events in the Cold War, Turkey's refusal was a comparatively minor problem. For example:

- Within four years of gaining its independence from France in 1956, Morocco expelled all foreign troops from its territory. The US was forced to abandon five superb SAC bases located in that country, built for millions of dollars in the early 1950s.[513]

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[511] Malina Brown, "Navy Marine Officials Argue Iraq War Validates Need for Seabasing," *Inside the Navy*, April 14, 2003.

[512] As cited in Converse, p. 86.

[513] Baker, *American Soldiers Overseas*, p. 52.

- In 1959, President Charles De Gaulle announced US nuclear weapons could not be based on French soil unless France had partial control over their use. Unwilling to accept this limitation, the US was forced to relocate nine fighter and bomber squadrons then based or deployed on French soil.[514]

- In 1966, as part of a larger effort to disengage France from NATO, President De Gaulle announced that all foreign troops had to leave France by April 1, 1967, causing the US to have to dismantle the extensive supply basing network it had built in southern and central France during the 1950s.[515]

- In 1970, the Libyans expelled the United States from the sprawling Wheelus Air Force Base. Adding insult to injury, the Libyans promptly turned the base over to the Soviets, Libya's new sponsor state.[516]

- In October 1979, faced with increasing Panamanian discontent over the semi-sovereign US Canal Zone, the United States signed a treaty that relinquished its control of the Canal in 1999.[517]

- In 1988, Spain refused to renew the lease on Torrejon Air Base outside Madrid, forcing the United States to re-locate the 41st Tactical Fighter Wing.[518]

Indeed, in hindsight, during the Cold War the United States could likely count on guaranteed access only if the Soviet Union *initiated* combat operations against nations with which it had signed a multi-lateral or bi-lateral treaty. Had the United States wanted to initiate combat operations, or in cases where the United States wanted to use exterior bases for independent operations, or in cases where the United States pursued policies counter to the host nation's interests, even close allies with whom the US had a mutual defense treaty might balk if these actions were contrary to its own interests..

For example, in the early 1960s, angered by President Kennedy's call for decolonization throughout Africa, the Portuguese government threatened to curtail US access to the Azores, whose mid-Atlantic facilities were vital to US war plans against the Soviet Union. In 1962, in response to the alarm raised by US military officers and defense strategists, the United States government changed its position in order to preserve access to the facilities.[519] In 1964, following the unauthorized use of Moron Air Base to support US operations in the eastern Congo, Spain refused to allow the US to use any Spanish bases for troops or aircraft returning to Europe. During the 1973 Arab-Israeli War, Portugal was the only European country to allow the US use

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[514] Baker, *American Soldiers Overseas*, p. 72.

[515] Baker, *American Soldiers Overseas*, p. 72.

[516] See "Wheelus Air Base," found online at http://www.globalsecurity.org/wmd/facility/wheelus.htm.

[517] Baker, *American Soldiers Overseas*, pp. 106-07.

[518] Adam B. Siegel, "Base Access Constraints and Crisis Response," *Airpower Journal*, Spring 1996.

[519] Alexander Cooley, "Base Politics," *Foreign Affairs*, November/December 2005.

of its bases (on the Azores) for the US airlift. And in 1975, in response to US pressure on Turkey to moderate its role in Cyprus, Turkey asked the United States to close all of its military installations on Turkish soil.[520]

As all of the aforementioned examples make clear, then, uncertainty over access is a *natural condition* of the post-Imperial/post-colonial world. The uncertainty is mitigated only in cases where a mutual defense treaty between the United States and a foreign nation is triggered by a *specific threat* to the foreign nation. In all other cases, access cannot be guaranteed. The Turkish Lesson learned during OIF was thus, in truth, merely a reminder of the periodic lessons learned by US defense planners since the mid 1940s. Under these circumstances, just as US defense planners concluded during the immediate post-World War II period, the best way to preserve global freedom of action is to negotiate *access rights* in multiple countries. By so doing, the US military can increase the likelihood that it can negotiate operational access in most theaters under most conceivable circumstances.

On the other hand, as suggested by their Cold War experience, if US leaders can convince nations that radical Islamists pose a clear and significant threat to their own security, it might lower their objections to providing even temporary basing rights for foreign powers. In the end, democratic Turkey refused US access because it did not agree with the US rationale for the invasion of Iraq and did not feel sufficiently threatened by Iraq (or US pressure) to grant the US access request. If US diplomats and strategists can convince a growing number of nations that they themselves are mortally threatened by radical Islamists and their ideology, they might regain something like the forward access the United States enjoyed during the Garrison Era.

In the end, however, the Turkish Lesson suggests that there could be a future case where the US military might be unable to negotiate any access in a forward theater and would have to fight to get it. As Arthur K. Cebrowski, late Director of OSD's Office of Force Transformation, so succinctly put it in June 2003, "There is a compelling reason to pursue operational maneuver from the sea and operational maneuver from strategic distances. In a word, it's Turkey."[521] Said another way, Cebrowski was suggesting that it would be wise to retain a viable forcible entry capability in the Second Transoceanic Era, or at least an ability to inject ready-to-fight combat forces into a theater without the need to conduct RSOI on arrival.

CONFIGURING FORCIBLE ENTRY FORCES FOR HIGHER STRATEGIC SPEEDS

Discussions about the shape and character of US forcible entry capabilities had been ongoing since 2002, when OSD asked a Defense Science Board Task Force to review emerging Department of Navy plans on seabasing. In the event, the Task Force focused almost exclusively on the future forcible entry mission. It logically argued that the emerging conditions of uncertain

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[520] Siegel, "Base Access Constraints and Crisis Response."

[521] Rick Barnard, "The Tri-mersible Enters the Fray as Navy Refines Its Sea Basing Concept," *Sea Power*, June 2003, p. 18.

and contested access in the Joint Expeditionary Era made the "(t)he assumption of readily available, secure land bases…open to serious question." The Task Force therefore concluded that the United States would need mobile seabases to serve as "intermediate staging bases" for attacks designed to seize access in a theater of operations. It justified its conclusion by asserting that the sea would be the most reliable and flexible environment from which joint forces could operate during the opening phases of a power-projection operation.[522]

Either constrained or influenced by the dictates of "10-30-30," the Task Force believed that forcible entry forces should be either "placed into battle *quickly to limit or shorten (a) conflict*" (emphasis added), or used to "capture and render useful in-theater seaports and airports of debarkation." It quickly made plain that it believed the "traditional" means of amphibious forcible entry were ill-suited for either of these roles. As explained by the Task Force, "today's amphibious operations focus on assaults over the shore and into seaports, to establish footholds ashore permitting the build-up 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."[523] As a result, it believed that future forcible entry operations should be conducted primarily by vertical maneuver rather than surface maneuver.

A desire to conduct forcible entry forces rapidly and a bias for aerial maneuver and against surface maneuver caused the DSB Task Force to gravitate toward using maritime prepositioning force ships rather than traditional amphibious assault ships in the forcible entry role. This direction was totally at odds with the Mission Needs Statement for the Maritime Prepositioning Force (Future), which reflected the long-held Marine position that the MPF(F) would *not* have an *independent* forcible entry capability. Indeed, the MNS suggested that the MPF(F) would be used only to reinforce the amphibious assault echelon deployed on and employed off of amphibious warships—a long time MPF mission.[524] However, in September 2003, one month after the DSB Task Force had published its final report, the Director of Program Analysis and Evaluation, the central OSD analytical shop, sent a memorandum to the Department of the Navy's chief acquisition executive highlighting a potential gap between the MPF(F) Mission Needs Statement and Navy Analysis of Alternatives. The memorandum stated, in part, that:

> *Even though the MNS states "MPF(F) will not possess a forcible entry capability," this does not preclude the AoA from evaluating MPF(F) as an augmenting forcible entry capability*. The context of the AoA guidance emphasizes that a MPF(F) system should be designed to achieve applicable capabilities across the full spectrum of warfighting functions. While MPF(F) would have no independent forcible entry capability, participation in assaults was explicitly envisioned in the

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[522] *Defense Science Task Force on Sea Basing*, (Washington, DC: Office of the Under Secretary of Defense for Acquisition, Technology, and Logistics, OSD, August 2003), pp. iii-v. The entire report can be found online at http://www.acq.osd.mil/dsb/reports/seabasing.pdf.

[523] *Defense Science Task Force on Sea Basing*, pp. 14-18.

[524] Mission Need Statement (MNS) for Maritime Prepositioning Force for the 21st Century (MPF(F)), as cited in Major John M. Curatola, USMC, and Lieutenant Commander Robert Bovey, Jr., USN, ret., "The Future Maritime Prepositioning Force," *Proceedings*, November 2001, pp. 87-89.

> guidance…*Failing to evaluate MPF(F) in the full context of forcible entry operations would greatly diminish the value of the AoA to the senior leadership* (emphasis added).[525]

In other words, the line between independent forcible entry operations and augmentation of forcible entry operations was growing ever narrower. This narrowing of the difference between forcible entry and MPF operations was further supported by the final results of the Joint Forcible Entry Operations (JFEO) Study, one of more than 30 studies called for in a Program Decision Memorandum signed out by then-Deputy Secretary of Defense Paul Wolfowitz on December 12, 2002. The results of the study were reported out by the Chairman of the Joint Chiefs in October 2003, soon after the DSB Task Force on Seabasing had published its final report and PA&E had directed that MPF(F) be capable of augmenting forcible entry operations. The "key insight" from the JFEO Study was the lack of capability to meet *emerging timeline criteria* for executing joint forcible entry operations, a clear reference to the "10-30-30" metric.[526] As a result, the subsequent development of the joint seabasing concept was driven by the requirement to mount a single Marine Expeditionary Brigade forcible entry operation within ten-14 days in order to "seize the initiative" in a traditional power-projection operation in the 2015-2025 timeframe.[527]

In other words, instead of augmenting amphibious landing ships and performing an assault follow-on type mission, the joint seabase would become the *leading edge* of the forcible entry operation. The natural result of these reports and conclusions was reflected in two inter-related ways. The first was a gradual de-emphasis in Navy shipbuilding plans on amphibious assault ships in general, and surface assault capabilities in particular. As late as 2005, the Navy had planned to cut the total number of amphibious assault ships in its battle fleet from 36 to between 17 and 24 ships. Moreover, the planned replacements for five "big deck" amphibious assault ships lost their well deck in favor of increased aviation capacity. The second was the increasing role of maritime prepositioning ships in planned future forcible entry operations. Since amphibious task forces could not be formed and moved to a theater in much less than 30 days, the only possible way to achieve the new joint timeline criteria for forcible entry operations was to exploit the MPF.

The de-emphasis of proven amphibious ships and the endorsement of using the MPF(F) seabase in forcible entry operations after so little operational testing is surprising. The Defense Task Force on Seabasing listed a dozen capabilities that needed to be developed before the seabasing concept could be fully implemented, and they noted that most were years away from any sort of operational capability.[528] It took two decades of experimentation, war gaming, and analysis for

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[525] Memorandum for the Secretary of the Navy from the Director of the Office of Program Analysis and Evaluation, subject: "Maritime Prepositioning Force—Future (MPF(F)) Analysis of Alternatives (AoA)," dated September 25, 2003.

[526] Email to the author from Commander Mark Becker, USN, Deputy Sea Base Pillar Lead (N832), Navy Warfare Development Command, dated February 10, 2006.

[527] Commander Mark Becker, USN, Deputy Sea Base Pillar Lead (N832), Navy Warfare Development Command, "Seabasing Joint Integrating Concept Update," a PowerPoint briefing given before the International Institute for Defense Conference on Seabasing, Washington, DC, October 6, 2005

[528] *Defense Science Task Force on Sea Basing*, pp. ix-x.

the Navy to fully integrate aircraft carriers into fleet operations. In contrast, the seabasing concept is backed up primarily by PowerPoint briefings and only now is being explored in more than the most cursory of technical experiments. The haste in which the Defense Department and the Navy is pursuing this new concept, which appears to be at least as complicated as integrating carriers into the fleet, is quite striking—and perhaps premature.

MEANWHILE, BACK AT THE RANCH—A GROWING FOCUS ON IRREGULAR WARFARE

The reason why the current moves toward new seabasing capabilities may be premature is that their design priority on rapid traditional power projection operations may be misplaced. Ironically, while OA 2003 and "10-30-30" helped to focus the US military on traditional challenges and inculcate a short-war mentality, combat experience in Operation *Enduring Freedom* and *Iraqi Freedom* as well as other GWOT operations such as those being conducted by Joint Task Force Horn of Africa had begun to refocus more and more military officers—especially those in the Army and Marine Corps—on irregular warfare challenges.[529] Moreover, the military gradually rejected the notion that the Global War on Terror would be a short one. Indeed, General Abizaid, Commander of the US Central Command, began referring to the Global War on Terror as the *Long* War—a term subsequently adopted in the 2006 QDR.[530]

The Long War and extended operations in Afghanistan and Iraq also had an important impact on the way the military operated and thought. The Secretary of Defense designated the Special Operations Command as the supported commander in the Long War, the first time that command had assumed a leading, central role in war planning and operations. The Marines dusted off and updated their famous *Small Wars Manual*, and they joined the Army in rewriting counterinsurgency doctrine. In addition to a renewed interest in counterinsurgency doctrine, the services began to consider more seriously other irregular warfare tasks, such as counterterrorism, foreign internal defense, and security, stability, and reconstruction operations.

Changes were not limited to command relationships and doctrine. For example, the Army, under extreme pressure due to the continuous demands of sending combat units to Iraq and Afghanistan, announced it would finally reject its World War II and Cold War division-based organization and structure in favor of a new modular brigade structure. This new structure would at once establish an enduring rotation base like those already used by the Air Force, Navy, and Marines, and improve the expeditionary "deployability" of Army units.[531] To relieve the pressure on the Army and Marines in Afghanistan and Iraq, the Navy and Air Force contributed forces for the ground operations, sending truck drivers, medics, engineers, and other specialties to free up

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[529] For the turn of the US ground forces toward irregular warfare, see Ricks, *Fiasco: The American Military Adventure in Iraq*, pp. 414-24.

[530] The term "long war" is used in the first sentence of the 2006 QDR, and prominently throughout the remaining report. See Rumsfeld, *2006 QDR*.

[531] The Army's reorganization was announced by General Peter Schoomaker in 2003 after he had taken over as the Army's Chief of Staff. Objective Force Warrior (OFW) Vision, a Department of the Army PowerPoint briefing published in November 2003.

Army and Marines for the ongoing fight. Navy surface warfare officers were sent to Afghanistan to serve as heads of Provincial Reconstruction Teams.

In other words, the Long War was changing attitudes in the military in ways only an extended war can. Slowly but inexorably, it was eroding the vestiges of planning assumptions that could be traced to the Cold War and were prevalent up through 2001-02. If irregular warfare was indeed going to be the dominant military challenge of the 21st century, then all of these assumptions would have to be reviewed and modified. For example, when fighting irregular foes, the requirement to inject a combat brigade in ten to 14 days was likely to be far less important, and the opportunity costs to develop the capability would likely be far too high.

GLOBAL DEFENSE POSTURE REVIEW, PHASE I

The shift toward a focus on irregular warfare was also evident in the results of the aforementioned 2004 report entitled *Strengthening the US Defense Posture*. As discussed in the first chapter, this report represented just the first phase of the overall Global Defense Posture Review, as it focused primarily on identifying how exterior basing decisions would impact the ongoing domestic BRAC round, the results of which were due to President Bush in 2005. However, while the study was primarily focused on rethinking the number and locations of forward-*based forces*, it was guided by several consistent and coherent themes about the future US global military posture. These themes were to:

- *Adopt a more indirect global strategy and unobtrusive global posture.* Consistent with the lessons learned during nearly five years of campaigning in the Long War, the United States would begin to shift away from an emphasis on unilateral, preemptive actions (although the US retained the right to do so) toward building "collective defense capabilities" and partnership capacity.[532] The new strategy would seek "strengthened and new relationships to harmonize views on the nature of the security challenges we confront and to provide a solid basis for allied and partner capabilities in critical areas, such as counter-terrorism."[533] Accompanying the shift in strategy would be a new global defense posture that would gradually reduce the number of large, forward and stationary exterior defense garrisons focused on traditional security challenges and assume a more subtle and less intrusive forward presence focused on irregular warfare challenges.[534]

- *Improve US flexibility and ability to contend with uncertainty*. Although more subtle, the new US defense posture would require a truly global outlook. In the Cold War, consistent with their containment and territorial defense missions, forward-based forces were generally located where they were expected to fight. In contrast, in the Second Transoceanic Era, US defense planners would be forever uncertain where US forces

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[532] See Rumsfeld, *2006 QDR*, especially p. 16.

[533] DoD, *Strengthening US Global Defense Posture*, p. 7.

[534] Frank G. Hoffman, "Complex Irregular Warfare: The Next Revolution in Military Affairs," *Orbis*, Summer 2006, p. 399.

might next fight. As a result, the entire military needed to assume a balanced, nimble stance, ready to deploy to any theater at any time. This would require that US defense planners adopt a new force management philosophy of "global sourcing." As opposed to assigning forces to a specific geographic region and regional combatant commander, all US forces, no matter where located, would be considered part of a global force pool from which forces could be moved and deployed.[535]

- *Improve US global freedom of action.* Given the stated US intention to launch preemptive or preventive attacks, when necessary, a key goal of the new posture would be to maximize US global freedom of action.[536] As a result, Defense Department officials began to talk increasingly about the "usability" of US forces abroad—a code word for the political constraints a host nation might place on them in a crisis. In order to increase usability, US military planners wanted to position US forces "only where they were wanted," the thinking being that these countries would be less inclined to impose operational constraints on the out-of country deployability of US forces.[537]

- *Organize and optimize US forces for rapid expeditionary deployments and sustained expeditionary campaigns.* With most US combat power increasingly located in the continental United States, rapidly concentrating forces in time and space across global ranges would naturally become more difficult. Accordingly, the services would need to organize and optimize their forces for rapid expeditionary deployments and sustained expeditionary campaigns. This implied a number of things:

    - Establishing a sustainable rotational base—a necessary, if not overriding, requirement for an all-volunteer joint force fighting a persistent war. With the Army's conversion to a modular brigade combat structure, all services are either moving in this direction or have established such a base;

    - Improving each service's ability to conduct surge operations from a steady-state rotational posture. The Navy's Fleet Response Plan is a good example. It allows the Navy to surge five of its ten operational carriers in 30 days, and an additional one carrier within 90 days, from a notional rotation pattern that keeps two to three carriers forward-deployed at any given time.[538] The Air Force AEF construct is also designed to facilitate major combat surges.

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[535] Henry, "Transforming the US Global Defense Posture, pp. 40-41; 45-46.

[536] See Rumsfeld, 2006 QDR, p. 18.

[537] Bloomfield, "Politics and Diplomacy of the Global Defense Posture Review," p. 57.

[538] The Navy implemented it Fleet Response Plan in July 2003. By December 2003, with 11 operational carriers (and another in overhaul), it could surge 6 carriers in 30 days, and 2 more within 90 days. As the Navy drops to 10 operational carriers, it will be able to surge "6+1." See "Fleet Response Plan," at http://www.globalsecurity.org/military/ops/frp.htm.

- Increasing the number and capability of conventional global attack forces, which would often form the leading edge of any US response and cover the deployment of combat forces surging forward from the CONUS; and

- Gradually converting larger, heavy combat forces into smaller, more easily deployable combat forces. The cancellation of the Army's heavy Crusader self-propelled gun in 2002 was just the first step in this direction.[539] The Army's adoption of the Stryker family of wheeled combat vehicles, its aforementioned adoption of smaller, modular brigades, and its move toward the lighter Future Combat System continue this trend.[540]

- *Optimize the exterior basing network for support of rapid expeditionary power-projection operations and surge deployments from the United States, and sustained logistics support of expeditionary campaigns.* Consistent with an indirect global strategy focused on fighting a persistent irregular war, a less obtrusive global posture, a focus on flexibility and dealing with uncertainty, and an emphasis on stationing most forces at interior bases, the US exterior basing structure would shift away from a focus on warfighting and toward facilitating the rapid global movement of US forces to and through regions. As one senior defense official involved in the posture review said, "our forces need to be able to move smoothly into, through, and out of host nation."[541] Such a basing strategy places a premium on *contingency access agreements* involving flexible legal and support arrangements with US allies, friends, and strategic partners.[542] The practical result was that the future exterior basing network would emphasize fewer exterior main operating bases and many more FOSs and CSLs, which would help "to reduce friction with host nations and respect local sensitivities." Tellingly, this was exactly the approach taken by US defense strategists in the mid-1940s before the Soviet threat fully materialized.

- *Optimize the Strategic Military Transportation System for support of rapid expeditionary power-projection operations and surge deployments from the United States, and sustained logistics support of expeditionary campaigns.* In this new posture, the exterior basing network and SMTS would be more tightly linked than ever before. As the report stated, the posture "strengthens the demand for capabilities that provide increasingly global reach, such as …the worldwide disposition of key prepositioned materials and equipment, and improvements to global en route infrastructure and strategic lift."[543]

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[539] The Defense Department c\announced the cancellation of the 40-ton Crusader in May 2002. See Linda D. Kozaryn, "Pentagon Terminates Crusader Program," found online at http://www.defenselink.mil/news/May2002/n05082002_200205085.html.

[540] See "Future Combat Systems (FCS)," found online at http://www.globalsecurity.org/military/systems/ground/fcs.htm.

[541] Henry, "Transforming the US Global Defense Posture," p. 40.

[542] Henry, "Transforming the US Global Defense Posture, p. 40.

[543] Henry, "Transforming the US Global Defense Posture, p. 40.

Although the posture made no mention of improving forcible entry capability, as indicated by the Joint Staff JFEO study, these capabilities were also being studied.

Guided by these principles, Defense Department and State Department officials worked together to start defining the outlines of the new overseas basing network. As was the case in World War II, the development of the plan was an integrated inter-agency effort. Involving the State Department was necessary because of the political questions that the planned shift of US forces based overseas was sure to raise among US allies. Such questions included:

- Would smaller numbers of US forces based abroad suggest a lessened American commitment to defend its allies?

- Is the United States rejecting the formal alliance as its preferred mechanism for addressing security issues in favor of unilateral approaches or "coalitions of the willing"?

- Is the US moving its European forces to the east and securing bases in Central Asia and the Caucasus in order to check Russian influence or to contain China?

- How should allies view host-nation support for US bases that house troops that are part of a global force that have responsibilities outside the theater?[544]

The last question was an indication of just how different the Second Transoceanic Era's new global defense posture would be. For the Service Expeditionary Posture in the Oceanic Era, US forces based outside the continental United States were, for the most part, stationed on US sovereign exterior bases with no operational strings attached. In the Cold War's Garrison Posture, the majority of US combat forces based outside CONUS were in foreign exterior bases in countries the US had pledged to defend. In the new Joint Expeditionary Posture , US forces based outside the lower 48, wherever they were found, were poised to move anywhere in the world in support of US interests. Under these circumstances, not only did the United States have to negotiate basing access rights, *it had to persuade foreign countries that it was in their interests to support a global posture optimized for unfettered US global action.*

Said another way, during the Cold War, basing access agreements could be directly linked to the country's own enduring securing interests; in the Second Transoceanic Era, this direct link was becoming much more tenuous. At the very least, the link is certain to be far more indirect. How will host basing nations react to this circumstance over time? This remains an open question. For example, given the more indirect benefit of basing US troops on foreign territory, can the United States count on its allies to continue paying host nation support for the bases?[545]

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[544] Bloomfield, "Politics and Diplomacy of the Global Defense Posture Review," pp. 54-60.

[545] Bloomfield, "Politics and Diplomacy of the Global Defense Posture Review," p. 60.

Strengthening US Global Defense Posture: Outlining the New Basing Network

Nevertheless, the Defense and State Departments completed the initial outline of their desired exterior basing network in late 2003. On November 25, 2003, President Bush released a statement announcing that his administration would begin to "intensify its discussions with the Congress and our friends, allies, and partners oversea on our ongoing review of our overseas force posture."[546] By the time *Strengthening US Global Defense Posture* was published in September 2004, representatives from the Departments of Defense and State had consulted with NATO and 20 allies, partners, and friends. In addition, ambassadorial- level discussions had been held in an additional 30 countries.[547]

The bottom line: the shift to an expeditionary posture evident in the 1990s would be consolidated and expanded. Consistent with this shift, over the next ten years, the United States planned to reduce the number of troops it based overseas by a further 70,000, dropping the total number of forward-based troops to about 150,000. The returning troops would be accompanied by an additional 100,000 family members and civilian personnel. The exterior basing network would drop to just 550 sites of all types, down from 850 sites in 2004. This would be slightly less than the total number of bases in 1949, the Cold War low for exterior bases.[548]

Perhaps the biggest change would be seen in Europe, which would continue its transformation into a "strategic trampoline" for US global power-projection operations into other theaters. In this regard, the Army would replace all of its remaining heavy combat forces in Europe with rapidly deployable medium- and light-weight "early entry forces." In the process, the Army's permanent presence would be reduced to a single Stryker Brigade Combat Team and Special Operations Group in Germany, and an Airborne Brigade in Italy. The bases that supported these forces would be consolidated. The US Naval Forces Europe would likewise consolidate its headquarters in Naples, Italy, and USAFE would consolidate its remaining forces in just five bases (down from 25 in the 1990s). Consistent with Europe's new strategic mission as a "coaling station" for US troops on their way to another regions, the United States would seek to retain access to the existing advanced training facilities in Grafenwoehr, Germany, as well as critical high-capacity logistics and mobility hubs, such as Ramstein, Germany and Rota, Spain. In addition, the United States would seek access to several new FOSs and CSLs located on the territory of NATO's new eastern members, Romania and Bulgaria, which are situated closer to the Caucasus and Southwest Asia.[549]

The steady-state footprint in Southwest and Central Asia—that is, the enduring laydown of forces that remains after completion of major operations in Afghanistan and Iraq—is to be based on the principle of "presence without permanence." Its backbone would include the *Desert Storm*

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[546] Bloomfield, "Politics and Diplomacy of the Global Defense Posture Review," p. 52.

[547] DoD, *Strengthening US Global Defense Posture,* pp. 14-15.

[548] Henry, "Transforming the US Global Defense Posture," p. 13.

[549] Henry, "Transforming the US Global Defense Posture," p. 45; Donna Miles, "Air Force Transformation in Europe Aiding Terror War," found online at http://www.af.mil/news/story.asp?storyID=123010866.

campaign bases incorporated into the US exterior basing network in the 1990s, augmented by the further incorporation of an uncertain number of Central Asian GWOT campaign bases. However, the goal would be to maintain a relatively light forward presence in the region, with command and control facilities such as the Combined Air Operations Center in Qatar; land and seabased prepositioned equipment and war reserve material; and unobtrusive "warm" and "cold" forward operating sites and cooperative security locations designed to support forward-deployed forces.[550] For example, Manas Air Force Base in Kyrgyzstan, which first supported US operations in Afghanistan, is likely to remain an important access point to Central Asia. The US military is also anxious to replace the facilities it lost when it was ejected from Uzbekistan in 2005. As a result, Secretary of Defense Rumsfeld, Secretary of State Rice, and General John Abizaid, Commander, US Central Command have all visited Tajikistan in order to explore the possibility of establishing FOSs and CSLs in this strategically situated nation.[551]

Remaining to be seen is the impact that a growing US relationship with India will have on the broader US Asian defense posture. As former Secretary of State Henry Kissinger said in 2005, "Now India is, in effect, a strategic partner, not because of compatible domestic structures but because of parallel security interests in Southwest Asia and the Indian ocean, and vis-à-vis radical Islam."[552] However, delays to a proposed deal between the United States and India over US support for the development of India's commercial nuclear infrastructure prevented any further deepening of the strategic ties between the two countries. However, on December 8, 2006, a bill proposing US-India civilian nuclear cooperation was passed by an overwhelming majority in both the US House of Representatives and the Senate, ending the long period of uncertainty over the fate of the deal and paving the way for improved relations between the two countries.[553] Given India's location in South Asia, the United States has many incentives to continue to develop this strategic relationship, which may someday lead to potential new access agreements and arrangements in the Indian Ocean.

The exterior basing network in Central and Latin America and Africa would also consist mainly of small, unobtrusive FOSs and CSLs. The principal purpose of these light-footprint facilities would be to broaden relationships, build partner capacity, facilitate security cooperation activities, and provide for contingency access. Transit rights/agreements are particularly important in both regions. They are modeled after the Air Force's Africa Fuels Initiative, which

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[550] Henry, "Transforming the US Global Defense Posture," p. 47.

[551] Josh White, "Rumsfeld Seeks to Widen US Role With Tajikistan," *Washington Post*, July 11, 2006, p. A14.

[552] Henry A. Kissinger, "Implementing Bush's Vision," *The Washington Post*, May 16, 2005, p. A17. . See also Michael Sirak, "US Signs Defense Pact With India," *Jane's Defense Weekly*, July 13, 2005, p. 15; and Michael Barone, "An Emerging Alliance With India," *Jewish World Review*, July 5, 2005, found at http://www.JewishWorldReview.com.

[553] T.S. Gopi Rethinaraj, "US-India Nuclear Deal: Regional Security Implications in Asia." *Jane's International Security*, December 20, 2006, accessed online at http://www.janes.com/security/international_security/news/jir/jir061220_1_n.shtml.

facilitates "gas-and-go" operations for transport, tanker and tactical aircraft transiting to and from adjacent theaters. The plan foresees no permanent major operating bases in either region.[554]

The Pacific region would see much more substantial changes. As highlighted in the subsequent 2006 Quadrennial Defense Review—which must be viewed in context as a key part of the ongoing Global Defense Posture Review:

> The choices that major and emerging powers make [in the Pacific] will affect the future strategic position and freedom of action of the United States, its allies and partners. The United States will attempt to shape these choices in ways that foster cooperation and mutual security interests. At the same time, the United States, its allies and partners must also hedge against the possibility that a major or emerging power could choose a hostile path in the future.[555]

The report goes on to say, "Of the major and emerging powers, China has the greatest potential to compete militarily with the United States and field disruptive military technologies that could over time off set traditional U.S. military advantages absent US counter-strategies."[556] Planned changes to the Pacific posture are thus equally focused on fighting the Long War as well as hedging against any long-term worsening of US-Chinese relations.

In this regard, the 37,000 troops stationed in South Korea are to be reduced by 12,500 by the end of 2008. Moreover, the US exclusive bases along the Demilitarized Zone between South and North Korea and near the capital of Seoul are to be consolidated in two major hubs in the central and southern pasts of the country. In the process, the Army's permanent presence will be reduced to a single heavy combat brigade and the Air Force's permanent presence would be reduced to about a single Tactical Fighter Wing equivalent.[557]

After the troop reductions are complete, plans are for South Korea's Joint Chiefs of Staff to assume wartime control over South Korean military units. While South Korea took back the authority to control its own troops during peacetime in 1994, wartime control has remained the responsibility of the US-led Combined Force Command (CFC) since the Korea Armistice was signed in 1953. The US commander of the CFC has simultaneously served as the commander of US Forces in Korea (USFK) and of the United Nations Command. Under the new plan, the South Korean JCS would exercise operational control over South Korean forces in time of crisis, while US and UN forces would operate under the control of USFK. US military planners want

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[554] Henry, "Transforming the US Global Defense Posture," pp. 47-48.

[555] Rumsfeld, *2006 QDR*, pp. 27-28.

[556] Rumsfeld, *2006 QDR*, p. 28.

[557] The Global Defense Posture Review originally recommended that US forces based in Korea be reduced to 25,000 by the end of 2005. This target will now likely not be hit until 2008. See Richard Halloran, "Phasing Out US Forces in Korea," *Real Clear Politics*, found online at http://news.yahoo.com/s/realclearpolitics/20060728/cm_rcp/phasing_out_us_forces_in_south.

the command transfer to occur as soon as possible; however, whenever the change occurs, it will mark another step further away from the US Cold War experiences.[558]

The United States presence in Japan would also see substantial change, focused on improving military collaboration between the two countries. The first change is to establish a combined operations center. The second is to establish a combined air and missile defense operations and coordination center, by consolidating all elements of Japan's Air Defense Command at Yokota Air Base, home of the US Fifth Air Force. The third is to base US Patriot missile defense units at exclusive and shared bases throughout Japan and Okinawa. Finally, in 2013, plans are to shift the Army's 1st Corps Headquarters from Fort Lewis, Washington, to Camp Zama, Japan.[559]

The biggest change, however, would be part of a major expansion of the US sovereign Pacific basing network. Up to 8,000 Marines and their families are to be transferred from Okinawa to Guam by 2014, joining three nuclear-powered attack submarines and a sub tender already based there.[560] At the same time, the Army intends to base a Stryker Brigade Combat Team in Alaska, along with an airborne brigade; it would also base a second Stryker Brigade in Hawaii, as part of the light infantry division now stationed there. The Navy intends to shift 60 percent of its operational carriers and attack submarines into the Pacific, with most of the forces based either on the West Coast or in Hawaii; a Carrier Strike Group and Expeditionary Strike Group would remain forward-based in Japan. The Air Force would make improvements to air bases in Alaska, Hawaii, and on Guam.[561]

As these discussions suggest, Guam will become an increasingly important part of the US exterior Pacific basing network, as it is the only sovereign US forward operating base in the Western Pacific. The 209-square mile island is the site of the sprawling Anderson Air Force Base, with several 3,000-meter runways capable of handling the largest US aircraft, including bombers. It also boasts a superb deep water harbor and a ship repair dry dock. In addition, it is home to America's largest exterior aviation fuel depot, the largest ordnance storage site in the Pacific, and the region's only live-fire bombing range. It is also slated to become the hub for an Air Force Strike ISR Task Force, including two tactical aviation squadrons, a Global Hawk unmanned aerial vehicles detachment, and provisions to support rotational deployments of detachments of B-1, B-2, and B-52 bombers.[562]

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[558] Jung Sung-ki, "S. Korea, US Envision Separate Commands," *Korean Times,* August 8, 2006.

[559] Amy Klamper, "Stronger Ties," *Seapower,* August 2006, pp. 10-14.

[560] Klamper, "Stronger Ties," p. 10.

[561] Henry, "Transforming the US Global Defense Posture," p. 46.

[562] Andrew S. Erickson and Justin D. Mikolay, "A Place *and* a Base: Guam and the American Presence in East Asia," in *Reposturing the Force: US Overseas Presence in the Twenty-first Century* (Newport, RI: Naval War College Newport Paper No. 26, February 2006), pp. 65-93.

Forward-Deployed and Prepositioned Forces

Although *Strengthening US Global Defense Posture* did not explicitly discuss the steady-state forces maintained forward as part of a joint rotational force or the location of prepositioned equipment, these were developed hand-in-hand with the basing plans.

The Navy, as part of its new Flexible Deployment Concept and Fleet Response Plan, intends to keep at least two Carrier Strike Groups (CSGs) continuously forward-deployed, along with one or two SSGN strike forces and several Theater Air and Missile Defense (TAMD) Surface Action Groups (SAGs). One of these CSGs—the CSG homeported in Japan—would normally remain in the Pacific. However, the battle fleet's maintenance cycle would be adjusted so as to be able to surge up to six CSGs in 30 days, and another within 90 days, along with a third SSGN and several SAGs.

The Marines plan to maintain at least two Marine Expeditionary Units forward as part of an Expeditionary Strike Group (ESG) composed of three amphibious ships and three surface combatants. At the same time, it plans to retain the brigade set of equipment now stored in caves in Norway, and to reduce the number of maritime prepositioning squadrons from three to two, with one of the squadrons configured for seabasing operations. It will also maintain two T-AVBs, one on either coast of the continental United States, ready to deploy and support US Marine aviation squadrons.

The Air Force, having developed and honed its rotational Air and Space Expeditionary Force concept during the 1990s, intends to keep two of its ten AEFs deployed or ready for deployment for at all times. The remainder of the force will be able to surge, as necessary, during times of crises. Each AEF would consist of a mix of bombers, fighter-bombers, and support aircraft, augmented as necessary with ISR assets. In addition, the Air Force plans to maintain four ships loaded with ordnance in the Indian Ocean/Persian Gulf to provide ready ammunition in the early stages of any developing crisis.

The Army intends to rotationally deploy a single heavy brigade combat team to Europe and a Stryker brigade to Korea. Its land-based prepositioning program would consist of a "1x1" brigade set of equipment in Europe; a "2x2" brigade set of equipment in Southwest Asia; and a "2x2" brigade set of equipment in Korea. In addition, it would include a new Immediate Ready Force Battalion set of equipment in Europe ready for rapid deployment. Depending on the availability of resources, the Army plans to transform its single-brigade Combat Prepositioning Force into a new Army Strategic Flotilla patterned after the Marines' Maritime Prepositioning Force. The Flotilla would consist of three squadrons, each carrying a single "1x1" brigade and the supplies and ammunition necessary to keep the brigades in combat for 15 days. The squadrons would be anchored in the Mediterranean, Indian Ocean, and Western Pacific, ready for instant deployment.[563]

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[563] Brigadier General Mike Milano, US Army, "The Army in Transition: Confronting the Global Challenges of the War on Terror," a PowerPoint presentation dated March 15, 2006. General Milano makes plain that the costs of ongoing operations in Afghanistan and Iraq would likely delay the implementation of these plans.

A Global Expeditionary Posture

Taken together, the changes outlined in *Strengthening the US Global Defense Posture* will result in an expeditionary posture that resembles a unique blend of all three previous US global military postures. It is at least conceptually linked to the Continent Era's leasehold basing network, in that it is designed to support the global mobility and operations of US expeditionary forces (although not just naval forces) with more informal basing arrangements such as forward operating sites and cooperative security locations. Like the Service Expeditionary Posture adopted during the Oceanic Era, the preponderance of US forces in the Pacific would be found on sovereign bases in Alaska, Hawaii, and Guam. Finally, like the Garrison Posture associated with the First Transoceanic Era, its exterior basing network includes many bases on foreign soil. True, the overall network is far smaller and its individual bases are far less obtrusive; the steady-state network will see only four brigade equivalents of ground troops permanently based in foreign countries in Europe and Asia (one in Germany; one in Italy; one in Korea; and one on Okinawa).[564] However, it will still compel the United States to negotiate many Status of Forces and transit right agreements.

Despite the similarities, however, the end result is an expeditionary posture far different than any ever erected by the United States—or, for that matter, any other previous global power. It includes a naval base in Cuba—a holdover from the Oceanic Era. It retains numerous FOSs and CSLs in the Caribbean, Central and South America, and throughout the Atlantic Basin. It includes expeditionary access points and gas-and-go agreements with numerous African countries. It relies upon and exploits traditional security arrangements such as the North Atlantic Treaty Organization, providing the US with extraordinary logistics support facilities and allowing US forces to gain access to FOSs and CSLs along the Black Sea. It includes bases throughout Southwest Asia, as well as in Central and South Asia. In the East Asian Littoral, it relies on numerous access points such as a FOS in Singapore and CSLs in numerous countries in Southeast Asia. In the Pacific, forces are found in Japan and South Korea, as well as ob all US possessions and territories.

Most tellingly, however, the steady-state posture is optimized to provide US global freedom of action and to facilitate rapid global reaction and concentration of forces. If all plans come to fruition, the posture supports two airborne brigades (one brigade based in both Europe and Alaska); four medium-weight Stryker brigades (one each based in Alaska, Hawaii; and Europe, and an additional rotationally-deployed brigade in Korea); a light infantry division based on Hawaii; a Marine Expeditionary Force based on Hawaii, Okinawa, and Guam; four land-based prepositioned brigade sets (two in Europe, one in Southwest Asia, and one in Korea); and a total of five brigade sets of equipment on ships (three Army and two Marines). These forces would be backed up by powerful forward-deployed forces, including, but not limited to, two Carrier Strike Groups, two Expeditionary Strike Groups, two Air and Space Expeditionary Forces. All of these forces would, in turn, be backed up by Joint force based in the United States organized and trained to conduct expeditionary surge operations.

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[564] There will also undoubtedly be a residual permanent presence in Southwest Asia, but the steady-state requirement is not at all yet clear.

It is, quite simply, a new type of *global expeditionary posture* that supports rapid US power-projection operations, and one specifically designed to maximize US global freedom of action. The basing network is perhaps most similar in outline to the British global "coaling station" network assembled during the late 19th century, as it is designed first and foremost to facilitate the rapid global movement and concentration of US Joint expeditionary forces (as opposed to just naval forces). However, instead of being anchored on sovereign colonial territory like the earlier British network, it is anchored on bases located on sovereign foreign territory, and as such, is totally reliant on the goodwill of foreign governments. This circumstance is perhaps best illustrated by a stunning fact: at the end of the Cold War, the US had permanent Status of Forces Agreements with approximately 40 countries; today, the number has grown to more than 90. *This means that US has some type of access agreement with nearly half of the more than 190 nation-states comprising the world community.*[565] There is no clear historical analog to this leasehold global expeditionary basing network.

THE 2006 QUADRENNIAL DEFENSE REVIEW: THE GLOBAL DEFENSE POSTURE REVIEW CONTINUES

As was just mentioned, the 2006 QDR must be viewed in context as a continuation of the ongoing Global Defense Posture Review. As the report states:

> … the United States will continue to adapt its global posture to promote constructive bilateral relations, mitigate anti-access threats and off set potential political coercion designed to limit U.S. access to any region. The United States will develop capabilities that would present any adversary with complex and multidimensional challenges and complicate its offensive planning efforts. These include the pursuit of investments that capitalize on enduring US advantages in key strategic and operational areas, such as persistent surveillance and long-range strike, stealth, operational maneuver and sustainment of air, sea and ground forces at strategic distances, air dominance and undersea warfare. These capabilities should preserve US freedom of action and provide future Presidents with an expanded set of options to address all of the QDR focus areas and a wide range of potential future contingencies. The aim is to possess sufficient capability to convince any potential adversary that it cannot prevail in a conflict and that engaging in conflict entails substantial strategic risks beyond military defeat.[566]

While the 2006 QDR Report adds little to the discussion about forward-based and forward-deployed forces found in *Strengthening US Global Defense Posture*, it does provide important signals about the direction of key components of the new defense posture, such as "long-range strike" (e.g., global attack forces); "operational maneuver" (e.g., forcible entry forces); "sustainment of air, sea, and ground forces at strategic distances" (e.g., strategic mobility and logistics forces); and "persistent surveillance" (part of the global C3I network).

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[565] "Status of Forces Agreements."

[566] Rumsfeld, *2006 QDR*, pp. 30-31.

Global Attack Forces

The 2006 QDR signals that the conventionalization of US global attack forces will not only continue, but accelerate. It reaffirms an earlier decision to assign the Strategic Command (STRATCOM) the new mission of *global strike,* and outlines a continuing shift in focus away from global *nuclear* strike and toward global *conventional* strike. With regard to nuclear forces, the QDR announces the continued reduction of the residual Cold War ICBM force, from 500 missiles (itself down from a Cold War high of 1,050 missiles) to 450; the replacement of four National Airborne Operations Centers with two new airborne operations centers; and the modification of the airborne nuclear control force to allow it to act as a cellular base during catastrophic national events.[567]

As demonstrated during Operations *Allied Force, Enduring Freedom,* and *Iraqi Freedom*, the combination of a bomber's long range and large payload along with guided weapons make them especially powerful conventional attack platforms. For example, during OIF, bombers delivered two-thirds of the total Air Force tonnage while flying only about five percent of the total campaign sorties.[568] Not surprisingly, then, improving US bomber conventional strike capabilities are an important priority in the QDR. In this regard, the QDR directs the Air Force to "fully modernize (its) B-52s, B-1s, and B-2s to support global (conventional) strike operations." Under current plans, the Air Force would reduce its B-52 force from 94 to 56 bombers, using the $680 million in savings improve all it remaining bombers for conventional attack. This plan would allow all remaining combat-coded bombers to receive satellite communications systems in order to permit the near instantaneous targeting of both bombers and their cruise missiles in flight. The B-52s and B-2s would be modified to employ stand-off weapons, while the stealthy, penetrating B-2s would be configured to carry GPS-guided 500-pound JDAMs, allowing them to attack no less than 80 separate targets on a single mission.[569]

Even as it directs the modernization of the current bomber force, the QDR also orders the Air Force to "develop a new land-based, penetrating long-range strike capability to be fielded by 2018."[570] This marks a major acceleration of the Air Force's original force planning timetable, which had anticipated the fielding of a new bomber in the 2030 timeframe. This new long-range strike system may be either manned or unmanned. In any event, because it must be a "penetrating" system, it will necessarily be stealthy. Moreover, it will emphasize fuel efficiency, long range, and endurance (mission duration) to reduce its dependency on aerial tankers.[571] The QDR sets a goal of increasing long-range US strike capabilities by 50 percent and the penetrating component of long-range strike by a factor of five by 2025. With just 21 stealthy B-2 bombers

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[567] Rumsfeld, *2006 QDR*, p. 50.

[568] "New Long-Range Bomber on the Horizon," *Space Daily*, July 26, 2006.

[569] Rumsfeld, 2006 QDR, p. 46; "Pentagon Pushes Congress to Support Service's B-52 Retirement Plans," *Inside the Air Force*, August 4, 2006, p. 1.

[570] Rumsfeld, *2006 QDR*, p. 46.

[571] "New Long-Range Bomber on the Horizon."

now in its inventory, this suggests the Air Force intends to buy at least 100 of the new systems.[572]

Based on the success in conventionalizing the US bomber force, the QDR also directs the rapid fielding of conventional intercontinental range missiles. The report directs the Navy to convert and deploy *Trident* submarine-launched ballistic missiles capable of delivering conventional warheads within two years.[573] The so-called CTM (Conventional Trident Missile) program would convert 26 of the missiles, which would be carried aboard the same *Ohio*-class SSBNs that now form the American covert undersea nuclear strike base. The missiles could allow STRATCOM to deliver conventional warheads within ten yards of any target on the planet within 12 to 24 minutes.[574] This would give "the United States a long-range strike option against targets beyond the range of current systems or that are heavily defended…and help deter state actors from sponsoring terrorism by imposing the threat of prompt conventional attack."[575]

Since the QDR was published, however, Defense Department plans for their global attack forces have encountered trouble. With regard to DoD bomber plans, the House Armed Services Committee wants to block DoD from retiring any B-52 bombers with the exception of one bomber that NASA no longer uses for testing; the Senate Armed Services Committee backs a plan that would prohibit DoD from spending any Fiscal Year 2007 (FY 2007) funds devoted to B-52 retirements until it has submitted to lawmakers a thorough examination of its future bomber plans.[576] The fate of the CTM program is even more up in the air. Ever since its announcement, some commentators have worried that employing conventional missiles from the US covert undersea nuclear strike base might trigger an inadvertent retaliation against the United States by a nuclear-armed power.[577] Their worries were made real when Russian President Vladimir Putin warned that the launch of such a missile "could provoke and inappropriate...full-scale counterattack using strategic nuclear forces."[578] As a result of these concerns, the House of Representatives FY 2007) defense appropriations bill that denied the Navy funding to begin buying the modified missiles, and the Senate Appropriations Committee left the program unfunded.[579]

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[572] Rumsfeld, *2006 QDR*, p. 46.

[573] Rumsfeld, *2006 QDR*, p. 50.

[574] "Appropriators Leave "Global Strike' Missile Procurement Unfunded," *Inside the Pentagon*, July 27, 2006.

[575] Sergeant Sarah Wood, USA, "Conventional Missile System To Provide Diverse, Rapid Capabilities," found online at http://www.defenselink.mil/news/Mar2006/20060309_4439.html.

[576] "Pentagon Pushes Congress to Support Service's B-52 Retirement Plans."

[577] See for example William A. Arkin, in Tony Capaccio, "U.S. May Arm Subs With Conventional Warheads for Quicker Strike," *Bloomberg.com*, at http://www.bloomberg.com/apps/news?pid=10000103&sid=aZeqovAl9zgY&refer=us.

[578] As quoted by John A. Tirpak, in "Back to the Future Cold War," in "Washington Watch," *Air Force Magazine*, July 2006, p. 12.

[579] "Appropriators Leave "Global Strike' Missile Procurement Unfunded."

Whether or not the CTM program survives is at this point uncertain. What is certain is that the future US power projection operations and the future global defense posture will rely evermore heavily on conventional global attack forces than in the past.

Strategic Mobility and Logistics Forces

As befits the ongoing shift to a new global expeditionary posture, the QDR states that "Rapid global mobility is central to the effectiveness of the future force. The joint force will balance speed of deployment with desired warfighter effects to deliver the right capabilities at the right time and at the right place." Strategic mobility and logistics forces "underpin the transition from a Cold War-era garrisoned force to a future force that is tailored for expeditionary operations."[580]

As part of the QDR, the Defense Department conducted a Mobility Capabilities Study (MCS) to review the mobility forces needed to support the *National Defense Strategy* and the Long War. The MCS, which included participants from the Military Departments, the Combatant Commands, the Joint Staff and the Office of the Secretary of Defense, used as its baseline the force structure recommended by MRS 2005. The study analyzed how this force structure supported the two overlapping MCOs used in the aforementioned Joint Staff-led Operational Availability (OA) studies.

In the event, the MCS recommended that DoD:

- Stabilize the strategic airlift fleet at 180 C-17s and 112 modernized and reliability-enhanced C-5s, for a total of 292 dedicated strategic airlifters. In addition, the study recommended that C-17 tooling be moved to an offsite storage site to preserve the option to build additional C-17s in the future.

- Stop purchasing the latest version of the C-130 tactical airlifter and divert money first toward a new light intra-theater cargo aircraft optimized for Long War operations and then a new "Advance Mobility Concept tactical airlifter" called the AMC-X.

- Recapitalize the aerial tanker fleet "to ensure global mobility and power-projection."[581]

- Develop new intra-theater range Joint High Speed Vessels and other forms of inter-theater high-speed sealift.

The MCS conclusion that the strategic airlift fleet could meet the requirements for both two MCOs as well as the Long War took some analysts and observers by surprise. A former commander of the Transportation Command had testified that in order to meet the goals set in MRS 2005, the Air Force would require 222 C-17s, not 180.[582] As a result, during the markup of

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[580] Rumsfeld, *2006 QDR*, p. 53.

[581] Rumsfeld, *2006 QDR*, pp. 53-55.

[582] Harold Kennedy, "More Lift Needed, Avers U.S. Transportation Chief," *National Defense*, July 2002, found online at http://www.nationaldefensemagazine.org/issues/2002/Jul/More_Lift.htm.

the FY 2007 Defense Authorization Bill, the House of Representatives added money to buy three more C-17s (bringing the total number of planes authorized to 183), and told the Defense Department that shutting down the C-17 production line would be "premature and ill-advised."[583] Regardless of whether the C-17 line remains open or not, the US will retain the most capable strategic airlift fleet in the world, with a total capacity of approximately 50 million ton-miles per day.

The pursuit of a new, smaller intra-theater cargo aircraft reflects the lessons learned during the Long War. After five years of war, military planners well recognize the problem of delivering cargo to widely dispersed ground forces in austere environments like those found in Afghanistan and Iraq. For the past several decades, the Army and Marines have both used small aircraft and heavy lift helicopters to move cargo and personnel "the last tactical mile"—the final distance between field depots and troops scattered over inhospitable terrain. However, the Army's small cargo fleet is aging rapidly and both the Army and Marines are wearing out their heavy-lift cargo helicopters at an alarming rate.[584]

The Marines' answer has been to replace their medium helicopters with the expensive new MV-22 tilt-rotor aircraft, which have the speed of a turboprop but can land like a helicopter. At the same time, they plan to recapitalize their heavy-lift helicopter fleet. For their part, both the Army and the Air Force have agreed to join forces in developing and buying a new Joint Cargo Aircraft (JCA) that can deliver cargo to short austere runways lacking typical navigation aids. Subject to further analysis, current plans are for the Army to buy up to 75 of the aircraft and for the Air Force up to 132, for a total of 207 aircraft. However, like the DoD plans for the C-17 fleet, the JCA program has run into trouble in the Congress. Although the House fully funded the JCA, the Senate Armed Services Committee cut the budget request in half. Resolution of the issue will presumably be made during the FY 2007 budget conference. [585]

In the end, it seems likely that the JCA program will survive. Up through the end of the Vietnam War, in addition to the larger tactical airlifters like the C-119 *Boxcar* and the C-130 *Hercules*, the US tactical airlift fleet always included a smaller airlifter adept at delivering cargo to austere locations. These planes included the old C-123 *Provider* (a powered variation of a heavy assault glider designed after World War II) and the CV-8 *Buffalo*. After Vietnam, however, these specialized aircraft disappeared, replaced by small transports optimized for cargo deliver in Europe and Korea—theaters with extensive prepared airfields. In effect, the JCA is an updated

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[583] "Boeing Official: New Mobility Study Needed Before Final C-17 Decision," *Inside the Air Force*, July 28, 2006.

[584] Staff Sgt. C. Todd Lopez, US Air Force, "Air Force, Army to Purchase Small Cargo Aircraft," *Air Force Link*, at http://www.af.mil/news/story.asp?id=123018296.

[585] Tirpak, "Panel Cuts Army JCA Budget," in "Washington Watch," p. 21; Lopez, US Air Force, "Air Force, Army to Purchase Small Cargo Aircraft;" see also Stephen Trimble and Caitlin Harrington, "C-27J Team Selects Florida to Build JCA," *Jane's Defense Weekly*, July 26, 2006, p. 8.

version the C-123 and CV-8, performing the very same role these earlier planes performed in Vietnam—another long, irregular war.[586]

The new AMC-X tactical airlifter is the expected replacement for the Air Force's large existing C-130 fleet. This next-generation plane will be designed to satisfy "joint operational concepts and requirements for future tactical airlift capabilities," including support for land and maritime forces as well as air operations. The development of the new aircraft is set for sometime in 2010, with an initial operating capability sometime near the end of the next decade. A key requirement for the AMC-X will be that it be capable of taking off from and landing on short runways. Some planners believe a modified version of the C-17 strategic airlifter could fill this role, which would result improved strategic and tactical airlift capabilities.[587]

There is absolutely no debate over the important role that the aerial tanker fleet plays in ensuring US global mobility and freedom of action. There is also no debate that the Air Force will need to at some point start recapitalizing its 544 KC-135 tankers, which have an average age of around 45 years. However, beyond that, there is little agreement. The debate over the future tanker force was clouded by an earlier Air Force plan to lease 100 new Boeing KC-767 tankers, a derivative of their B-767 commercial airliner. The plan was first lambasted by the Congress as a waste of tax payer money, and then collapsed when it was revealed that Boeing and Air Force contracting officers collaborated over the leasing arrangement in an illegal manner.[588]

The current plan, which is in constant state of flux, is to retire 78 of the oldest tankers that operate under some form of flight restrictions. The money saved would be used to modernize the remaining legacy tankers and to jump-start a "full and fair" competition for an entirely new type of tanker. Defense Department officials say that upon the completion of the competition, the Air Force would recapitalize its tanker fleet by buying 15-20 tankers a year for the next 20 years, suggesting an ultimate force structure target of some 350-400 tankers. However, the Congress is balking at DoD's plans to retire the 78 tankers, much like it has balked at many of DoD's plans for its "posture enablers."[589] In any event, given both the age of the current tanker fleet and their importance to the US global military posture, it is certain that this program will continue, in some form of the other.

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[586] See entries for the C-123 and the CV-8 at "Airlift Cargo Aircraft," found at http://www.globalsecurity.org/military/systems/aircraft/cargo.htm.

[587] "Air Force's AMC-X Program Could Give C-17 Production Line New Life," *Inside the Air Force*, August 4, 2006, p. 1.

[588] "'Fair' and 'Open' Competition Debate Stirs Tanker Replacement Effort," *Inside the Air Force*, August 4, 2006, p. 1.

[589] Robert S. Dudney, "The Mobility Edge," *Air Force Magazine Online*, August 2003, found at http://www.afa.org/magazine/aug2003/0803edit.asp; "Boeing KC-767," at http://en.wikipedia.org/wiki/KC-767; "Krieg: 20-Year Tanker Replacement," found in Tirpik, "Washington Watch," *Air Force Magazine*, July 2006, p. 21; and 'Fair' and 'Open' Competition Debate Stirs Tanker Replacement Effort."

Forcible Entry Forces: *Quo Vadis*?

Having long lambasted the Defense Department for its adherence to comfortable Cold War planning assumptions ever since it arrived on the scene, it is surprising that Secretary Rumsfeld accepted a MCS that uses the very same planning assumptions that guided the results of earlier MRS 2005 rather than those used by the 1996 DSB Task Force on Strategic Mobility. These assumptions continue to point toward a Strategic Military Transportation System optimized for the delivery of reinforcements and forces through established theater infrastructures in Southwest and Northeast Asia. In other words, the Mobility Capabilities Study appears to assume assured forward theater access in the future. While the study does suggest some improvements in the tactical delivery of cargo to dispersed combat forces, it still will result in a strategic mobility force largely dependent on forward access and prepared ports and airfields.

The continued assumption of assured forward access helps to explain the QDR's silence on the entire subject of forcible entry forces. The QDR states that "the effective combination of seabasing, overseas presence, enhanced long-range strike, reach-back, and surge and prepositioned capabilities will reduce the forward footprint of the joint force." However, it is mute on the need to improve the Joint forces' ability to seize access should access be denied or contested. It does say that the future joint force "will exploit the operational flexibility of seabasing to counter *political* anti-access and irregular warfare challenges" (emphasis added). However, it says nothing about the joint force might having to project ground forces in the presence of an *operational* A2/AD network. Indeed, there is not a single reference to either airborne or amphibious landing forces in the entire document.[590]

As mentioned above, the QDR does favorably endorses the idea of seabasing as well as the idea of building a future joint seabasing capability around the Maritime Prepositioning Force (Future), saying that the "Maritime Prepositioning Force (Future) family of ships will advance the capability of seabasing to support a wide spectrum of joint force operations." It goes on to say that "Special Operations Forces will exploit Afloat Forward Staging Bases (AFSBs) to provide more flexible and sustainable locations from which to operate globally."[591] Perhaps senior DoD officials have accepted the view that MPF(F) seabases are an acceptable substitute for amphibious landing forces in forcible entry operations. Whatever their views, the sense the 2006 QDR gives is that the Defense Department has no great concern over either the possible future development of anti-access/area-denial networks, or the Joint forces' ability to penetrate them.

Global C3I Forces

With regard to the US global C3I network, the 2006 QDR continues the direction established in the 1990s and embodied in the concept known as C4I for the Warrior. It establishes as its goal a

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[590] Rumsfeld, *2006 QDR*, pp. 47, 53.

[591] Rumsfeld, *2006 QDR*, p. 47.

seamless global C3I network forces that stretches across the strategic, operational, and tactical levels of war. As the report states:

> The ability of the future force to establish an "unblinking eye" over the battle-space through persistent surveillance will be key to conducting effective joint operations. Future capabilities in ISR, including those operating in space, will support operations against any target, day or night, in any weather, and in denied or contested areas. The aim is to integrate global awareness with local precision. Intelligence functions will be fully integrated with operations down to the tactical level, with far greater ability to reach back to intelligence collection systems and analytic capabilities outside the theater. Supporting this vision will require an architecture that moves intelligence data collected in the theater to the users, rather than deploying users to the theater. Future ISR capabilities will be designed to collect information that will help decision-makers to mitigate surprise and anticipate potential adversaries' actions….[592]

This breathtaking vision for a global and seamless strategic-to-tactical C3I architecture is critically dependent upon the space-based portion of the C3I network. In this regard, the QDR demands a space-based C3I architecture that is at least one generation ahead of any foreign or commercial space power. It also requires the joint force to develop "improved space control measures" to ensure the future joint force will always enjoy space superiority.[593]

Despite the growing importance of the space-based segment of the C3I network, however, the QDR also implicitly acknowledges the technical and cost risks associated with their development. It therefore directs the services to balance air- and space-based ISR capabilities and to explore the use of "high altitude loitering capabilities." Additionally, it explicitly notes that space-based ISR capabilities should be complemented by penetrating airborne platforms.[594]

In line with this dual-track development approach, important new air and space-based C3I capabilities highlighted in the QDR are:

- A new constellation of Space Radars that will provide persistent, all-weather, day and night ISR capabilities in denied areas;

- A Transformational Satellite constellation that employs laser cross-links with Internet Protocol (IP) to provide high-bandwidth communications for tactical forces on the move; and

- New types and more unmanned aerial ISR systems such as the *Global Hawk* and *Predator*.

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[592] Rumsfeld, *2006 QDR*, p. 55.

[593] Rumsfeld, *2006 QDR*, pp. 55-56.

[594] Rumsfeld, *2006 QDR*, pp. 55-56.

Also critical to the vision is "harnessing of the power of information sharing," now referred to by defense planners as "net-centricity." As the QDR states, "Achieving the full potential of net-centricity requires viewing information as an enterprise asset to be shared and as a weapon system to be protected." The foundation for joint net-centricity is the Global Information Grid (GIG), a single, inter-connected, secure, ground-based fiber optic information grid consisting of trusted and protected information networks—providing a forum for collecting, processing, and managing on-demand information to warfighters, policymakers, and support personnel.[595]

What is so revolutionary about this planned network is its sheer capacity and the extent to which tactical users will be able to plug into the net, even when on the move. For example, as a result of the GIG Bandwidth Extension (GIG BE) program, 80 different terrestrial C3I hubs in CONUS, the Pacific, Southwest Asia, and Europe will soon be connected by a secure and redundant 10 gigabit-per-second Internet Protocol fiber optic telecommunications network. Soon thereafter, the network's throughput capacity will jump to an astounding 40 gigabits per second. Special teleports will link this ground-based system to the space-based C3I segment, providing even more network redundancy and coverage. Moreover, once the aforementioned Transformational Satellite and the new Joint Tactical Radio System (JTRS) are fielded—both Internet Protocol systems—even units in remote geographical locations will be able to plug into the net and both "pull" or "push" information, as required, using simple common web-based applications.[596]

To fully exploit this system, the Global Command and Control System will be replaced by the Joint Command and Control (JC2) system. Much like the WWMCCS before it, during the 1990s each of the services pursued their own internet applications tailored to support their individual missions. The proliferation of non-standard applications greatly hinders the use of common applications in joint environments. The JC2 will introduce standard Joint applications and protocols, making the sharing of information in US Joint Multidimensional Battle Networks that much more seamless and effective.[597]

AN ONGOING PROJECT

The reorientation of the US global defense posture promised in the 2001 QDR remains very much a work in progress. The exterior basing network is still evolving as the Long War continues and as the US continues its shift toward a distributed leasehold structure that emphasizes smaller, less obtrusive forward operating sites and cooperative security locations. The services, particularly the Army, continue to reorganize themselves to better meet the continuous demands for forward deployments that have marked the Second Transoceanic Era. Key questions remain about the exact capabilities and capacities for future US global attack

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[595] Rumsfeld, *2006 QDR*, p. 58; Clarence A. Robinson, Jr., "Information Technology," in *The Year in Defense, 2006 Edition,* (Tampa. FL: Faircount Publications, 2006), p. 118.

[596] Robinson, Jr., "Information Technology," pp. 118-22.

[597] Robinson, Jr., "Information Technology," p. 116.

forces, strategic mobility and logistics forces, forcible entry forces, and the global C3I network, but all are guided by a common vision and intent.

There is much left to learn and debate about the details of the posture's individual components. However, as was argued earlier, it is important not to miss the forest for the trees. For now, it is sufficient to say that the vectors for all the component parts of the US global defense posture all point toward and reinforce the move toward a new Joint Expeditionary Posture that aims to provide the US military with great global freedom of action and an ability to support rapid expeditionary operations across transoceanic ranges. The key question that remains is: how does the new expeditionary posture being constructed for the Second Transoceanic Era stack up against the expected challenges of the 21st century?

The next two chapters offer some preliminary answers to this important question.

IX. Assessing the Emerging Global Military Posture

Up to the Challenges Ahead?

As outlined in the first chapter, this paper aims to answer three simple questions: What exactly makes up a global military posture and how do its components work together to help a great state project military power? How did the United States come to assume its current posture? Are the impending changes to the US global military posture appropriate for the expected 21st century national security environment and adequate in light of expected national security threats?

Having now answered the first two questions in some detail, this chapter concentrates on answering the third. Overall, while it concludes that while much has been accomplished over the past half decade—certainly far more than was achieved during the ten years immediately following the Cold War's end—still more remains do be done.

In the first decade following the fall of the Berlin Wall, the main thrust of the United States' efforts centered on moving toward a global military posture that was "smaller but similar" to the one adopted during the Cold War/Garrison Era. Toward this end, Washington worked at scaling back its external basing structure to reflect the reduced threat to the national security and its desire to realize a "peace dividend" by reducing the size of the military and its overseas presence. However, the changes being made to the US global defense posture lacked a unifying focus and lagged substantially behind events. For example, even though the geopolitical climate of Europe had been transformed, the Clinton Administration planned to retain as many troops in that theater as in Asia, which was rapidly emerging as the focal point of US security concerns.

Nevertheless, as the Second Transoceanic phase of national security policy evolved, the decade saw the beginning of a major shift from a forward-based garrison posture toward one much more in tune with America's historical preference for expeditionary postures. The Joint Expeditionary posture reflected several circumstances: the gradual reduction in the number of foreign exterior bases and a relocation of most US combat power to CONUS and US-controlled territory; in the wake of operations in Haiti, central and eastern Africa, the Balkans and the Persian Gulf, a growing awareness that it was becoming more difficult to gauge where the next security challenge would emerge; and a steadily increasingly awareness of the conditionality of non-sovereign external base access.

Efforts to field forces better organized, trained and equipped for expeditionary operations were reflected in the Navy's organization of new Carrier Strike and Expeditionary Strike Groups and the adoption of a new Fleet Response Plan; the Air Force's move to a new Air and Space Expeditionary Force construct; the Army's October 1999 announcement that it would transform its force structure to enhance its deployability; and the creation of a new Strategic Military Transportation System under TRANSCOM. At the same time that its forces were becoming more expeditionary in character, the entire American military was being influenced by an ongoing military revolution stimulated by the maturation of guided weapons warfare and

dramatic advances in information technologies. The decade saw guided munitions spur an order-of-magnitude increase in the effectiveness of strike operations. At the same time, because of the global span of US expeditionary operations, the Pentagon relied increasingly on space-based systems for command and control, and communications, as well as for intelligence, surveillance and reconnaissance missions. These changes, and others like them, had major implications for US basing and logistics requirements. For example, long-range guided weapon strikes substantially reduced the requirements for strike aircraft—especially those with short ranges that rely on fixed forward bases.

Nevertheless, it was not until the Bush Administration entered office in 2001 that a fundamental review of the nation's global posture was initiated. If this effort needed any encouragement, it came in the 9/11 attacks on New York and Washington. These attacks injected an added sense of urgency and direction in the post-Cold War transition to a new national security policy era. Having covered the changes these terrible attacks hastened, however, it is now necessary to step back and ask some pointed questions: How well is the evolving Joint Expeditionary Posture adapting to meet the demands of the new Second Transoceanic Era? Said another way, since the US global defense posture is developed in response to, and to address, the most pressing national security problems, what national security challenges seem most likely to emerge over the next several decades? How do the Bush Administration's efforts to transform the global posture measure up to these challenges to US security?

THE LONG WAR AGAINST RADICAL ISLAMIST EXTREMISTS

The immediate and most obvious challenge to US security is posed by the Long War against radical Islamist extremists. Sometimes referred to as Islamofascists,[598] these radical Islamists are leading a transnational, theologically-based insurgent movement seeking to overthrow regimes in the Islamic world that are friendly toward the United States, and to evict US presence from parts

[598] Islamofascism refers to certain radical Islamist movements and their similarities with European fascist movements of the early 20th century, and National Socialism, or Nazism, in particular. Radical Islamist organizations that have been labeled Islamofascist include Al-Qaeda, the Taliban, the Muslim Brotherhood, Hamas, and Hezbollah, as well as the current Iranian government. None label themselves fascist, however, and critics of the term argue that associating Islam with fascism is both offensive and historically inaccurate. But Islamofascists do not represent Islam any more than the Nazis represented the true ideas of socialism. Moreover, the characteristics of these groups with the fascism exemplified by Nazi Germany are striking. They include a desire to reestablish a former empire—and ultimately achieve world domination; the use of "fifth columns" in foreign countries targeted for attack; the categorization of some people as subhuman (i.e., "master race" vice "untermensch;" "true Muslims" vice "apostates" and "infidels"); a hatred of the Jews; a sense of betrayal by their own kind (i.e., the "stab in the back" argument and the Weimar Republic leadership, and the hatred Islamofascists feel toward pro-Western Muslim leaders); disregard of international law; and the willingness to kill many of their own people to advance their aims. Finally, Islamofascists also represent a minority among their own people, much the same as Germany's National Socialists. The term has recently come into more popular use as US government leaders have adopted the term. For example, see President Bush's recent statement, "There's no question that if we were to prematurely withdraw and the march to democracy were to fail, the al Qaeda would be emboldened; terrorist groups would be emboldened; the Islamofascists would be emboldened." President George W. Bush, Press Conference, March, 21, 2006, cited at http://www.whitehouse.gov/news/releases/2006/03/ 20060321-4.html.

of the world considered vital to America's interests.[599] Radical Islamist groups are experts in irregular warfare, as evidenced by their effective employment of terrorism, subversion, and guerrilla warfare in Afghanistan and Iraq. Irregular warfare is the only form of warfare available to them at the moment, following models of earlier insurgent movements which sought to gain strength for later, more ambitious forms of military action. However, the groups are becoming more sophisticated and dangerous, as evidenced by Hezbollah's effective use of guided weapons in their recent confrontation with the Israeli Army in southern Lebanon.

Aside from their transnational character and theological roots, some radical Islamist groups seek to employ advanced technology—in the form of telecommunications for coordination, guided weapons and sophisticated improvised explosive devices for ambushes, and potentially even weapons of mass destruction—to cause maximum destruction. The radical Islamist's globe-spanning network (al Qaeda is reported to be operating in over 60 countries),[600] their lack of respect for internationally accepted laws of war and the lives of innocents, combined with their apparent willingness to employ weapons of mass destruction and disruption, should they acquire them, makes their form of insurgency especially threatening.

The roots of this insurgency run deep. Whether the group engaged is al Qaeda, the Mahdi Army, Hezbollah or the Taliban, the forces opposing them award these groups high marks for their persistence and their skill. No one should be under the illusion that this war will be won quickly, or that the price of victory will be cheap. As with most insurgencies, victory rests less in military action than in the successful treatment of political, economic and social ills, and in winning the "war of ideas" against those advancing a perverse and dangerous distortion of the Islamic faith. Nevertheless, military forces are essential to providing the security needed for these things to take place. As success will likely take years and perhaps decades to achieve, the United States must be prepared to sustain the war effort indefinitely until victory is achieved.

Posture Implications for the Long War Against Radical Islamist Extremists

What does this mean for the US military's global posture? Several factors come to mind:

- The threat from radical Islamists is global, yet its ranks are thus far relatively thin. Al Qaeda, for example is not a mass movement. A highly distributed but highly networked enemy argues for a distributed network of bases on a global level. As the radical Islamists do not yet possess large forces,[601] the US military footprint in threatened areas can be kept relatively small. Thus a basing structure optimized to deal with radical Islamist

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[599] For an excellent overview of the character of radical Islamism, see Mary Habeck, *Knowing the Enemy* (New Haven, CT: Yale University Press, 2006). See also Bernard Lewis, *What Went Wrong?* (New York: Perennial Books, 2002); and Bernard Lewis, *The Crisis of Islam* (New York: Random House, 2003).

[600] James Phillips, "The Evolving Al-Qaeda Threat," Heritage Lecture #928, March 17, 2006, accessed online at http://www.heritage.org/research/nationalsecurity/hl928.cfm.

[601] To be sure, Iran has a sizeable military, but to date it has not been overtly engaged in the fighting in large numbers.

elements should be weighted toward a global network of "micro bases" capable of supporting relatively small, highly distributed forces on a large number of relatively austere, geographically distributed exterior bases, to include mobile sea bases. Thus, the current de-emphasis on main operating bases and the pursuit of large numbers of smaller, less intrusive, "warm" and "cold" FOSs and CSLs appears to be perfectly in line with a global counterinsurgency strategy against these extremist groups.

- The war with radical Islamists is very much an intelligence war. The United States and its allies have overwhelming military power relative to the enemy. What they lack is intelligence on who the enemy is, and where he is. Sustaining a persistent intelligence effort also argues for a basing structure dominated by small FOSs and CSLs, especially in areas where local governance is weak or effectively non-existent.[602] These remote, isolated locations (on the land or on the sea) would support the introduction of small detachments (e.g., special operations forces) or systems (e.g., UAVs) designed to gather intelligence. The need for such bases is far less in areas where effective governance exists (e.g., Western Europe). Here the radical Islamist challenge can be addressed through the use of indigenous national intelligence capabilities.

- In or adjacent to ungoverned areas, forward-based and forward-deployed forces also will be needed to exploit intelligence findings. As "actionable" intelligence (e.g., the location of a radical Islamist leader; the covert movement of a weapon of mass destruction; the location of a cache of explosives; a sighting of hostages being held by the enemy) may be highly perishable, US forces must be positioned to act quickly. This means fielding highly mobile forces in close proximity to the threatened area to minimize the distance between their base and their target. Again, as these forces are not likely to be large, a basing network dominated by FOSs and CSLs supported by forward-deployed maritime forces and global attack forces should suffice.

- That said, as radical Islamist forces have recently emerged to wage guerrilla warfare on a sizeable scale in Afghanistan, Iraq and Lebanon, the possibility exists that substantial numbers of US forces will be required to support local efforts to defeat them. Indeed, the situation could change dramatically if the insurgencies continue to grow in strength, and if the United States proves unsuccessful either in building up indigenous forces to address the threat, or in forming a coalition of like-minded states that can minimize direct US involvement. In that case, major US troop deployments may be required, along with a more robust basing structure, to include larger FOSs and MOBs. However, the 2006 QDR is painfully thin in its discussion of how the United States might minimize its own direct role in counterinsurgency operations against guerrilla forces. To be sure, the QDR advocates an "indirect strategy" and building "partner capacity" as a means of reducing US force requirements; however, it does not explain how this is to be achieved.[603]

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[602] Significant parts of Africa, especially sub-Saharan Africa, fall into this category, as do some states in the Middle East (e.g., Lebanon, Iraq, Yemen and South Central Asia (e.g., Pakistan), and parts of Latin America.

[603] The QDR provides no mechanism for training large numbers of indigenous forces in stability operations or counterinsurgency warfare. This has become painfully evident in Afghanistan and Iraq, where the lack of qualified

Consequently, it is unclear whether either the current or projected US global posture will prove adequate in supporting military operations in this aspect of the conflict.

- The QDR also speaks of posturing the US military to "defend the homeland in depth," with an emphasis on defense against extremist attacks (e.g., of the kind conducted against the United States on 9/11; the British on "7/7," the Spanish on "3/11"; as well as WMD attacks employed through covert delivery means).[604] Unfortunately, there is no elaboration on how this is to be accomplished or what this means for the global posture.[605] For example, recall that just prior to World War II, the United States established a robust Atlantic basing structure to push its Atlantic perimeter farther and farther east. The discussion as presented in the QDR is limited to the conduct of offensive global reconnaissance and strike operations against radical Islamist elements—a kind of "global whack-a-mole."[606] But this provides few clues as to how the US military (and associated domestic security elements) will defend the continental United States in depth, or its implications for the global posture.

- As long as US force requirements needed to fight the radical Islamist extremists remain relatively small, the stress on strategic mobility assets should also be comparatively light. However, since Vietnam, the US Strategic Reinforcement System and the immediate post-Cold War Strategic Military Transportation System was not optimized to keep large numbers of distributed, austere "micro-bases" supplied, especially on a global scale. As a result, the global defense posture's strategic mobility and logistics infrastructure will likely need to be modified to sustain a globally-dispersed counterinsurgency force. For example, new delivery means such as the aforementioned JCA transport aircraft and GPS-guided aerial delivery will be required to get small packets of supplies the "last mile" to small forces operating from forward FOSs and CSLs. Similarly, the global C3I network will need to be extended all the way to these austere locations, in order to deliver the actionable intelligence needed to prosecute fleeting targets.

Despite the lack of definition in the overall indirect strategy for the Long War or fully developed plans for the defense in depth of the homeland, the emerging posture for the ongoing war against radical Islamist extremists appears to on the right track. This is unsurprising; every war has spawned its own unique campaign basing structure, and this one is no different. However, the

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advisers in Afghan National Army and Iraqi Security Force units is hampering US efforts to reduce its military footprint. See Andrew F. Krepinevich, "Send in the Advisors," *New York Times*, July 11, 2006.

[604] 2006 *QDR*, pp. 26-27.

[605] An example of a "layered" defense or "defense in depth" is the ongoing US effort to defend against ballistic missile attacks. This effort seeks to intercept enemy ballistic missiles in their boost phase (before they leave the atmosphere), mid-course phase (while they are in space), and terminal phase (after the warheads re-enter the atmosphere). The QDR offers no similar example or concept of a "defense in depth" of the US homeland against nontraditional WMD attacks (or other attacks, such as those conducted on 9/11) by radical Islamist extremists.

[606] The term "whack-a-mole" has gained currency as a consequence of the ongoing war in Iraq. It refers to a children's game where players find themselves competing at frantically bopping rambunctious rodents as they briefly pop their little heads out of their holes. Here the US military is seen as the "players" while insurgents or terrorists are the "moles" that must be "whacked." Cited at http://www.answers.com/topic/whac-a-mole.

global counterinsurgency against radical Islamists is not the only major concern of the US military. Another is the growing prospect of a proliferated world—a world in which weapons of mass destruction, particularly nuclear weapons, have spread to a wider number of nations. As the 2006 QDR notes, "During the Cold War, the main challenge facing the United States was deterring the former Soviet Union from using weapons of mass destruction (WMD) against the United States and its allies. Today, the United States faces a greater danger from an expanding number of hostile regimes and terrorist groups that seek to acquire and use WMD. These actors may not respond to traditional tools and concepts of deterrence."[607] How must the US global defense posture change to accommodate this emerging national security challenge?

NUCLEAR ROGUE STATES AND UNSTABLE REGIMES

Throughout the Cold War/Garrison Era, the number of nuclear-armed powers could be counted on little more than one hand. All five permanent member of the UN Security Council had nuclear arsenals; the only other nation suspected of having a nuclear capability was Israel. Since 1998, however, India and Pakistan have tested nuclear weapons and created their own nuclear strike forces. As evidenced by recent events, North Korea now apparently has nuclear weapons and is producing the fissile material necessary to fabricate more of these devices.[608] Iran, no doubt aware of the very different treatment accorded North Korea by the United States relative to a non-nuclear Iraq, is pressing forward vigorously with its nuclear weapons program. Should Iran go nuclear, it may trigger yet another round of proliferation involving Egypt, Saudi Arabia and Turkey.

It is therefore quite conceivable that, before the decade is out, a solid front of nuclear-armed states will stretch from the Persian Gulf to the Sea of Japan, running through Iran, Pakistan, India, China and North Korea, with Russia looming from above—a five-thousand mile atomic "arc of instability" in a part of the world which has become increasingly important to the United States' security and economic well-being.

A Potential for Nuclear Weapons Use

The prospect for such a proliferated world raises the likelihood that nuclear weapons will be used at some point in the Second Transoceanic Era to perhaps a higher level than at any time since the 1962 Cuban Missile Crisis. There are several reasons for this. First, it is not clear that new nuclear-armed regimes will view nuclear weapons in the same way that the United States' political leadership has come to view them over the years; i.e., as weapons of last resort, to be used only under the most extreme circumstances. In particular, it is far less certain that the current regimes in Iran and North Korea, whose political and social cultures are quite distinct from that of the United States, view nuclear weapons in this way. The same may be true for other nuclear armed countries such as Pakistan or Israel

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[607] 2006 *QDR*, p. 32.

[608] Robert Norris and Hans M Kristensen, "North Korea's Nuclear Program, 2005," *Bulletin of the Atomic Scientists*, May/June 2005, pp. 64-67.

Second, it is uncertain whether regimes possessing nuclear weapons will take the kinds of precautions that the mature nuclear powers put into place to secure them against unauthorized use. Indeed, owing to the relative instability of states like Iran, North Korea, and Pakistan when compared to the mature nuclear powers, it is possible that these weapons could fall into the hands of non-state entities, either as a consequence of corruption (e.g., the unauthorized sale of a nuclear weapon to a non-state entity), state failure (e.g., possession by a faction in a civil war; seizure by radical Islamists factions within the government), or even state policy. With respect to the latter observation, it is conceivable that a state like North Korea, a known proliferator of ballistic missile technology, or Pakistan, which was running a nuclear weapons production materials bazaar, would consciously provide, for a price, nuclear weapons or fissile materials to other states, or even non-state entities. Should even one nuclear weapon fall into the hands of a hostile non-state entity (e.g., narco-traffickers; radical Islamist extremists) the danger to US security interests would be extreme.

Third, even setting aside the sobering problem of nuclear-armed, religiously-inflamed radical extremists, who seem clearly incapable of being deterred, traditional US views on escalatory dominance and thoughts about deterrence may no longer be appropriate or valid in the Second Transoceanic Era. As one commentator wrote:

> …it is entirely unlikely that Pyongyang's or Tehran's calculations, let alone al Qaeda's, hinge on whether the United States has 6,000, 3,500, or 2,200 deployed strategic weapons (the numbers permitted under the last three rounds of US-Russian nuclear arms agreements), retains tactical nuclear weapons deployed in Europe, forswears nuclear retaliation for chemical or biological weapons use, or develops new types of nuclear weapons.[609]

To put it bluntly, then, the United States is now on the verge of what might be characterized as a "Second Nuclear Regime," with the First Regime, which began in 1945 with the attacks on Hiroshima and Nagasaki, having passed into history. That earlier regime was defined by two principal elements. First, a few, "mature" great powers possessing nuclear weapons, with all but China having a common European cultural orientation.[610] Second, during that period, which lasted until the early 1990s, there developed a strong tradition of non-use of these weapons. Now the first principal characteristic of the old regime no longer holds, and the second is open to serious question.

Should such a proliferated world come to pass, the national security implications would be profound. To begin with, all things being equal, the United States' willingness to project power against nuclear-armed adversaries, especially those with unknown views on first use and deterrence, would likely be much more constrained than against those who do not possess them. At a minimum, Washington may be compelled to alter its war aims when confronted by rogue states armed with nuclear weapons. For example, given the prospect of confronting such a

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[609] Ashton B. Carter, "How to Counter WMD," *Foreign Affairs,* September/October 2004, p. 81.

[610] Israel and South Africa both developed small nuclear arsenals during this period; however, in both cases these arsenals were covert. Perhaps even more important, both countries were generally friendly toward the United States. India tested a nuclear device in 1974, but apparently did not develop a nuclear arsenal until the late 1990s. Again, unlike the regimes in Pyongyang and Tehran, New Delhi was not overtly hostile toward the United States.

regime, the United States might abandon the option of regime change, or even forgo attack on an aggressor's territory altogether, opting instead to try to wage a long-range aerospace bombardment, or to institute a blockade, or to exert other less direct forms of strategic pressure. Should a regional power possess nuclear weapons, it would also be far more difficult for the United States to deal effectively with ambiguous forms of aggression, such as Iran's support for the insurgency in Iraq, or potential North Korean trafficking in fissile materials.

Then there is the entire debate over how the United States should respond after the first use of nuclear weapons. Some argue that the only appropriate response would be a massive nuclear retaliatory attack, to dissuade any power thinking about pursuing nuclear weapons, and deterring any that already have them from resorting to their use. Here it must be remembered that during the Cold War the US military had plans to attack its nuclear superpower rival, the Soviet Union, with nuclear and non-nuclear weapons. It is possible to envision plausible scenarios when a nuclear-armed adversary would be subjected to the full range of US military capabilities. For instance, were North Korea to employ nuclear weapons, or execute attacks that resulted in mass casualties, the United States might consider regime change operations to be necessary, and likely unavoidable. In that case, one would expect North Korea to be subjected to a ferocious bombardment, to include the possible US use of nuclear weapons. However, others think that the United States should avoid making an atomic strike of any kind on any country under any circumstances, arguing that the costs to the US for crossing the nuclear threshold, especially with respect to its attempts to slow the proliferation of nuclear weapons, would be too high.[611]

In sum, the potential nuclearization of Asia thus poses challenges to deterrence and questions about first use and limited nuclear responses that are relatively new for US strategists. The acquisition of nuclear weapons by hostile or unstable Third World regimes would disrupt the favorable military balance now enjoyed by the United States in key areas of the world, by forcing the US to completely rethink and change the way it plans to project power into areas of vital interest in the Third World, and to position its forces.

> Actually, however, a post-proliferation future is likely to be far more complex than either the pessimists or the optimists believe. In a multi-polar nuclear world, international politics will continue but in an environment dominated by fear and uncertainty, with new dangers and new possibilities for miscommunication adding to and complicating familiar ones. *As a result, many of the military plans, defense policies, and national security doctrines that officials in the United States and other countries now take for granted are likely to become obsolete and will need to be revised significantly* (emphasis added). [612]

Posture Implications of the Rise of Nuclear-Armed Rogue States

One of the first questions that US strategists would be forced to consider in a proliferated world is: What might the rise of nuclear-armed Third World states in Asia mean for the evolving Joint Expeditionary Posture?

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[611] See for example Ashton B. Carter, "How to Counter WMD," *Foreign Affairs,* September/October 2004, pp. 80-83.

[612] Stephen Rosen, "After Proliferation: What to Do if More States Go Nuclear?" *Foreign Affairs*, September/October 2006, p. 9.

- Armed with even a small nuclear arsenal measuring in the few dozens of weapons mated to ballistic missile delivery systems, countries like North Korea and Iran would likely be able to coerce or dissuade many US allies within missile range from granting US forces any form of operational access in the event of any armed confrontation with the United States. Few governments are likely to grant US access and risk the nuclear destruction of their capitals or population centers unless their countries are under the threat of invasion or if they already been threatened by nuclear attack for other reasons besides the presence of US troops. In any event, the risk of nuclear attack would likely make it prohibitively costly or risky for the United States to maintain large MOBs within the range of these countries' missile forces, unless missile defenses become far more effective than they have proved to date.

- In the final analysis, then, the US base structure being assembled in Asia to fight the Long War against radical Islamist extremists—with its de-emphasis on large main operating bases and it emphasis on small FOSs and CSLs—appears to be well aligned with the potential appearance of a nuclear Asian arc of instability, at least between crises.

- In the event that the United States is forced to confront a nuclear-armed regional power, it would first look to its global attack forces as well as other Joint forces capable of projecting combat power and operational effects from long range, outside an adversary's nuclear strike envelope. To achieve any sort of favorable strategic outcome, however, it seems unlikely that the US would be able to operate only from long range; it would likely have to risk putting at least some forces inside the enemy's nuclear range ring. If true, it is difficult to imagine most nuclear-armed regional powers having an ability to seriously threaten US maritime forces unless they are operating close to their own coasts. Put another way, if forced to confront rogue nuclear states, US maritime forces operating from their mobile bases may become more attractive over time in the Second Transoceanic Era. One potential exception might be US maritime forces operating in the highly restrictive waters of the Persian Gulf. As the US military's Millennium Challenge 2002 field/fleet exercise demonstrated, US naval forces can be highly vulnerable in the Gulf, even when confronting an enemy who does not resort to nuclear weapons use, and possesses only modest anti-access/area-denial (A2/AD) capabilities.[613] Nevertheless, early in any campaign against a nuclear-armed adversary (i.e., prior to the defeat of the enemy's A2/AD capabilities and neutralization of his nuclear-strike forces), US global attack forces and maritime forces will be especially useful.

- Ultimately, US strategists must account for a contingency against a regional nuclear power in which its objective is regime change. It is one thing to erode an enemy's A2/AD capabilities and suppress his modest nuclear strike element with long range strikes and special operations and quite another to project enough combat power into overthrow a government with access to nuclear strike systems. What type of new operational concepts

[613] See, "The Immutable Nature of War," *Battle Plan Under Fire*, a PBS documentary, available at http://www.pbs.org/wgbh/nova/wartech/nature.html.

would allow the United States to consider such a risky course of action? What kind of basing and mobility posture would enable these concepts?

- The first requirement would be for forces specially designed for widely dispersed operations under an enduring nuclear threat. These forces would necessarily need to be injected inside the enemy's nuclear strike envelope without having to conduct lengthy RSOI procedures, as the risks for concentrating for any length of time would be too great. This provides further impetus for transforming the current Strategic Military Transportation System into a new adopting a 21st century GEMMS. A necessary adjunct to the GEMMS would be a far greater ability for rapid base construction forces, designed to develop hardened CSLs rapidly within the target country, and perhaps FOSs as well, particularly if they cannot be seized from the enemy or established in neighboring countries. At the same time, the strategic logistics infrastructure would need to be able to sustain large numbers of widely dispersed combat forces, just as is required for the Long War against radical Islamists. However, the infrastructure's throughput capacities would need to be much greater, as the size of the operating units would be much larger. It also goes without saying that both the GEMMS and the logistics infrastructure would need to account for the added burden of transporting and supporting consequence management units should nuclear weapons be exploded. Finally, the global C3I network would need to be hardened to sustain the flow of information to engaged units even after nuclear attack.

If the primary near term security challenge is the Long War against radical Islamists, and the most likely mid-term national security challenge is operating in a proliferated world of nuclear-armed rogue or unstable regimes, what additional national security challenges might evolve over the longer term? The 2006 QDR identifies the challenge posed by the rise of China to great power status as one such candidate.[614] How does the emerging US global military posture stack up against this potential threat to US national security?

THE RISE OF CHINA AND THE BALANCE OF POWER: RIVAL OR PARTNER?

The Bush Administration's concerns over China's rise to great power status significantly outpace those of the Clinton Administration, which viewed Beijing more as a partner than a rival. The 2006 QDR describes China as one of several major powers at a "strategic crossroads"—a euphemism for "potential threat." While Beijing's *intentions* remain unclear, there is little doubt that the United States confronts a *potentially* large-scale challenge to its security based on China's ongoing build-up of its military *capabilities*. There is also little debate concerning China's rise to great regional power status and, perhaps, over the next several decades, potentially to the rank of major global power.

Ironically, in the near-and mid-term future (that is to say, over the next decade or two), China and the United States are more likely to find themselves engaged in a conflict stemming from Beijing's weakness and insecurity, as much as from its rising power. China is beset by questions

[614] 2006 *QDR*, pp. 27-39.

of political legitimacy; growing ecological problems; an economy that, while enjoying a remarkable rate of expansion, may be entering a period characterized by slower growth; an aging population with no social "safety net" to protect it; a significant demographic imbalance favoring males that could induce societal instabilities; problems with internal discontent; and a rapidly growing need for increasingly costly foreign energy supplies. These factors, combined with Beijing's outstanding territorial issues in the form of Taiwan, the Spratly and Paracel Islands, Tibet, and perhaps portions of the Russian Far East, could yield high levels of friction and even conflict between China and the United States. An important goal of the US military's global posture is to support efforts that encourage China to achieve its security objectives within established international norms of behavior; i.e., that Beijing is not tempted to employ coercion or aggression.

Fortunately, unlike the war with radical Islamist extremists or the ongoing move of regional powers toward nuclear weapons, a hostile Sino-American rivalry, while a serious concern, is not a reality. Consequently, the US global military posture with respect to China is focused more on establishing a military balance that dissuades or deters China from developing or employing its military forces in ways that threaten American interests. As Beijing's intentions cannot be easily divined, and could change literally overnight in any event, this ineluctably leads to the question: Where is the Chinese military headed? What kind of capabilities are being developed and fielded? How might these capabilities be employed? How will the US global military posture need to adapt to China's growing military capabilities—or to shape them?

China's Military Transformation: The Assassin's Mace

The People's Liberation Army (PLA) is transforming itself to meet the demands of China's new position in the world, and the advent of what it sees as "local war under modern high-technology conditions." This process benefits from the increased resources China's rapid economic growth has made available for military purposes, its access to advanced military technologies on the international market (and through espionage), and from the relative internal stability the regime currently enjoys as a consequence of the country's prosperity.

A key element of PLA military transformation, derived from the Chinese desire to deter a US intervention in a crisis over Taiwan, are anti-access/area-denial capabilities, especially those that can challenge US access to the "global commons"; (i.e., space, the sea, the undersea, and the infosphere).[615] In particular, attention is directed on PLA fielding "Assassin's Mace" forces, which comprise advanced air defenses, information warfare, ballistic and cruise missiles (to include anti-ship cruise missiles), advanced fighter aircraft, attack submarines, and counter-space

[615] Generally speaking, anti-access forces are designed to deny US forces access to forward bases. Area-denial capabilities are generally directed on denying US forces freedom of action in the littoral. In a larger sense, anti-access strategies seek to prevent US forces from entering a theater of operations, while area-denial strategies look to deny US forces freedom of action in a particular area within the theater of operations.

capabilities. The use of limited nuclear strikes (perhaps to generate an electromagnetic pulse, or EMP) is also discussed as a means of achieving information advantage. [616]

Assassin's Mace forces are designed to enable the "inferior" to defeat the "superior," i.e., to enable China to defeat the powerful US armed forces. However, only a fraction of modern weaponry is seen by the Chinese as supporting their Assassin's Mace concept.[617] The concept appears to be centered on information warfare, or achieving an information advantage over the enemy, and around extended-range guided weapon strikes and undersea warfare. The PLA's transformation represents a "great leap forward" in that it deviates sharply from its long-standing strategic culture, which had long been centered on Mao Zedong's concept of people's war. If the PLA succeeds in transforming itself around Assassin's Mace capabilities, China will be able to pose a formidable challenge to both its neighbors and to US interests in the region.

Interestingly, the Chinese appear to be taking steps to deflect US intelligence from identifying its development of Assassin's Mace and related capabilities. A report by the Director of National Intelligence concludes that US intelligence has been slow to detect Chinese military developments of a new long-range missile; a new attack submarine; guided munitions; and advanced surface-to-air missiles.[618] The purpose of such obfuscation is unclear, but it does conform to traditional Chinese strategy, with its emphasis on surprise, as well as evolving concepts surrounding Assassin's Mace capabilities.

A Chinese Challenge to the Global Commons?

China has embarked on a significant program to expand the size and capabilities of its submarine fleet. Submarines can play an important role in area-denial operations in the East Asian region, combining with other Assassin's Mace elements (e.g., over-the-horizon (OTH) radars; ballistic missiles; anti-ship cruise missiles; etc.) to force US surface naval forces further out from the littoral, and threaten forward-based US forces (particularly those at unhardened main operating bases in Japan and on Guam). A capable submarine fleet would also enhance the prospects for

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[616] For a discussion of Assassin's Mace capabilities, see Jason E. Bruzdzinski, "Demystifying *Shashoujian*: China's "Assassin's Mace" Concept," in *Civil–Military Change in China: Elites, Institutes, and Ideas After the 16th Party Congress*, Larry Wortzel and Andrew Scobell, eds. (Carlisle, PA: U.S. Army War College, 2004), pp. 309–364; and "The Assassin's Mace," *The New Atlantis*, Number 6, Summer 2004, pp. 107-110. The Defense Department also describes China's military buildup in its annual report on the state of Beijing's military capabilities. See Office of the Secretary of Defense, *Annual Report to Congress: The Military Power of the People's Republic of China 2006*, pp. 1-41. Found online at http://www.defenselink.mil/pubs/pdfs/China%20Report%202006.pdf.

[617] It is worth noting that militaries have succeeded in effecting a dramatic shift in the military balance by transforming a relatively small portion of their force. Examples of this can be found in Germany's mechanized ("*blitzkrieg*") forces in World War II, the US Navy's carrier forces in that war's Pacific theater, and the Imperial German Navy's submarine force in World War I. Each of these force elements comprised but a small fraction of their military forces in terms of size and material investment.

[618] See, John D. Negroponte, "Annual Threat Assessment of the Director of National Intelligence for the Senate Armed Services Committee," Testimony before the Senate Armed Services Committee, February 28, 2006.

Chinese control of the Taiwan Strait in support of an "Operation Sea Lion"-style invasion of Taiwan, and threaten the maritime approaches to Japan and South Korea.[619]

Alternatively, a Chinese sea-denial capability centered around its submarine forces could, along with extended-range ISR and targeting capabilities (e.g., employing space-based systems, UAVs, and covert operatives) and various long-range strike means (e.g., ballistic and cruise missiles; advanced underwater mines; imbedded PLA special operations forces) be important elements of Chinese blockade operations against Taiwan, South Korea, or even Japan. If the PLA succeeds in fielding such capabilities in substantial numbers, it could lead to China's "Finlandization" of East Asia.[620]

By giving priority to its submarine fleet as it has, China could also acquire a serious sea-denial capability over the next several decades, enabling it to pose a threat to regional shipping. This capability could have substantial extra-regional effects within the framework of the global economy. For example, Chinese sea-denial forces could destroy or disrupt critical undersea economic infrastructure, such as that associated with offshore energy production and the global fiber optic grid, or interdict cargo that is central to the global economy's "just-in-time" supply network.

China's development of capabilities to challenge access to the global commons extends beyond the infosphere, the seas and the undersea. Over the past fifteen years, the United States has come to rely increasingly on access to capabilities in space for critical information, to include surveillance, reconnaissance, intelligence, targeting and positioning. While other states may not aspire to deploy the kind of space architecture the United States enjoys, China, apparently intends to develop effective space-denial capabilities. In particular, China is reported to be developing a range of ASAT capabilities, to include ground-based laser ASATs and satellite jamming systems.[621]

China also is looking to employ space-based capabilities to enhance its own military capabilities, to include ISR and targeting. For example, Beijing's involvement in the European-led Galileo global positioning system could provide China with extended-range precision-targeting that could prove invaluable should China move against US allies and partners (e.g., Taiwan) in the

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[619] Operation Sea Lion was the German plan for invading England during World War II. It called for a rapid movement across the English Channel to negate Great Britain's advantage in naval forces. The invasion would be enabled by the German Air Force (*Luftwaffe*), whose mission was to establish air superiority over the channel, thus blocking British naval operations to disrupt the seaborne assault.

[620] Finlandization *(Finnlandisierung* in German) refers to the influence that one neighboring powerful country can have on the policies of a smaller nearby country. Specifically, it involves the process by which a regional hegemon coerces a weaker country to the point where the latter, while maintaining its national sovereignty, resolves not to pursue an independent foreign policy distinct from a more powerful neighbor. During the Cold War the term was used in reference to Finland's policies vis-à-vis the Soviet Union.

[621] See, Hui Zhang, "Capabilities of Potential Adversaries: China's ASAT capabilities As a potential response to US missile defense and "space control" plans," *Ensuring America's Space Security*, available at http://www.fas.org/main/content.jsp?formAction=297&contentId=311.

region, or against the United States itself.[622] Given its great reliance on space-based systems for the effective operation of terrestrial-based forces, the United States needs to develop defensive measures in the event China fields this capability.

China's Strategic Depth

Unlike the United States' immediate post-Cold War rivals, such as Iraq, Iran and North Korea, China possesses great strategic depth. China has long exploited this source of enduring advantage as, for example, during its war with Japan from 1937-45, and in developing its nuclear capability in the 1950s and 60s.[623] Several Assassin's Mace assets (e.g., ballistic missiles; ground-based ASATs; command and control centers; leadership facilities) can exploit China's strategic depth to advantage. Specifically, by positioning these assets deep in the country's interior, Beijing can either drive up the cost to hold them at risk, or create a quasi-sanctuary for them, or both. This presents the United States with a challenge reminiscent of that posed by the Soviet Union's great strategic depth during the two countries' Cold War rivalry.

A Pacific Basing Competition?

The challenges posed by a rapidly growing Chinese military emphasizing "local war under modern high-technology conditions" centered on Assassin's Mace capabilities and exploiting its great strategic depth has important implications for US security. Indeed, owing to its size, geographic location, and the scale of its military effort, China has the potential to pose a much greater military challenge to the United States than at any time since the Cold War, and one arguably more difficult than the threat posed by the Soviet Union. During First Transoceanic Era, the United States enjoyed good access in the expected primary theater of operations (i.e., Europe), and to the robust logistics and basing infrastructure located there. In sharp contrast, in any potential confrontation between China and the United States, China would enjoy a formidable asymmetrical basing advantage. It would be able to call on hundreds of sovereign interior main operating bases spread throughout the depth and breadth of its own territory, while the United States would be forced to operate from a smaller, more geographically dispersed, exterior basing structure.

The 2006 QDR gives little hint about how the US military intends to confront, much less overcome, this potential asymmetrical basing challenge. True, it does direct the US Air Force to develop new long-range strike systems (which will diminish, but not eliminate the demand for forward air bases), and the Navy to shift 60 percent of its carrier and submarine forces into the Pacific. Unfortunately, however, it provides no clues about how the supporting basing network might change as a result. Yet the outcome of any long-term Pacific "basing competition" with

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[622] See Seth Jones and F. Stephen Larrabee, "Let's Avoid Another Trans-Atlantic Feud," *International Herald Tribune*, January 13, 2006 at http://www.rand.org/commentary/011206IHT.html and Cui Ning, "Chinese Firms Join Galileo Project," *China Daily*, March 10, 2005 found online at http://www.chinadaily .com.com/English/doc/2005-03/10/content_423412.htm.

[623] The Chinese positioned much of their nuclear development assets and missile forces deep in the country's interior, near the Soviet Union but away from US bases in East and Southeast Asia, so as to limit their vulnerability to US attack.

China will have an important impact on US efforts to deter and dissuade China from resorting to force or military coercion to achieve its national objectives.

- For example, China's rapidly growing ballistic missile forces, combined with its ever-expanding access to improved targeting capabilities, and the fact that most land bases can be pre-registered for missile strike, will likely find US external main operating bases located along China's periphery progressively more vulnerable to attack over time.[624] Thus, similar to the circumstances the United States faces along the Asian nuclear arc of instability, forward bases located in the Western Pacific will remain relevant and useful only on territory where the threat of Chinese attacks will not likely result in a denial of access by the host country. This means the components of the global posture aimed at deterring and dissuading reckless Chinese behavior should likely be increasingly located only on US sovereign territory, such as Guam, or on the soil of very close military allies, like Japan (which also covers much, if not most, of the base construction and operations expense for bases on its territory). Even then, the bases will likely be relevant only if hardened against conventional guided weapon attacks and covered by active defenses.[625] Viewed in this light, the Defense Department's decision to reduce the US military profile in South Korea—an increasingly wobbly ally whose territory is within range of North Korean missiles as well as those of China—has merit, as do its plans to strengthen its military alliance to Japan; to transfer missile defense units to exclusive and shared Japanese bases; to collaborate on missile defense technologies; and to relocate some Marine forces to Guam. However, much more could, and should, be done.

- The US Pacific basing network might be immediately enhanced in four ways. First, the United States could expand Guam into a defended forward base complex, by slowly hardening the facilities on Guam and then by expanding facilities to the nearby islands and atolls in the Northern Marianas Islands, particularly on Tinian. This would both disperse US forces now threatened by Chinese ballistic missile attack and diminish the density of potential guided weapons attacks on each individual basing site, improving the effectiveness of their defenses. Second, in line with the American "empire's" "leasehold basing posture," this Guam-centered basing cluster might be expanded using a CSL-heavy approach in the Federated States of Micronesia and other Pacific island groupings in the Western Pacific such as the Republic of the Marshall Islands and Palau. The expansion into both the Northern Marianas and these other Pacific island groupings would be supported and enabled by American economic and development assistance to

[624] The presumption here, of course, is that the missile/anti-missile competition will remain heavily weighted in toward the offense's favor.

[625] Japan, for example, has borne much of the cost of construction for the US air base at Kadena in Okinawa. It also covers much of the expense for base operations. If the Japanese government were willing to fund the hardening of the base to mitigate the effects of non-nuclear precision strikes, this MOB could remain a key element in the US global basing posture. Hardened bases would not, however, withstand a nuclear attack. The United States has weighed the possibility of developing very low yield earth-penetrating nuclear warheads to strike deeply buried targets. Over time, China might develop such weapons. Should this occur, the United States may find it risky to concentrate forces even at hardened MOBs.

these island nations.[626] Such an expanded forward basing network might also serve as a great "littoral training center." By using small high-speed vessels (HSVs), US forces would have access to many of the austere pier sites constructed throughout the South Pacific during World War II. Moreover, the coral airfields the "Seabees" built during that conflict are still capable of supporting VSTOL (Marine) aircraft and perhaps other types of aircraft as well. Third, the United States could build up both its Pacific intermediate basing structure by improving the existing but long-neglected facilities located at Johnston, Midway, Wake, and Kwajalein Islands. Finally, the US could continue to work for additional access points in the territory of its Pacific allies and friends, such as Australia, the Philippines, and Singapore. The general objectives of all four of these moves, which would create a growing number of dispersed FOSs and CSLs, would be to complicate the Chinese targeting challenge, and to impose costs on PLA plans.[627]

- The expansion of the number and capabilities of forward and intermediate Pacific bases would also be augmented by improvements to the two main US Pacific basing hubs on Hawaii and in Alaska. All bases at these hubs could be expanded, hardened, and provided with active defenses. Additionally, any move toward a widely dispersed Pacific basing structure would place increased demands on the US strategic mobility and logistics forces, particularly the Air Force's strategic and tactical airlift and aerial refueling forces and the Navy's combat logistics forces. Sustaining combat operations from bases dispersed throughout the Pacific from Japan all the way to the US West Coast, and from Alaska to Australia, will place great demands on the US mobility and logistics support forces.

Of course, the US Pacific basing network should not be designed purely with an eye toward *reacting* to Chinese military initiatives. The United States must do what it can *to shape* any Pacific basing competition in ways conducive to preserving a favorable military balance in this region of vital interest.

- As one example, given the PLA's growing potential to target fixed forward bases, the natural inclination for US planners will be to concentrate forces at bases which are more difficult to target, such as mobile (e.g., naval strike forces), peripheral (e.g., Hawaii) or remote (e.g., space- or undersea-based capabilities, CONUS) bases. However, these moves, by themselves, will not likely be sufficient over time. There is evidence that the PLA, especially through its Assassin's Mace set of capabilities, is seeking to target

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[626] The authors are indebted to LTG (Ret.) Wallace C. Gregson, USMC, for these insights.

[627] The cost-imposing strategy is centered on the assumption that China will want to hold all prospective US bases in the region at risk of destruction. The greater the number of bases to which the US can plausibly employ, the greater the burden on Chinese strike forces to attack all of them. If the United States can obtain access to many Forward Operating Sites and Cooperative Security Locations at little cost to itself (i.e., through the willingness of allies, partners and friends to make their existing bases available to US forces on a periodic or even episodic basis), then China's targeting problem might be complicated substantially at little cost to the United States. Of course, base hardening is another way to drive up Chinese strike requirements. However, the costs associated with base hardening are quite substantial, and it is likely that if costs are imposed on anyone here, it will be the United States and its allies.

effectively warships operating within a few hundred miles of its shores.[628] If successful, the US fleet may find itself pushed ever further from the Chinese littoral. Should this come to pass, the United States would likely find it more difficult to deploy surface maritime forces than it has for the past half century. As for relying on peripheral and remote bases, all US bases located in the Pacific basin will likely fall under the threat of guided missile salvos at some point in the next several decades, and US space assets are most likely already under threat of immediate attack. Consequently, the US must develop operational concepts for remaining inside the extended Chinese A2/AD network, and continuing to operate effectively while doing so. Failing to plan for such operations would work to embolden the Chinese and undermine American efforts to reassure its allies in Asia that it will not abandon them to live under a Chinese regional hegemon.

- Accordingly, the US should place great emphasis in its operational concepts and capabilities to operate under threat of guided weapons attack. A key aspect would be concepts and capabilities neutralize or degrade the PLA's targeting capabilities. While fixed forward bases would still be at risk of attack, blinding the Chinese C3I network would make it difficult to determine which FOSs and CSLs are being employed by US forces at any given time. Similarly, if China's maritime C3I network was greatly reduced, the PLA's ability to target maritime forces in the waters near China could become much more problematic. Concepts and capabilities to degrade Chinese C3I assets should be accompanied by capabilities that enable US forces to rapidly construct a forward FOS or CSL, to use it for a short period of time, and to then to abandon it. In addition to contributing to force survivability, it would create a network of temporary bases that US forces could subsequently use to move forces to and from like a shell game, further complicating Chinese targeting efforts. Finally, if US ballistic and cruise missile defenses were even modestly effective, they would enable American forces to operate forward at much reduced risk.[629]

- Other moves could be used to help shape Chinese choices. For example, to the extent that Beijing positions important elements of its Assassin's Mace A2/AD capabilities (e.g., ballistic missiles, command and control centers, ground-based anti-satellite lasers) in its interior to exploit its great strategic depth, the US must develop means to hold these capabilities at risk of destruction, both to deter Chinese aggressive behavior and to enable US forces to operate forward effectively if war should occur. The basing implications

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[628] Ronald O'Rourke, *China Naval Modernization: Implications for U.S. Navy Capabilities—Background and Issues for Congress* (Washington, DC: Congressional Research Service (CRS), November 18, 2005), p. 63.

[629] Rapid base construction complicates an enemy's targeting by presenting the prospect that new bases may be create, on fairly short notice. The enemy will likely be well aware of established MOBs, FOSs and CSLs. These can be targeted—although at some cost—even if the enemy should lose his capability for extended-range ISR. However, it seems likely that the cost would be prohibitive for an enemy to target every possible location that may be suitable for a rapidly constructed (albeit austere) forward base. The capability to create austere bases rapidly can thus be part of a cost-imposing strategy against adversaries with Assassin's Mace kinds of capabilities that pose A2/AD challenges to US power-projection forces. The US military has demonstrated a remarkable capability to develop bases rapidly, as can be seen by the Mulberry harbors employed following the allied invasion of France in June 1944, the work of Navy construction battalions ("Seabees") on Pacific islands during World War II, and the rapid establishment of US bases in South Vietnam in the mid 1960s.

here are significant. For example, US FOS and CSL bases in Central Asia may become attractive not only for the purpose of waging the Long War, but also to minimize the effects of China's strategic depth by posing the prospect of "back door" strikes against Assassin's Mace forces based in China's western interior provinces. Moreover, by developing a basing posture that requires China to field an air defense network along its entire frontier, and to do it in depth (so as to protect targets at risk deep in its interior), the US basing posture can impose substantial costs upon the PLA at much lower cost to the Defense Department's budget. The challenge here would be twofold: convincing Central Asian partners that it is in their interests to have US bases serve a dual mission of reducing the threat to their security from radical Islamists and serving as a check on potential Chinese expansionism; and hedging against the rise of potentially hostile regional nuclear powers that could threaten the bases with nuclear attack.

As the foregoing discussion suggests, then, the trends in Chinese military capabilities have important implications for the kinds of US capabilities that must be resident in the future Joint force. For example, to diminish the need for forward bases, to hold key assets at risk (e.g., mobile ballistic missile launchers; ground-based ASATs; command and control centers; cyber-warfare forces; etc) throughout China's strategic depth, and to neutralize the defenses protecting them would require expanded global attack forces and new persistent long-range targeting (ISR) components in the global C3I network far in excess of what the US military currently possesses. While the 2006 QDR notes the importance of these capabilities in addressing the combination of China's A2/AD capabilities and its strategic depth, there has been little movement toward changing the defense program to accord them high priority. This shortfall of global reconnaissance and attack capabilities has profound implications for any long-term strategic-military competition with China. Absent adequate numbers of these types of systems, US forces might find itself forced to put a high percentage of its forces within range of the densest Chinese guided weapon salvos, where they might be at risk of unacceptably high levels of destruction and attrition.

Long-range systems are especially important for operations in the Pacific, but other capabilities are important as well. Systems that are difficult to detect (e.g., stealth aircraft, submarines) would be especially important in the early stages of any conflict against Assassin's Mace forces. These systems should be able to penetrate any Chinese A2/AD network and begin the process of rolling it back to enable the follow-on operations of less stealthy platforms. If the continued development of Joint Multidimensional Battle Networks enables US forces to operate in a highly distributed manner while achieving their missions (thus making them more difficult to target), they may prove an important counter to China's A2/AD capabilities. Forces that are based forward will likely need to be capable of operating out of hardened MOBs, on mobile sea bases, or from rapidly constructed CSLs, until the enemy's extended-range ISR capabilities are sufficiently degraded. Even then, however, US forces would likely want to avoid unhardened MOBs that are not protected by capable missile defense systems.

In short, great powers like China, which have the potential to field high-end conventional battle networks of their own and employ guided weapons in the same scale as US forces, can—and should—exert a profound influence on the US global basing and mobility posture—particularly in the Pacific—as well as the associated force structure. Indeed, addressing the existing and

prospective challenges from China will also have major secondary effects on US allied relationships. For example, the United States will need to find ways to reassure allies that the changes in its global posture, especially those that reduce the level of US forces deployed in their country or in their region, work to enhance their security, and not dilute it.

AN EMPHASIS ON PREEMPTIVE AND PREVENTIVE ACTION

The foregoing sections suggest how the Joint Expeditionary Posture must evolve to account for three potential 21st century national security challenges. However, there is an additional burden the posture must meet: an ability to support preemptive and preventive action.

As discussed earlier, one year after the September 11th attacks, the White House published a new *National Security Strategy* which indicated that in the years ahead the United States would take far more seriously the need to try to prevent threats from fully forming. The strategy explained the need for more proactive preemptive and preventive action in this way:

> For centuries, international law recognized that nations need not suffer an attack before they can lawfully take action to defend themselves against forces that present an imminent danger of attack. Legal scholars and international jurists often conditioned the legitimacy of preemption on the existence of an imminent threat—most often a visible mobilization of armies, navies, and air forces preparing to attack.
>
> We must adapt the concept of imminent threat to the capabilities and objectives of today's adversaries. Rogue states and terrorists do not seek to attack us using conventional means. They know such attacks would fail. Instead, they rely on acts of terror and, potentially, the use of weapons of mass destruction—weapons that can be easily concealed, delivered covertly, and used without warning.
>
> The targets of these attacks are our military forces and our civilian population, in direct violation of one of the principal norms of the law of warfare. As was demonstrated by the losses on September 11, 2001, mass civilian casualties is the specific objective of terrorists and these losses would be exponentially more severe if terrorists acquired and used weapons of mass destruction.
>
> The United States has long maintained the option of preemptive actions to counter a sufficient threat to our national security. The greater the threat, the greater is the risk of inaction— and the more compelling the case for taking anticipatory action to defend ourselves, even if uncertainty remains as to the time and place of the enemy's attack. To forestall or prevent such hostile acts by our adversaries, the United States will, if necessary, act preemptively.[630]

The global military posture challenge is made more acute if one is concerned with the prospective need to rapidly strike and disrupt gathering threats from radical Islamist extremists, or to conduct preemptive action against rogue nuclear powers, or even to quickly deal with the consequences of their collapse. Here the ability to employ US military forces without seeking the approval of states hosting US bases becomes important. By extension, the need to minimize positioning US military capabilities required for preemptive operations on foreign soil becomes

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[630] *National Security Strategy of the United States of America*, September 2002, Chapter 5, p. 1.

important as well.[631] An ability to conduct prompt preemptive and preventive global attacks thus favors the use of sovereign basing, multiple CSLs (in an effort to secure at least some forward-basing assets), maritime forces, and global attack forces.

GLOBAL DEFENSE POSTURE AND STRATEGIC AND OPERATIONAL CONCEPTS: A GROWING LINKAGE

The requirement for the Joint Expeditionary Posture to support prompt preemptive and preventive global action suggests the increasingly important role that strategic and operational concepts will play in the Second Transoceanic Era. The case was made in Chapter I that these concepts link the overall posture with existing or emerging contemporary national security challenges and the military capabilities needed to address them, forming the posture's "connective tissue." However, the linkage between operational concepts and posture has been a slowly developing one. It was quite weak during the Continental Era, when America's military posture was focused on threats on the North American continent and US operations "overseas" were restricted to relatively small naval expeditionary operations. As soon as US strategists began contemplating operations beyond the Western Hemisphere, however, the linkage grew much stronger, as evidenced by the inextricable ties between the operational concepts developed during the interwar period of the Oceanic Era and the ultimate Service Expeditionary Posture adopted during World War II. The linkage grew stronger still in the First Transoceanic Era, when the strategic and operational concepts of containment and rapid garrison reinforcement made a defining impact on the Cold War's Garrison Posture.

In a like way, the strategic concepts of global freedom of action and preemptive and preventive action are already having a dramatic impact on the shape and character of the evolving global defense posture. New operational concepts to address the emerging national security challenges will as well. For example, the Pacific basing posture might best be optimized to support a gradual roll-back of any future China's A2/AD shield, much as the United States did against Japan in World War II. There are, of course, other options, including a hardened basing posture designed to weather any potential Chinese attack and to support the immediate transition to offensive operations. Whichever concept the United States may choose however, one thing should be readily apparent: if the operational concepts and the posture are disconnected, the results would not be pretty.

It is also important to note the close relationship between the operational problems of operating against a nuclear-armed regional adversary and a Chinese A2/AD network. While the PLA discusses using limited nuclear strikes in terms of securing an information advantage over US forces, the bulk of its Assassin's Mace forces will be employ *conventional* capabilities. Nevertheless, because it may very well enjoy battle network parity with the US and be capable of

[631] For example, if North Korea were found to be trafficking in nuclear weapons with al Qaeda, or if Iran were to engage in overt or covert attempts to compromise the supply of oil from the Persian Gulf, the United States may feel it has no recourse but to undertake preemptive regime change operations. In any event, it seems regime change capabilities would be valuable for a US president to have, not only in terms of enhancing his flexibility in addressing the crisis, but also for its potential deterrent effect on the source of aggression.

employing guided weapons in the same scale and density as US forces, a future Chinese A2/AD network might be able to achieve destructive effects equivalent to tactical nuclear strikes even when relying solely on conventional attacks. *The key point here is that if the US can solve the near term operational problem of operating under an enduring nuclear threat against regional nuclear opponents, it should be able to cope with the long term problem of operating against future Chinese A2/AD networks.*

As this discussion suggests, then, the linkage between the global defense posture and strategic and operational concepts is as strong today as it was in the Cold War. Indeed, because two of the three aforementioned future national security challenges involve the need to conduct operations from much longer ranges than in the past, the importance and strength of the posture's connective tissue may be higher than it has ever been.

Unfortunately, there has been little progress in developing coherent Joint operational concepts that might be able to sensibly drive future global defense posture decisions in the Joint Expeditionary Era. This helps explain why the 2006 QDR does not elaborate as to how the US military's global basing and mobility posture will function to dissuade China from pursuing threatening capabilities; deter them from using these capabilities, once acquired; or defeat China's A2/AD forces, should deterrence fail; the operational concepts that would inform these questions remain to be developed. The same can be said about the QDR's failure to address how the US military might operate if faced by the prospect of confronting a nuclear-armed regional adversary.

One of the reasons for the lack of any coherent Joint operational concepts is the recently adopted *Joint Capabilities Integration and Development System* (JCIDS). The JCIDS is "a capabilities-based approach to identifying current and future gaps in our ability to carry out joint warfighting missions and functions." One of the key outputs of the JCIDS is supposed to be new *Joint Integrating Concepts* (JICs).[632] These JICs are themselves part of the extended *Family of Joint Operational Concepts (JOpsC).* At the top of this hierarchical family is the *Capstone Concept for Joint Operations* (CCJO), a broad statement of how the joint force will operate in eight to ten years. The CCJO then spawns both *Joint Operating Concepts* (JOCs), which set the future "operational context" by identifying desired operational designs and effects; and *Joint Functional Concepts* (JFCs), which support the JOCs by identifying required functional capabilities. From these come the JICs, which identify the "tasks, conditions, and standards" necessary to integrate service efforts, and which form the basis for follow-on *Capabilities-based Assessments* (CBAs) in their respective areas. Each CBA is, in turn, composed of a *Functional Area Analysis*, a *Functional Needs Analysis*, and a *Functional Solutions Analysis.* These analyses form the basis for both an *Initial Capabilities Document* and a *Capabilities Development Document*, which ultimately lead to specific changes to joint doctrine, organization, training, materiel, leadership and education, personnel and facilities (DOTMLPF).[633] Is there any wonder

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[632] See "The Joint Capabilities and Integration and Development System (JCIDS)," found online at http://www.almc.army.mil/hsv/2003-ISE.pdf.

[633] See Final Signature Draft, Chairman of the Joint Chiefs of Staff Instruction CJCSI 3010.02B, "Joint Operations Concepts (JOpsC) Development Process," dated December 7, 2005, found online at http://www.dtic.mil/

why such an arcane, process-driven approach has a difficult time producing sensible Joint Integrating Concepts?[634]

At this point, JCIDS has identified seven JICs as capstone concepts deemed critical for future joint force warfighting success. They include: Joint Command and Control; Global Strike; Joint Undersea Superiority; Joint Forcible Entry Operations; Integrated Air and Missile Defense; Joint Logistics (Distribution); and Seabasing.[635] However, the Seabasing JIC is emblematic of the problems with these concepts. It is driving the development of Joint force capabilities that likely are in conflict with the admonitions of the NDP, US Commission on National Security in the 21st Century, and the DSB Task Force of Strategic Mobility about the potential proliferation of future A2/AD networks. Worse, the operational concepts involving the use of MPF(F) during forcible entry operations are being pursued without the benefit of any rigorous operational experimentation. Given that early/forcible entry forces are the ultimate guarantor of access in an era that everyone agrees will be characterized by uncertain access, the lack of any substantive discussion about improving the Joint forces' ability to conduct operational maneuver from strategic distances or from the sea in the presence of an operational A2/AD network is a troubling omission in the current development of Joint seabasing plans.[636]

The problems with the JCIDS are now well recognized. Among the findings reported in the *DSB Summer Study on Transformation: A Progress Report,* published very nearly simultaneously with the 2006 QDR in February 2006, was that:

> …the [Joint Capabilities Integration and Development System] has attempted to encompass a wide range of programs to ensure that the entire investment portfolio makes the best investments in needed capabilities. While this is a noble purpose, there are already processes in the DoD that do that, however imperfectly, and attempts to add a JCIDS contribution to that worthy purpose has only *rendered the JCIDS so unwieldy as to make it ineffective in its intended purpose of focusing intensely on key challenges faced by warfighters in integrating and employing Joint Forces* (emphasis added).[637]

With regard to the final point, the DSB Task Force concluded that the "ponderous" Joint Capabilities Integration and Development System had not resulted in "…increased warfighter influence, as it continues to be dominated by the Force Providers [i.e., the services] and the Joint

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futurejointwarfare/concepts/cjcsi3010_02b.doc; see also Chris Miller, "Meeting FORCENet Requirements: An Acquisition Community Perspective," a November 14, 2005 PowerPoint briefing found online at enterprise.spawar.navy.mil/getfile.cfm?content=ld744.

[634] For an interesting and unflattering perspective of the JCIDS process, see "Van Riper's E-mal to Pace, Hagee, and Schoomaker Regarding JCIDs," *Inside the Navy*, January 23, 2006.

[635] "The Joint Capabilities and Integration and Development System (JCIDS)."

[636] For a more detailed discussion on problems surrounding current seabasing plans and programs, see Work, *Thinking About Seabasing: All Ahead, Slow*.

[637] Dr. Robert Herman, General Larry Welch, co-chairs, *DSB Summer Study on Transformation: A Progress Report, Volume I* (Washington. DC: Office of the Under Secretary of Defense for Acquisition, Technology, and Logistics, February 2006), p. 19.

Staff. Because of this, the Task Force recommended that the Chairman provide direct support to the Combatant Commanders "to analyze and assess solutions to needs *offered by the services*," and that all concepts "*be validated by experiments and/or operational experience*" (emphasis added).[638]

These recommendations are highly sensible, and are heartily endorsed. Given the linkage between new strategic and operational concepts and the evolving Joint Expeditionary Posture and, developing a better way to develop concepts and capabilities is a pressing need in the Second Transoceanic Era.

[638] Herman and Welch, co-chairs, *DSB Summer Study on Transformation: A Progress Report, Volume I*, p. 19 and 41.

X. AN ENCOURAGING START

As this report hopefully makes plain, if national strategy defines US *intent* in its approach toward global affairs and provides focus for American foreign policy, then the US global defense (military) posture reflects the US *capability* to project military power beyond its borders and across transoceanic ranges in support of US national security policy objectives. The United States thus adopts and maintains a global military posture as an indispensable means of securing its national interests.

While national strategy can change from administration to administration, making major adjustments to the US global defense posture is much more difficult and time-consuming process. As a result, once made, adjustments to US defense postures have proven to be quite durable, enduring for tens of decades. Indeed, between 1783 and 1989, the United States assumed only three distinctly different global defense postures, each one tailored to a unique national security era:

- In the *Continental Era*, which extended from the birth of the Republic to about 1890, the United States adopted what might be best called a *Naval Expeditionary Posture*.

- In the *Oceanic Era*, which spanned nearly six turbulent decades between 1890 and 1946, the US assumed a *Service Expeditionary Posture*, which included for the first time several exterior bases, almost all sovereign bases located on US-controlled territory in either the Pacific or Caribbean Basins.

- The *Transoceanic Era*, marked by the long Cold War with the Soviet empire, stretched from 1947 through the fall of the Berlin Wall. During this period, the United States adopted a *Garrison Posture* which saw the basing of large numbers of combat troops on foreign soil for the first time in its history.

Historically speaking, the ultimate scale of the American Garrison Posture adopted in the First Transoceanic Era has been approached by only a few of history's great empires, the British Empire in particular. However, unlike earlier empires, America's is an "informal" empire, one based on consensus, and thus its global basing network has assumed a unique, "leasehold" characteristic. This imposes some unique restrictions on the United States' ability to exploit its non-sovereign external bases relative to those of earlier empires that were non-consensual in character.[639] It also has led, appropriately, to a greater emphasis on strategic mobility and on expeditionary forces, and a clear preference for expeditionary postures.

[639] As Niall Ferguson has observed, the American Empire is one that prefers indirect rule to direct rule, and informal empire to formal empire. Rome and Britain exercised direct rule over many foreign states and nations within their empire, but not all of them. Rome had many "allied" states within its empire, while Britain ruled major parts of its empire indirectly, through local rulers. However, both Rome and London did not have to petition the local rulers within their empires for base access the way the United States must with the members of its consensual "liberal" empire. See Niall Ferguson, *Colossus* (New York, NY: The Penguin Press, 2004).

Since 1989, the US has been slowly transitioning to a new global defense posture tailored to the unique demands of the post-Cold War world, which might best be viewed as the *Second Transoceanic Era.* The relatively slow development of this new global defense reflects, in large measure, the great uncertainty and lack of defined threats that characterized the decade immediately following the implosion of the Soviet Union. Now, however, as the national security challenges facing the United States have become more fully formed and understood, the shift toward a new *Joint Expeditionary Posture* is beginning to accelerate.

While the evolving leasehold basing structure and the reliance on expeditionary forces are not new for the United States, the demands of the Joint Expeditionary Era are unique. The leasehold basing structure associated with the Naval Expeditionary Posture in the Continental Era was far smaller and less focused on warfighting than it was on protecting US trade and access to global markets. During the Cold War, the alliance structures were much more rigid; the global recognition of a mortal ideological threat worked to make the allies were more durable and access more reliable (or at least this was believed to be so), Recent problems obtaining access to forward bases reflect the fact that alliance ties are loosening, that much of the world has yet to acknowledge the US view that radical Islamist extremists pose a mortal ideological threat to freedom-loving nations, much less that the United States now faces at least three different types of threats in different parts of the world than those which dominated the Cold War era.

Said another way, the US military's global posture and its associated basing structure is no longer linked to an overarching common enemy. During the Cold War that enemy assumed the form of the Soviet Union. But security interests are much more regional now. This poses a dilemma, as the United States' global defense posture becomes more expeditionary in character, global in orientation, and focused on a global counterinsurgency against radical Islamic extremists, nuclear-armed rogue states, and a rising China, Under these conditions, forces at an external base in one region may be needed to meet a crisis in another region, as occurred recently with the shift of a US Army brigade from Korea to the Persian Gulf. Thus US forward-based forces may be far less tied to the defense of the country hosting them then was the case during the Cold War. How will the nations hosting these forces react to a posture focused first on US national security needs? Will they view the United States as a much-needed, benign Global Policeman, or as something quite different? Bases established for one purpose (e.g., fighting the Long War) may be seen by some as intended for quite a different purpose (e.g., containing China or neocolonialism). These questions provide powerful reasons for avoiding large, fixed exterior foreign bases that convey an air of permanence.

Thus, the Defense Department's general shift in emphasis away from non-sovereign, external MOBs in favor of increased emphasis on sovereign MOBs (e.g., Guam) or MOBs located on the territory of close, long standing allies (e.g., Britain's Diego Garcia; Kadena Air Base in Japan) makes great sense. The same is true for the move toward a global "coaling station" network of unobtrusive Forward Operating Sites and Cooperative Security Locations, and the development of new global attack capabilities, mobile maritime bases, new strategic mobility and logistics capabilities, rapidly erectable Joint Multidimensional Battle Networks, and a global C3I network based around space-based capabilities.

As for relying on expeditionary forces, the US military successfully navigated two earlier expeditionary eras that saw it emerge victorious in two global conflicts. Thus there is good reason to believe that the United States military's global posture can evolve into an effective combination of forward-based and forward-deployed forces, supported by expeditionary forces as needed. The moves by all four services to develop and field rapidly deployable expeditionary forces (e.g., CSGs, ESGs, AEFs and Army modular brigades) thus makes perfect sense also. The development of expeditionary forces capable of conducting widely dispersed, networked operations is made even more critical should global A2/AD capabilities continue to evolve, which will require the injection of ready-to-fight combat forces directly into theaters, and will make operations from large, fixed forward bases far less attractive. Said another way, in addition to the traditional airlift and sealift forces that supported the reinforcement of forward garrisons in the Cold War, the United States must be prepared to seize and defend access when needed, to rapidly build austere campaign bases where none exist, to operate from mobile sea bases—and to protect all of them from guided weapons attack.

To sum up, then, the Defense Department's moves to reorient its global military posture to meet the demands of the Second Transoceanic Era represent encouraging first steps. However, if this paper shows anything, it is that while the basic global defense posture is relatively fixed, its individual components are constantly being adjusted to accommodate changes in the national security environment, national policy and military requirements, and technologies. Therefore, just as the foregoing discussion suggests, there are many more wrinkles to be ironed out. Among the more pressing questions to be resolved are:

- How will foreign states react to this posture over time? As the United States' global defense posture becomes more expeditionary in character, global in orientation, and focused on a global counterinsurgency against radical Islamist extremists, nuclear-armed rogue states, a rising China, and supporting preventive action, forces at an external base in one region may be needed to meet a crisis in another region, as occurred recently with the shift of a US Army brigade from Korea to the Persian Gulf. Thus, US forward-based forces may be far less tied to the defense of the country hosting them then was the case during the Cold War. It remains uncertain how nations hosting these forces will ultimately view a posture focused first on US national security needs. Will the US continue to be able to negotiate the requisite SOFAs and transit agreements to permit US global freedom of action? Being able to do so will likely test the best State Department and Pentagon strategists and planners to their fullest.

- Similarly, will the US be able to maintain bases in one nation for one purpose (e.g., waging the Long War) if they are viewed by another state as accomplishing an entirely different purpose? For example, China may view Long War bases in Central Asia as part of a US strategy to encircle them. They may thus exert pressure on the host nation to eject US forces. Once again, the posture will demand diplomats and strategists that are both adept and flexible.

- Does the posture, focused as it is on supporting offensive actions and expeditionary operations in distant theaters, pay enough attention to the question of how the US homeland will be defended in depth? If not, how will the posture need to be adjusted?

- Are current plans for global attack and extended-range stealthy ISR capabilities sufficient for an evolving environment where range provides a great deal of operational freedom of action and a hedge against nuclear-armed rogue states or a hostile China?

- Are the components of the evolving Strategic Military Transportation System well balanced for an era characterized by uncertain access? Should the US develop a 21st century Global Expeditionary Maneuver and Movement System that better supports the delivery of intact, ready-to-fight combat forces without the need for a lengthy RSOI process? Are the moves toward seabasing and new means to deliver cargo the last tactical mile, such as the Joint Cargo Aircraft, well considered?

- Can the global C3I network really support all users—strategic, operational, and tactical? Or will it need to be optimized as it has been in the past to serve a particular group of decision makers?

- Can the Defense Department correct the JCIDS so as to develop coherent operational concepts that can be used to more closely link the global defense posture with the capabilities needed to address evolving national security problems?

These questions aside, it seems clear that the ongoing efforts to assume a new Joint Expeditionary Posture to accommodate the demands of the Second Transoceanic Era are on the right track, overall. By developing satisfactory answers to lingering questions, and by addressing some of the weaknesses in the current plans, the result should be a 21st century global military posture that assures US allies that they will be well supported; dissuades potential future competitors from pursuing destructive capabilities; deters current adversaries from resorting to bad behavior, and, if necessary, hastens the defeat of any foe that confronts the United States.

GLOSSARY

A2/AD	Anti-Access/Area Denial
ABSD	Advanced Base Sectional Dock
ACC	Air Combat Command
ARG	Amphibious Ready Group
ASW	Anti-Submarine Warfare
ATC	Air Transport Command
BLT	Battalion Landing Teams
BMEWS	Ballistic Early Warning Line
BUR	Bottom-Up Review
C2	Command and Control
C3I	Command, Control, Communications and Intelligence
CBI	China-Burma-India Theater
COMINT	Communications Intelligence
CONUS	Continental United States
CRAF	Civil Reserve Airlift Fleet
CSL	Co-operative Security Locations
CV	Aircraft Carrier
CVE	Escort Carrier
CVL	Light Aircraft Carrier
DEW	Distant Early Warning Line
DoD	Department of Defense
FMP	Foreign Military Presence
FOS	Forward Operating Sites
GCCS	Global Command and Control System
GEM2S	Global Expeditionary Movement and Maneuver System
GWOT	Global War on Terror
IRBM	Intermediate Range Ballistic Missile
ISR	Intelligence, Surveillance and Reconnaissance
JCA	Joint Cargo Aircraft
JCIDS	Joint Capabilities Integration Development System
JCS	Joint Chiefs of Staff
JFEO	Joint Forcible Entry Operation
JOA	Joint Operations Area
JPWC	Joint Post War Committee
JSSC	Joint Strategic Survey Committee
LHA	Amphibious Assault Ships
LPD	Amphibious Transport Dock

LPH	Amphibious Assault Ship
LSD	Dock Landing Ship
LTDP	Long-Term Defense Program
MATS	Military Air Transport Service
MAU	Marine Amphibious Unit
MCO	Major Combat Operations
MEB	Marine Expeditionary Brigade
MOB	Main Operating Bases
MPF	Maritime Pre-positioning Force
MRC	Major Regional Conflicts
MSTS	Military Sealift Transportation Service
MTW	Major Theater War
NALMEB	Norway Air Landed Marine Expeditionary Brigade
NATO	North Atlantic Treaty Organization
NCW	Network Centric Warfare
NDP	National Defense Panel
NDRF	National Defense Reserve Fleet
OEF	Operation Enduring Freedom
OIF	Operation Iraqi Freedom
OMFTS	Operational Manuver from the Sea
OSD	Office of the Secretary of Defense
POMCOS	Pre-positioning of Material Configured to Unit Sets
QDR	Quadrennial Defense Review
RDF	Radio Direction Finding
RDJTF	Rapid Deployment Joint Task Force
RRF	Ready Reserve Fleet
SAC	Strategic Air Command
SLBM	Submarine Launched Ballistic Missile
SMTS	Strategic Military Transportation System
SOFA	Status of Forces Agreement
SPOD	Sea Point of Debarkation
SPOE	Sea Point of Embarkation
SRS	Strategic Reinforcement System
STOM	Shit-to-Objective Maneuver
SWNCC	State-War-Navy Coordinating Committee
TRANSCOM	US Transportation Command
UNREP	Underway Replenishment
USAAF	United States Army Air Forces
WWMCCS	World Wide Military Command and Control System