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Cover

The Sinai Peninsula, as seen from the space shuttle Challenger *(mission STS-41G) in October 1984. Clearly visible, stretching from the Mediterranean on the right through the Great Bitter Lake to the Red Sea, is the Suez Canal, scene of the Suez Crisis of 1956, a half-century ago this year. Those momentous events are recalled and assessed in this issue by Michael Coles, a former Royal Navy officer.*

The photo appears in The Home Planet *(1988), edited by Kevin W. Kelley for the Association of Space Explorers in Houston, Texas, by courtesy of which we reproduce it.*

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FROM THE EDITORS

The appearance of this issue of the *Review* coincides with the formal establishment of the Naval War College's China Maritime Studies Institute (CMSI), and our two lead articles serve to introduce the work of the institute to the security studies community in this country and abroad. The first article, "China's Aircraft Carrier Dilemma," by Naval War College faculty and CMSI members Andrew Erickson and Andrew Wilson, offers a detailed account of the state of thinking and program development in the People's Liberation Army Navy (PLAN) relating to aircraft carriers, long a controversial and obscure subject. As future CMSI analyses will be, it is based on a thorough and careful exploitation of the large and growing Chinese-language military and military-technical literature now available from open sources, much of it known only very imperfectly, if at all, in the West. The second article is a translation of an important, wide-ranging article by Senior Captain Xu Qi of the PLAN, "Maritime Geostrategy and the Development of the Chinese Navy in the Early Twenty-first Century," which appeared in *China Military Science*—the leading People's Liberation Army periodical—in 2004. As such, it carries very substantial (if somewhat indeterminate) weight as an expression of views held at senior levels of the Chinese military and political hierarchy, and it should therefore be of much interest to Western scholars and decision makers as they attempt to come to grips with the thinking of a Chinese leadership that is increasingly sophisticated technically, operationally, and as this paper shows, strategically as well.

Second-guessing and recriminations of various kinds over the conduct of the Iraq war continue to roil the arena of civil-military interaction as well as the political arena in the United States today. Mackubin Thomas Owens usefully reminds us that the civil-military relationship is never easy and that there is no simple division of responsibility between civilian and military decision making in time of war. He thereby opens a discussion on the subject of "Leadership and Decision," one we hope to pursue further in these pages in subsequent issues. The importance of military leadership is also a theme of Gary Ohls's article on the little-known Union amphibious operations against Fort Fisher in North Carolina during the late stages of the American Civil War.

This year marks the fiftieth anniversary of the military operations carried out against Egypt in 1956 by a combined Franco-British expeditionary force acting

in conjunction with Israel. Though much has changed since that time, this history, reexamined here by Michael H. Coles, holds some intriguing lessons for the conduct of coalition warfare in today's Middle East.

2006 PRIZE WINNERS

The President of the Naval War College, accepting the nominations of faculty committees, has chosen winners of the Hugh G. Nott Prize and the Edward S. Miller History Prize. The prizes are awarded by letter.

The Hugh G. Nott Prize, established in the early 1980s, is given to the authors of the best articles (less those considered for the Miller Prize) in the *Review* in the previous publishing year (in this case, 2005). This year's winners are:

- *First place:* Capt. David C. Hardesty, USN, for "Space-Based Weapons: Long-Term Strategic Implications and Alternatives," Spring 2005 ($1,000)
- *Second place:* James R. Holmes and Toshi Yoshihara, for "Taiwan: Melos or Pylos?" Summer 2005 ($650)
- *Third place:* George H. Quester, for "If the Nuclear Taboo Gets Broken," Spring 2005 ($350).

The Miller Prize was founded in 1992 by the historian Edward S. Miller for the author of the best historical article appearing in the *Naval War College Review* in the same period. This year's winner is "Midway: Sheer Luck or Better Doctrine?" by Thomas Wildenberg (Winter 2005).

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U.S. Naval Strategy in the 1990s: Selected Documents, edited by John H. Hattendorf (the Naval War College's Ernest J. King Professor of Maritime History) and scheduled to appear in winter 2006, will collect documents reflecting the evolution of official thinking within the U.S. Navy and Marine Corps during the post–Cold War era concerning the fundamental missions and strategy of the sea services. It will form part of a larger project bringing greater transparency to a dimension of our naval history that is now seen as having urgent interest. Professor Hattendorf initiated the undertaking with his authoritative study in Newport Paper 19 (2004) of the Maritime Strategy of the 1980s. In Newport Paper 27, covering the 1990s, Professor Hattendorf will assemble for the first time in a single publication all the major naval strategy and policy statements of that decade.

Rear Admiral Jacob L. Shuford was commissioned in 1974 from the Naval Reserve Officer Training Corps program at the University of South Carolina. His initial assignment was to USS Blakely *(FF 1072). In 1979, following a tour as Operations and Plans Officer for Commander, Naval Forces Korea, he was selected as an Olmsted Scholar and studied two years in France at the Paris Institute of Political Science. He also holds master's degrees in public administration (finance) from Harvard and in national security studies and strategy from the Naval War College, where he graduated with highest distinction.*

After completing department head tours in USS Deyo *(DD 989) and in USS* Mahan *(DDG 42), he commanded USS* Aries *(PHM 5). His first tour in Washington included assignments to the staff of the Chief of Naval Operations and to the Office of the Secretary of the Navy, as speechwriter, special assistant, and personal aide to the Secretary.*

Rear Admiral Shuford returned to sea in 1992 to command USS Rodney M. Davis *(FFG 60). He assumed command of USS* Gettysburg *(CG 64) in January 1998, deploying ten months later to Fifth and Sixth Fleet operating areas as Air Warfare Commander (AWC) for the USS* Enterprise *Strike Group. The ship was awarded the Battle Efficiency "E" for Cruiser Destroyer Group 12.*

Returning to the Pentagon and the Navy Staff, he directed the Surface Combatant Force Level Study. Following this task, he was assigned to the Plans and Policy Division as chief of staff of the Navy's Roles and Missions Organization. He finished his most recent Pentagon tour as a division chief in J8—the Force Structure, Resources and Assessments Directorate of the Joint Staff—primarily in the theater air and missile defense mission area and the Abraham Lincoln *Carrier Strike Group. His most recent Washington assignment was to the Office of Legislative Affairs as Director of Senate Liaison.*

In October 2001 he assumed duties as Assistant Commander, Navy Personnel Command for Distribution. Rear Admiral Shuford assumed command of Cruiser Destroyer Group 3 in August 2003. He became the fifty-first President of the Naval War College on 12 August 2004.

PRESIDENT'S FORUM

A New Maritime Strategy: Admiral Mullen's Challenge

DURING OUR CURRENT STRATEGY FORUM this past June, Admiral Michael Mullen, the Chief of Naval Operations, called for the development of a new maritime strategy and asked that the Naval War College take on the responsibility for coordinating the efforts of the Naval Postgraduate School, the Naval Academy, and other organizations in the strategy-development process. The Naval War College has been the spawning ground for American naval strategy since its opening in 1884. Combining high-level professional military education with consistent institutional commitment to research, analysis, and gaming has created the conditions—academic freedom coupled with a keen sense of academic responsibility and a spirit of objective inquiry—that have produced first-class strategists and many of the most influential concepts, plans, and strategies in the U.S. Navy's history. Today, Navy leadership has again turned to the College for help in crafting a new maritime strategy to deal with the complex and challenging global geostrategic environment that has emerged since the 9/11 attacks.

Why is a new maritime strategy needed? I believe that there are more than sufficient new strategic challenges manifesting themselves since 9/11—indeed, since the fall of the Berlin Wall—to require a fundamental rethinking of the traditional tenets of seapower that most policy makers and strategists still hold as truisms. It is clear, for instance, from language in the National Security Strategy that the seas no longer represent the definitive strategic barriers they once did. Losing this most important geostrategic source of depth reduces the time available for deliberate, diplomatic response options by our national command authority. Yet, the U.S. Navy has been the guarantor of national strategic depth since the age of Teddy Roosevelt and the Great White Fleet. Should the Navy focus on reestablishing this particular relative advantage? Should the sea be the

medium by which preemptive counter-force operations are made more responsive, or should we be working to establish the lost strategic depth through achievement of global maritime awareness? The doctrinal legacy of ". . . From the Sea" suggests the former, while the organizing principle referred to as "a Thousand-Ship Navy" suggests the latter. Is the choice limited to "either/or," or must we do both? Options need to be clarified and choices made: a coherent maritime strategy is required to establish the ways, means, and resources to reestablish strategic depth. Again, this is just *one* example of the sort of questions that emerge from a comprehensive discussion of grand strategy.

There is another reason that a maritime strategy is necessary at this point in time. The changing nature of warfare is forcing all services to conduct a reexamination of their structure and doctrine. This is happening in the world of the Global Information Grid, where information appears to be the most valuable warfighting resource. The result is a premium on obtaining, analyzing, and distributing information via new, more capable means of command and control. In this environment, traditional roles and missions become fungible and open for renegotiation. However, if we make roles-and-missions decisions simply on the basis of emerging technical capabilities, we may back our way into serious warfighting seams in the future. The logic of an overarching strategy is needed in order to make sense of novel, emerging technical capabilities, operating concepts, and organizing principles as part of a coherent and ultimately more effective whole. A broadly understood maritime strategy would provide a powerful logic for roles and missions relating to all our maritime partners.

The U.S. Navy has a long and successful history of articulating national maritime strategies, since the founding of the Naval War College. Starting with Alfred Thayer Mahan's seminal work *The Influence of Sea Power upon History* (1890), the Navy has generally crafted a new strategy when the flow of world events made it clear that one was needed. The prospect of a trans-isthmian canal, for example, and the rise of Germany and Japan as great naval powers provided much of the impetus for Mahan's pioneering work. In the 1930s, in response to the increased chances of a war with Japan, the Navy developed a trans-Pacific strategy that eventually brought success in World War II. In the Cold War, the Navy aligned itself with the nation's grand strategy of containment and deterrence and created elements of its force structure that could support nuclear warfighting if deterrence failed. As the Cold War matured, the viability of nuclear weapons as warfighting weapons deteriorated, and the Navy developed the Maritime Strategy of the 1980s to provide a foundational logic of conventional warfighting using its forces in a forward, offensive manner. After the Soviet Union fell, the Navy morphed the strategy of early, forward operations into a littoral warfighting doctrine.

The Naval War College has fully embraced the challenge laid down by Admiral Mullen and is proceeding at full speed to put in place a process that is intellectually rigorous and accommodates ideas from around the fleet, around the country, and around the world. We plan to move forward in an integrated fashion with the Coast Guard and the Marine Corps, and with early, close involvement with our other joint-service and agency partners.

We will also involve our international maritime partners. The College has been an effective forum for international naval cooperation over the years, and we intend to take it a step farther via international participation in the maritime strategy development process. Given the objective of a secure international commons for legitimate commerce, regional peace and stability, and the general benefit and progress of all mankind, this approach to strategy is timely and appropriate to the international community's growing appreciation of the unique contributions maritime collaboration makes to these objectives.

The fundamental philosophy underpinning the College's development effort is that any maritime strategy must derive from and support national policy and grand strategy. We intend to consider a range of potential grand strategies. By examining the range of maritime strategies suggested by them, we hope to understand the fundamental strategic imperatives of any maritime strategy. Moreover, since any U.S. national grand strategy is necessarily global, this approach promotes maritime thinking in global terms. Also, this approach helps keep the level of discussion and analysis elevated—that is, it keeps workshop and war-game participants from immediately focusing on ship types, deployment patterns, and operational concepts. These topics have all but governed the dialogue on the future of the Navy for a number of years and have generated differing points of view that cannot be resolved without an overarching strategic logic.

We expect that logic to emerge from a competition of ideas. That competition must reflect expert, diverse perspectives and must be based on disciplined and objective analysis—something for which the College has established a sound reputation. In order to establish rigor, and also to increase the odds of obtaining genuinely creative thinking, we are going to conduct a novel type of exploratory war game in which "Blue" players representing the United States and international partners react to well-developed "Red" strategies to create a composite of the future plans for a number of what we term "strategic entities." The outcome will be an understanding of the dynamics of strategic challenge-and-response cycles. Follow-on workshops will synthesize key insights and conclusions into candidate maritime strategies. These strategies will then be subjected to additional perspective and analytic scrutiny to clarify strategic options for Navy leadership.

The U.S. Navy developed a highly successful maritime strategy in the 1930s and again in the 1980s in response to specific threats. Today, our task is far more complex, as the distinction between friend and foe is not as clear and the world is faced with numerous insurgencies, ethnic clashes, and regional competition among states. What some writers term the "super-empowered individual"—a person or group capable of inflicting strategic harm on a nation via advanced technology—adds significant new complexity to strategy making. This heightens the importance of bringing a rigorous, intellectual approach to strategy development.

The need for a new maritime strategy is manifest, and Admiral Mullen's call for one is both timely and compelling. Many institutions and organizations are responding to his appeal, and the Naval War College is serving as a clearinghouse for the ideas emerging from their efforts. The College will also serve as guarantor of rigor and subjectivity, fulfilling this critical institutional role of intellectual conscience for the Navy.

J. L. SHUFORD
Rear Admiral, U.S. Navy
President, Naval War College

NAVAL WAR COLLEGE
NEWPORT, RI

Andrew S. Erickson is assistant professor of strategic studies in the Naval War College's Strategic Research Department. He earned his PhD in 2006 at Princeton University, with a dissertation on Chinese aerospace development. He has worked for Science Applications International Corporation (as a Chinese translator), as well as at the U.S. embassy in Beijing and the American consulate in Hong Kong. His publications include contributions to Comparative Strategy *and to (for the Naval War College Press) Newport Papers 22,* China's Nuclear Force Modernization *(2005), and 26,* Reposturing the Force: U.S. Overseas Presence in the Twenty-first Century *(2006).*

Andrew R. Wilson is professor of strategy and policy at the Naval War College. He received his PhD in history and East Asian languages from Harvard University and is the author of numerous articles on Chinese military history, Chinese seapower, and Sun Tzu's Art of War. *He is also the author or editor of two books on the Chinese overseas,* Ambition and Identity: Chinese Merchant-Elites in Colonial Manila, 1885–1916, *and* The Chinese in the Caribbean. *Recently he has been involved in editing a multivolume history of the China War, 1937–1945, and a conference volume entitled* War and Virtual War, *and he is completing a new translation of the* Art of War. *Among his other duties at the Naval War College, Professor Wilson is a founding member of the Asia-Pacific Studies Group.*

CHINA'S AIRCRAFT CARRIER DILEMMA

Andrew S. Erickson and Andrew R. Wilson

China's national leadership is facing a dilemma that has bedeviled many other powers in modern history. The challenge—an especially difficult one in an era of rapid technological change—is discerning when and how to spend finite military budgets on new technology, organization, doctrine, and force structure. The history of navies trying to anticipate and prepare for the next war is replete with both positive and negative analogies to which Beijing can turn. These include Germany's attempts prior to World Wars I and II to strike the right balance between fleet-on-fleet and *guerre de course* and missing on both counts; Japan's pattern prior to World War II of innovating with aircraft carriers and amphibious warfare but keeping the battleship firmly at the center of its naval doctrine; and even China's own naval embarrassments in the 1884–85 Sino-French War and the 1894–95 Sino-Japanese War, in which poor standardization, divided political and military leadership, and slow mobilization cost the Qing dynasty two very expensive fleets.

The numerous sources available suggest that these issues weigh heavily on China's naval strategists today. Getting the answers right in the near term will appropriately shape China's force structure and inform training and doctrine in anticipation of the most likely scenarios. Obviously, analyses regarding the nature of the next war, the relative strengths and weaknesses of the possible belligerents, and the characteristics of the likely theater will determine those answers. In other words, strategic focus and concentration on the nature of the next war can spur modernization. Taiwan scenarios certainly dominate Beijing's attention, but while they narrow the decision sets, they do not resolve the central dilemma facing China's maritime strategists.

Of the issues that confront Chinese naval modernization, the most comprehensive and far-reaching is the extent to which Beijing has faced a choice between a navy focused on large-deck aviation and one based fundamentally on submarines. The answer is the simplest possible—not at all. China has yet to confront the issue in any meaningful way, and that is so because its technology, assets, and facilities are far from a state that might force the issue.

Whether it makes sense now for China actually to develop an aircraft carrier has apparently been the subject of considerable debate in China.[1] Hong Kong's Phoenix Television has quoted Song Xiaojun, editor in chief of *Jianchuan Zhishi* (Naval & Merchant Ships), as stating that a PLA faction advocates aircraft carrier development but must compete with elements urging submarine and aerospace industry development.[2] One Chinese analyst states that Beijing, reflecting the interests of the submarine faction, is currently focused on developing new types of submarines in part precisely because they can attack carrier strike groups (CSGs), presumably those of the United States. Carriers present large targets and have weaker defenses than (and cannot easily detect) submarines. Submarines can attack CSGs with "torpedoes, sea mines, and missiles," thereby rendering sea lines of communications and seaborne trade itself vulnerable to undersea attack.[3] The analyst contends that China's Type 093 and 094 submarines will increase the sea-denial capabilities, strategic depth, coastal defense, and long-range attack capability of the People's Liberation Army Navy (PLAN).[4] In a recent meeting with the authors, a senior Chinese official elaborated that although he had "been an advocate of aircraft carriers for many years because we need them," until recently carriers had "not been the best use of national resources" because China "lacks an escort fleet," thereby making any carrier a vulnerable target. China has therefore invested instead in "submarines, mid-sized ships, and fighters [aircraft]."[5]

At the same time, however, dismissing China's carrier aspirations could be myopic, given its rapid development of all other major aspects of its navy over the past few years. Submarines currently dominate China's naval development, but they might not do so indefinitely. Contending that submarine force development is not a panacea for the PLAN, one Chinese analyst calls for "rethinking the theory that aircraft carriers are useless and [that one should] rely solely on assassin's maces," or asymmetric silver bullet–type weapons: "Allied ASW is very strong. . . . [T]he U.S. and Japan carefully monitor PLAN submarine activities. . . . PLAN submarines' 533 mm torpedoes are insufficient to constitute a strong threat to a U.S. aircraft carrier [and] PLAN submarine-carried guided missiles are insufficient to wound an aircraft carrier."[6]

The aforementioned Chinese official stated to the authors in 2006 that "China will have its own aircraft carrier" in "twelve to fifteen years." In 2004,

however, he had declared to a group of Western academics that there was an internal political and military consensus that China had no intention of developing an aircraft carrier. When asked to explain this apparent contradiction, the official stated that over the past two years the subject of aircraft carrier development has become a "heated internal debate" in Beijing as Chinese national interests have grown, sea lines of communication have become ever more important, the need to rescue Chinese citizens overseas has become increasingly apparent, and "air coverage" is viewed as an essential component of "balanced naval forces."[7]

Pierside view of ex-Soviet aircraft carrier *Kiev* at Binhai Aircraft Carrier museum in Tianjin, China.

China has made great progress in many dimensions necessary to support the development of aircraft carriers, though in some areas it is unclear whether substantial efforts have been made at all. The PLAN's submarine program is far ahead of its carrier (CV) program. In India, by contrast, the CV program is far ahead of the ballistic-missile submarine (SSBN) program; Spain, Japan, and Thailand have carriers though they lack SSBNs entirely, whereas the United Kingdom and France deploy both carriers and SSBNs. The Chinese literature notes all of these potential force structure models and the disparities in capabilities and experience between not merely the PLAN and the world's leading navies, but most notably between the PLAN and its regional peers, the Japan Maritime Self Defense Force (JMSDF) and the Indian navy. In that literature the discussion of submarines, both as machines and as operational and strategic platforms, is much more advanced and grounded in reality than that of carriers—which is still notional, if not romantic, and largely comprises rather generic analyses of possible ship-configuration options.[8] Certainly, there is logic, reinforced by the German and Japanese examples, in not playing to the adversary's strength. If the greater payoff is to be found in an asymmetric "silver bullet" or "assassin's mace" that SS/SSNs or mine warfare seem to offer, why should Beijing invest in a war-fighting specialty—that is, power-projection carrier operations—in which the PLAN is so clearly outmatched by the U.S. Navy and that appears ill suited to China's overall defensive posture?[9]

This, however, does not mean that the way ahead for the Chinese navy—which currently has a submarine-centered force structure and doctrine—is cast in stone or that the choice need be mutually exclusive. In fact, while submarines seem to be ascendant, the Chinese are still actively engaged with the carrier question and are reframing the terms of the debate. That debate, moreover, has been reinvigorated by recent events, notably the 2004 Southeast Asian tsunami, which the above-cited Chinese official averred had "definitely" changed Chinese thinking about the utility of aircraft carriers, and by the advent of China's eleventh "five-year plan," for the period 2006–10. This paper examines China's progress thus far, the road ahead, and a range of ways in which an aircraft carrier might ultimately fit into the PLAN's emerging order of battle.

CHINA'S CARRIER DEVELOPMENT HISTORY AND FUTURE OPTIONS

The aircraft carrier has long had determined, if not numerous, advocates at the highest levels of the Chinese military. Adm. Liu Huaqing, a student of Soviet admiral Sergei Gorshkov at the Voroshilov Naval Academy in Leningrad (1954–58), championed the aircraft carrier when he became chief of the PLAN (1982–88) and vice chairman of the Central Military Commission (1989–97). "Building aircraft carriers has all along been a matter of concern for the Chinese people," Admiral Liu insisted. "To modernize our national defense and build a perfect weaponry and equipment system, we cannot but consider the development of aircraft carriers."[10]

Liu has been credited with an instrumental role in modernizing China's navy and with conceiving ambitious goals for its future power projection, in the framework of "island chains."[11] Liu and others have defined the First Island Chain, or current limit of most PLAN operations, as comprising Japan and its northern and southern archipelagos (the latter disputed by China), South Korea, Taiwan, and the Philippines.[12] The Second Island Chain, which Liu envisioned as being fully within the scope of future PLAN activities, ranges from the Japanese archipelago south to the Bonin and Marshall islands, including Guam.[13] Some unofficial Chinese publications refer to a "Third Island Chain" centered on America's Hawaiian bases, viewed as a "strategic rear area" for the U.S. military.[14] The ultimate goal is a Chinese navy that can perform a mix of sea denial, area denial, and varying degrees of power projection within and out to these island chains.

In his 2004 autobiography, coverage of which by China's Xinhua press agency implies quasi-official endorsement, Admiral Liu described in some detail his association with, and aspirations for, efforts to develop an aircraft carrier.[15] As early as 1970, Liu "organized a special feasibility study for building aircraft

carriers as instructed by the higher authorities and submitted a project proposal to them."[16] In May 1980, Liu became the first PLA leader to tour an American aircraft carrier, USS *Kitty Hawk* (CV 63). This experience left him "deeply impressed by its imposing magnificence and modern fighting capacity."[17] Liu stated that he emphasized to the PLA General Staff the need to devote great effort to "two large . . . key issues" essential not only to "long range combat operations" in "wartime but also to deterrence power in peacetime": development of aircraft carriers and of SSBNs.[18]

Liu recalled that the question of Chinese aircraft development had weighed particularly heavily on him when he became PLAN commander in 1982. "With the development of maritime undertakings and the change in the mode of sea struggles, the threats from sea we were facing differed vastly from the past," Liu assessed. "We had to deal with SSBNs and ship-based air forces, both capable of long-range attacks. To meet that requirement, the strength of the Chinese Navy seemed somewhat inadequate. Despite our long coastal defense line, we had only small and medium-sized warships and land-based air units, which were merely capable of short-distance operations. In case of a sea war, all we could do was to deplore our weakness." But "by developing air carriers," Liu believed, "we could solve this problem successfully."

In early 1984, at the First Naval Armament and Technology Work Conference, Liu recalled stating, "Quite some time has elapsed since the Navy had the idea of building aircraft carriers. Now, our national strength is insufficient for us to do this. It seems that we have to wait for some time." In 1986, however, "when briefed by leaders of the Navy Armament and Technology Department," Liu revisited the issue. "I said that we had to build aircraft carriers," Liu recalled, and that "we must consider this question by 2000. At this stage . . . we need not discuss the model of carriers to be built, but should make some preliminary studies." The Gorshkov-educated Liu saw a historical analogue: "The Soviet Union spent 30 years developing carriers. At the beginning, there were different opinions about building carriers. The Central Committee of the Soviet Communist Party did not have a firm determination to do this, but the Soviet people wanted carriers. Shortly afterward, they started building carriers. Judging from our present situation, even for defense purposes only, we are in need of carriers." Following Liu's entreaty, "the leaders of the Navy Armament and Technology Department promptly passed my idea to the Naval Armament Feasibility Study Center. Then, the two departments teamed up to organize a feasibility study in this respect."[19]

Liu suggested that in 1987 China was finally on track to address the "key question" of the carrier platform and its aircraft.[20] On 31 March of that year, he reported to the PLA General Staff that Chinese aviation and shipbuilding

industry leaders and experts assessed that their country was "technologically capable of building carriers and ship-borne aircraft." Liu allowed that "with regard to some special installations, of course, there are questions that we must deal with seriously. But they can be solved." Liu suggested that China begin carrier development "feasibility studies in the Seventh Five-Year Plan period, do research and conduct preliminary studies of the platform deck and key questions on the aircraft during the Eighth Five-Year Plan period, and decide on the types and models in 2000."

Liu contended that "the annual spending for the present and the following years will not be too much" and that "technologically [the plan had] many advantages." These included catalyzing "the development of technologies required by the state and by national defense." Moreover, "through the preliminary studies, we can get a deeper understanding of the value of aircraft carriers and the need for their existence in war preparations. This understanding will be conducive to making a final scientific policy decision." Liu maintained that his "report had a certain effect on the PLA General Staff Department and the Commission of Science, Technology, and Industry for National Defense [COSTIND]. After that, the science research units concerned and the Navy's armament department started to make relatively in-depth feasibility studies for developing aircraft carriers under the auspices of [COSTIND]."

Throughout his vigorous promotion of aircraft carriers, Liu insisted, he weighed overall naval and national interests carefully. "During the feasibility studies . . . I stressed the need to make a combat cost comparison between using aircraft carriers and ship-borne aircraft and using land-based air divisions, aerial refuellers, and land-based aircraft," he continued. "Later, when I was working with the Central Military Commission, I continued to pay attention to this matter. I asked [COSTIND] and the Armament Department of the PLA General Staff Department to make an overall funding plan for developing carriers, including the funds needed for preliminary studies, research, and armament." Liu stated that the aforementioned plan "should be listed along with the plans for developing warships, aircraft, weapons, and electronic equipment rather than included in the aircraft carrier development program so as to avoid creating an excessively large project that the higher authorities could not readily study. I told them clearly that any plan they made should be discussed by the Central Military Commission."[21]

As for foreign technology, Liu reports,

> I gave approval for experts of the Navy and related industries to visit such countries as France, the United States, Russia, and Ukraine to inspect aircraft carriers. During that period, departments related to the national defense industry invited Russian carrier design experts to China to give lectures. Technical materials on carrier designs were introduced into our country, and progress was made in preliminary studies

> concerning key accessories aboard carriers. Under arrangements made by the PLA General Staff Department and [COSTIND], findings obtained from the inspection trips, materials introduced from abroad, and the results of our own preliminary studies were analyzed, studied, and appraised. This enabled many leaders and experts within and outside the military to enhance their understanding of the large systems engineering [required] for [developing] carriers and ship-borne aircraft.[22]

In his retirement Liu was to recall that he had "fulfilled [his] responsibility for making some plans for developing an aircraft carrier for China."[23] In 2005, retired vice admiral Zhang Xusan stated, "I certainly advocate having an aircraft carrier soon. . . . When I was [deputy commander of the PLA] Navy I advocated that, and at that time Commander . . . Liu Huaqing advocated it too, but for many reasons it was postponed. I believe that it will not be too long before we will have an aircraft carrier. When, what year, I can't say, because I'm not in charge of that matter now. But I feel we will have one in the not too distant future."[24]

It remains unclear to what extent Liu's advocacy of carriers, which he termed the "core of the Navy's combined battle operations" and considered a symbol of overall national strength that many other countries had already developed, has actually influenced PLAN development.[25] As Liu himself was careful to emphasize, "the development of an aircraft carrier is not only a naval question, it is also a major question of national strategy and defense policy. It must emerge from the exact position [of] and prudent strategy [concerning] comprehensive national strength and overall national maritime strategy."[26] In light, however, of both Beijing's determination to be respected universally as a great power and its growing maritime interests, the Chinese navy has clearly been contemplating various alternatives for developing aircraft carriers—research that provides critical indicators of Beijing's emerging maritime strategy.

Overseas New Construction

When it comes to obtaining a working carrier, China has several options, but each largely limits what the carrier could be used for. Buying a big-deck, Western strike platform akin to the *Enterprise* or *Nimitz* has apparently never been seriously considered. It would simply not be within the realm of the possible to acquire such a ship from the West—including, apparently, even Russia, which China reportedly approached in the early 1990s.[27] Moreover, operating a *Nimitz*-class aircraft carrier or equivalent is among the most complex tasks of modern warfare. Matching American or French expertise at large-deck power projection would involve incredible cost and many years of trial and error. China may be weighing the costs and benefits of vertical-and-short-takeoff-and-landing (VSTOL) and catapult aircraft carriers, the latter of which could support larger aircraft with greater payloads. Specialists at China's Naval Engineering University and Naval Aeronautical Institute have conducted research on

steam-powered catapults, but it appears to be theoretical in nature.[28] Only a few navies, notably those of the United States and France, have solved the perplexing mechanics and daunting upkeep of steam catapults or the subtleties of arresting gear, and they are unlikely to sell them to foreign powers. When it comes to aircraft for a conventional deck, only the United States and France have third-generation catapult-capable planes (we will return to aircraft below).

Another option for overseas purchase would be a small-to-midsized VSTOL-capable carrier from a European producer, such as Spain's Navantia, the builders of Thailand's ten-thousand-ton *Chakri Naruebet*.[29] In fact, there were some tentative moves in this direction in the mid-1990s, but nothing developed from them. Empresa Nacional Bazán, which merged with Astilleros Españoles S.A. (AESA) to form Navantia in 2000, reportedly attempted to market its SAC-200 and -220 light conventional-takeoff-and-landing (CTOL) designs to China in 1995–96, but apparently Beijing was interested in obtaining design plans, as opposed to a prebuilt carrier.[30] Given the continuation of the post-Tiananmen U.S.-European arms embargo on the People's Republic of China (PRC), the acquisition of operational carriers from overseas seems highly unlikely for the foreseeable future.

Notwithstanding all of this, however, buying a carrier undeniably saves time, trouble, and expense, by capitalizing on the expertise of others and securing a proven commodity, and it is notable how the Chinese debate has accommodated to this reality.

Indigenous New Construction

This approach would appear to offer a wider range of options and would allow the Chinese to take engineering and architectural clues from other navies and tailor the ship more closely to China's anticipated naval doctrine and aspirations. Nonetheless, start-up costs are very high, and the "delta" between plans and construction is large. China would confront such challenges as a long timetable and a lack of relevant experience. Prestige issues would seem to push China toward the biggest ship possible, but lately there have been signs of favoring a more modest ten-to-twenty-five-thousand-ton ship that would carry helicopters or VSTOL aircraft, like the British Harrier or newer versions of Russia's Yak-141. These discussions include some speculation that such a ship might even be nuclear powered, although conventional power seems more realistic. This proposal has drawn intense interest within China's navy and in the opinion of the authors is the most realistic course of action if the PLAN is to bring aircraft-carrying naval vessels into service in the near future.

However, according to sources of varying credibility, a more ambitious construction plan, sometimes referred to as "Project 9935," is under way that would produce

a large-deck, conventionally powered CTOL carrier in the fifty-thousand-ton range capable of launching and retrieving carrier-capable versions of Russian Su-30 aircraft, possibly within the next few years. While these aspirations are not to be lightly dismissed, Chinese-language sources reflect little attention to this program, far less than to smaller helicopter and VSTOL-carrying ships. If a vessel along the lines of the 9935 concept were to come down the ways in a Chinese shipyard, it would be likely to do so under the twelfth five-year plan, which will begin in 2011. In the near term, it is critical to monitor the purchase or production of support ships, aircraft, and shipboard systems that would be required to support an operational carrier strike group regardless of whether the notional 9935 carrier or some other vessel is to constitute its core.

Rebuilding

China has already purchased four decommissioned aircraft carriers, to considerable Western media speculation. In 1985, China purchased for scrap the Australian carrier HMAS *Melbourne,* from which it may have learned engineering principles—albeit limited and perhaps antiquated ones—when dismantling it. The ex-Russian *Minsk,* acquired by front companies in 1998, is now the centerpiece of a Chinese "military education" amusement park in Shenzhen.[31] A ship of the same class, *Kiev,* arrived in Tianjin in 2000;[32] it was subsequently renovated to attract tourists as the center of "China's largest national defense education base" and "the world's largest military theme park."[33] A visit to *Kiev* in June 2006 revealed a replica of a PRC J-10 aircraft, of which China may be developing a carrier-compatible version, below deck. The vessel itself, however, appeared to receive only cosmetic maintenance and is therefore likely in no condition to go to sea.[34] Finally, the Russian "heavy aircraft-carrying cruiser" *Admiral Kuznetzov*–class *Varyag* (purchased from Ukraine in 1998 for twenty million dollars and delivered in 2002) has attracted renewed international attention after having recently received a fresh coat of PLAN silver-gray paint, and possibly other renovations, at Dalian Shipyard.[35] The subject of much press speculation, *Varyag* is the most likely candidate if a decommissioned carrier is to be made operational. At the very least, its expensive acquisition and lengthy refurbishing seem to contradict the stated intention of its original buyer, Macao's Agencia Turisticae Diversoes Chong Lot Limitada, to use it as a floating casino. There have even been claims that by 2008 *Varyag* will be operational and based in Yalong Bay, Sanya City, on Hainan Island, to protect the Spratlys and the Taiwan Strait.[36] A senior Chinese official has told the authors that "some naval officers want" to refit *Varyag* and that "there is still a heated debate."[37] The significance of this insight is that operationalizing *Varyag* is not a dead letter in senior naval circles and that debate over its general utility and possible future roles continues.

Many of *Varyag*'s apparent disadvantages as a first carrier for China can be viewed in fact as advantages. *Varyag* was delivered without weapons, electronics suites, or propulsion, so though start-up costs would be high, the potential for customization is considerable. Further in its favor, *Varyag* is a very large ship, designed to displace 67,500 tons fully loaded; it can therefore be equipped with a variety of aircraft and shipboard systems. It is also a known quantity, in that the Soviets experimented with similar carriers and thought through related doctrinal issues. Finally, "off the shelf" aircraft, including helicopters, CTOL, and VSTOL, already exist that are known to work with the design and have been deployed aboard the *Varyag's* sister ship, *Admiral Kuznetzov*.

On the downside, and though the Chinese can build a conventional power plant as well as a shaft and screws sufficient to propel the *Varyag*, it seems unlikely that the reverse engineering this effort would entail could be easy or fast. In addition, a large conventionally powered carrier could not operate far from Chinese home waters without a combination of friendly foreign ports (to which access is presently uncertain) or a robust underway-replenishment capability. On this latter point, the PLAN regularly performs resupply and even repairs at sea and could obviously learn from the practice of navies that now deploy conventional carriers. The Chinese, no doubt, are closely watching Indian efforts at purchasing and eventually operationalizing the former Soviet *Kiev*-class VSTOL carrier *Admiral Gorshkov*. Since India has operated ex-British carriers for years, it already has a great deal of carrier experience, however, so China will inevitably start far behind India's level of expertise in actual carrier aviation and operation.

China's old carriers, especially *Minsk* and *Kiev,* were probably purchased as "cadavers" to be dissected to inform indigenous design. *Varyag*—while it will certainly serve that purpose, especially as it reflects the largest and most advanced Soviet carrier design—may ultimately also be used for pilot and deck crew training, as well as a "test platform" for general research and the development of catapults, arresting gear, and other ship-board systems.[38] To this end, *Varyag* may be retrofitted with a power plant, shafts, and screws so that it can go to sea under its own power, but training and equipment experimentation will likely be the extent of its capabilities in the near term. Further out, a modestly capable *Varyag* may become a centerpiece of Beijing's naval diplomacy by showing the flag and, in addition to training (following the model of the *Shichang,* discussed below), could potentially be used for humanitarian operations and disaster relief. But as with everything concerning *Varyag*, these projections are highly speculative.

COMMERCIAL CONVERSION

A final option would be to reconfigure a large commercial vessel as an aircraft carrier. A possible indication of austerity, flexibility, and commercial orientation is

apparent Chinese interest in Australian shipbuilding corporation INCAT's "Evolution One12." This wave-piercing catamaran is claimed to be "the world's largest diesel powered fast craft," a distinction corroborated by INCAT. INCAT has reportedly proposed a "multifunction" VSTOL and helicopter ship for the Royal Australian Navy.[39] Were it to pursue a parallel course of development, China could exploit its large and rapidly advancing shipbuilding sector, projected to become soon the world's largest.[40] China's shipbuilding industry appears to combine economic dynamism and broad-based Western technology assimilation with close military coordination.[41] Indeed, Shanghai's Jiangnan shipyard—China's largest and perhaps soon the world's largest—already contains both commercial facilities and others for advanced submarines and surface warships.

Indeed, while commercial technology is not directly applicable to military vessels—substantial modifications are necessary—China might prove more adept at this process than many other nations. It is conceivable that carrier-relevant research, development, and even production could proceed at one or more of China's major shipyards on a scale and with a rapidity that might surprise Western analysts. Certainly, however, there would be extraordinary challenges in converting a merchant ship into a combat-ready carrier. Producing a ship capable of ferrying helicopters would be comparatively straightforward, but even then the final result would likely be of minimal tactical utility and a tempting target for an adversary. Ultimately the aircraft carrier itself is simply a platform for air operations—the system of systems that allows for the projection of air power from the sea. The acquisition of a Chinese carrier vessel is simply one step, and a relatively simple one at that, along a complex continuum that may someday lead to a truly operational Chinese aircraft carrier. The subsequent steps involve hardware, software, and training.

The Carrier Hardware Package

All of these options would rely on conventional propulsion. While a theoretical possibility, nuclear propulsion makes little sense for the Chinese, who do not currently need surface combatants with the range of U.S. nuclear-powered carriers. Conventional propulsion is technologically much simpler and significantly more economical. Still, a carrier that can go to sea under its own power is one thing; a fully operational carrier is another matter entirely. As we have seen, there are many other technological and doctrinal questions to be answered.

Carrier operation demands a full complement of such elements as aircraft, deck elevators, radars, and defenses. Already, Chinese specialists have conducted extensive research in many major relevant areas. Experts at Beijing University of Aeronautics and Astronautics have studied carrier-aircraft landing gear.[42] Harbin Engineering University's Naval Architecture Department has examined the

structural demands of flight decks.[43] Other experts have analyzed "ski-jump" configurations (similar to those of *Kuznetzov* and some European VSTOL carriers)* and other takeoff issues, deck-motion compensation, wake turbulence, wave-off procedures, and landing decision aids, as well as aircraft-critical technologies and command and control.[44] In addition to detailed analyses of the requirements of current carrier operations, there is discussion of potentially revolutionary technologies that could be employed on next-generation carriers, including electromagnetic catapults and "integrated full electric propulsion" (IFEP).[45] Nearly all of this research appears to be theoretical in nature, however, and none of it proves that China has made actual progress in developing its own aircraft carrier—or even has made an official decision to do so. Rather, it seems to indicate that Chinese experts have followed closely major foreign aircraft carriers and are gaining increasing understanding of the systems and technologies that their navies employ. Moreover, much of the research is at least indirectly applicable to targeting enemy carriers more effectively.[46] In June 2006, a second Chinese official informed the authors that in PLA internal meetings, Taiwan scenarios and how to target U.S. carrier strike groups are often discussed.

With respect to carrier aircraft, pilot training would be particularly problematic for VSTOL and VTOL aircraft, given China's lack of relevant experience, if less so for helicopters, though rotary-wing operations are now very modest in the PLAN. In general, however, there has been incremental progress in Chinese naval aviation, albeit from a rather low baseline. The PLA Naval Air Force (PLANAF) is increasingly aggressive and confident in its basic homeland defense and interdiction missions, and its experience in nighttime over-water training and patrol is growing. Leading indicators of serious aircraft-carrier preparations include the development of special air control radars and reinforced landing gear. According to a 2004 article, Chengdu Aircraft Industry Corporation has been working on a carrier variant of the J-10 but still faces many technological shortfalls.[47] Another recent source claims that China may be seeking Russian thrust-vectoring-controlled AL-31FN engines to render the J-10 better capable of takeoff from a ski-jump deck and to reduce its landing speed.[48] However, additional large purchases or licensing agreements for naval variants of Russian aircraft suitable for carrier operations—such as the Yak-141, the Su-30MKK, or the Su-33 (the last an Su-27 variant designed for *Kuznetzov*-class carriers, and hence appropriate for *Varyag*)—would be one of the better indicators of where China's aircraft carrier program is moving.[49]

* A ramp, typically twelve degrees, at the bow, that helps impart lift and permits heavier aircraft to become airborne after a short takeoff run. This allows for greater range and weapon payload than nonramped vertical/short take-offs, but still not on a par with the range and payloads of aircraft launched by steam catapult.

Obtaining aircraft would not in itself, however, mitigate the lack of practical experience with them in a carrier environment. Great leaps forward in operational capabilities solely through acquisition are unlikely. More incremental improvements—akin to Japan's gradual approach to its helicopter-carrying *Osumi*-class, and next-generation, LSTs (which some speculate may deploy fixed-wing aircraft, possibly the Joint Strike Fighter)—are more realistic. In this regard, Thailand's acquisition of the Spanish-built *Chakri Naruebet* may serve as a tangible lesson. Bangkok acquired this fully outfitted, very expensive ship in 1997 but due to financial constraints and lack of experience has rarely deployed it.

Therefore, there are many reasons for the Chinese to pace themselves rather than rush to deploy an operational carrier. The most that a major purchase of new aircraft, such as the Russian two-seat Su-30MKK, or the Chinese version, the MK2, can offer the PLANAF is greater ability to perform its basic missions. Better weapons and more experience with air-to-surface attack can extend area-denial and interdiction incrementally, but significant growth of that envelope is unlikely without sea-based aviation and land-based, over-water, midair refueling capability, in addition to some means of coordination and defense (e.g., an AWACS* equivalent). Both of these capabilities appear to be high priorities for the PLAN. China purchased Russian A-50 AWACS-type aircraft in 2000, following cancellation of Israel's Phalcon sale amid mounting American pressure. China is also reportedly developing the KJ-2000, and indigenous AWACS-type aircraft.[50] "While the larger, more advanced" KJ-2000 is envisioned to conduct "long-range, comprehensive aerial patrolling and control roles," the smaller KJ-200/Y-8 airborne early warning (AEW) aircraft (nicknamed "Balance Beam" in the West), with an electronically steered phased array, offers "a less expensive platform for tactical airborne early warning and electronic intelligence missions."[51] Various sources report that a KJ-200 aircraft crashed on 4 June 2006, killing forty people and possibly setting back the program.[52] China is also reportedly considering Russia's Kamov Ka-31 helicopter for carrier-based AEW.[53] China still relies on Russian aerial refueling tankers (for instance, the Il-78) but is struggling to achieve domestic production capabilities even there.

If the experience of other navies is any measure, the Chinese also need to realize that getting carrier operations right will involve the loss of expensive aircraft and hard-to-replace pilots. In 1954 alone, in working to master jet aviation off carriers, the U.S. Navy lost nearly eight hundred aircraft. In 1999 the Navy lost only twenty-two, but these were the most advanced aircraft flown by the world's

* The U.S. Airborne Warning and Control System, carried by the E-3A aircraft.

most experienced aviators.[54] While the Chinese will certainly benefit from improvements in technology and will not be attempting a scale of operations even close to that of the United States during the early Cold War, they must realize that their learning curve will be costly in terms of blood and treasure. Moreover, the PLAN air force has traditionally been poorly funded and its pilots have only a fraction of the flying hours that their peers in the United States, India, and Japan have. These factors will make China's mastery of carrier aviation even more costly in human terms.

Quantum leaps forward are required not only in sea-based fixed-wing aviation and midair refueling but also in PLAN doctrine and antisubmarine warfare (ASW) as well as in PLANAF service culture if China's aerial power-projection capabilities are to be improved dramatically. Without major improvements in ASW, for instance, any Chinese CV would be an easy target for a diesel-electric or nuclear-powered attack submarine (SS/SSN). Chinese ASW capabilities, while slowly improving, cannot yet be counted on to provide a reasonable degree of security in open waters. In a crisis scenario, many air support tasks would be performed by the People's Liberation Army Air Force (PLAAF). This means that, unlike a U.S. carrier strike group, a Chinese CSG would not need to be wholly self-supporting. But it remains unclear how capable of joint coordination China's different services are in operations over water. Integrating operations between a highly regimented and rigidly structured PLAAF and an immature and sea-based PLAN contingent would require technological and service-culture innovations, as well as exercises less carefully scripted than has been usual, to develop the requisite interoperability and interservice coordination. Significant additional research is required to gauge how much coordination exists within the PLAN between its ground-based naval air and surface/subsurface assets. This is all the more critical as the type and degree of coordination will necessarily vary depending on maritime mission, (i.e., humanitarian, interdiction, area denial, sea control, or strike power projection).

View from the flight deck of the *Kiev*. There are no actual carrier aircraft present at this museum.

The Chinese navy must also determine what mix of surface vessels and submarines would be necessary to support a carrier. Here the evolution of the overall naval order of battle may offer insights. China might be unlikely to commit

itself to a militarily useful carrier until it could fill out the strike group without compromising its ability to fulfill other missions. Analysis here requires nuanced understanding of exactly what it takes to operate a carrier and what mixes of indigenous products and off-the-shelf technologies could be combined in a Chinese strike group. CVs are highly vulnerable even with supporting strike groups, especially from submarines of the United States and other regional competitors; the time and expense of deploying a carrier will be for naught if it cannot be protected.

As they currently stand, China's capabilities are sufficient to give the United States pause if a Taiwan conflict scenario were to erupt, but truly controlling the battle space against a determined and capable adversary remains a Chinese aspiration, not a demonstrated capability.

THE ROLE OF A CARRIER IN CHINESE NAVAL DOCTRINE

If China were to achieve any of the acquisition options outlined above and outfit a carrier, such a ship, while expensive and complicated, would indeed be a useful asset. It would have little role in a near-term Taiwan scenario, however, as land-based PLAAF and PLANAF aircraft could probably handle all of the required air operations across the narrow Taiwan Strait. Unless China is able to produce and incorporate a range of carriers in a cohesive and effective concept of operations, it is difficult to envision carriers as the centerpiece of Chinese naval doctrine in future decades. In his memoirs, Adm. Liu Huaqing described aircraft carriers as providing air coverage essential to offshore defense. An aircraft carrier would thus facilitate Chinese air operations in the Taiwan Strait by obviating the need for short-range fighters to sortie from land bases. This, Liu believed, would maximize the utility of China's existing aircraft.[55] However, Liu made these statements in 1987, before modern precision weaponry. Indeed, a concomitant shift in operational scenarios may at least partially explain apparent indecision in China concerning aircraft carrier development. Though periodically considered, it may have been repeatedly postponed in favor of submarines. Even Liu acknowledged that nuclear submarines are "one of the very most important pieces of naval equipment."[56] A senior Chinese official has further emphasized to the authors that "China will not try to compete with the U.S. in the open sea. Even twenty PRC carriers cannot compete with U.S. nuclear carriers."[57]

That said, there are two general categories of potential carrier roles in the PLAN. The first is as a discrete capability to support secondary missions. The second is as a complement to China's submarine-centered fleet. As to using carriers as a discrete platform, the most basic motivation is prestige—particularly for a great power still seeking to right the wrongs of its devastating national weakness since 1840. As one Chinese analysis emphasizes,

> The enterprise of China's ocean development has a splendid history dating back to [Ming Dynasty Admiral] Zheng He's seven voyages to the West. But its previous feudal rulers locked their doors against the world. They fettered the Chinese Nation's vigorous ocean-based development. This included especially the Ming and Qing [dynasties'] severe prohibition of maritime [focus] for over 400 years. This repeatedly caused the Chinese Nation to miss favorable opportunities [that would have stemmed from] developing civilization from the sea. Then the Western gunships bombarded their way through the gate that China's feudal rulers had locked. Thenceforth, a succession of wars of invasion from the sea visited profound suffering as well as galling shame and humiliation on the Chinese Nation. The beautiful, abundant ocean gave forth only sorrow and tears.[58]

Chinese interlocutors often tell Westerners that "a nation cannot become a great power without having an aircraft carrier." Lt. Gen. Wang Zhiyuan, deputy director of the PLA General Armament Department's Science and Technology Commission, stated in a 2006 interview that the PLA "will conduct research and build aircraft carriers on its own, and develop its own carrier fleet. Aircraft carriers are a very important tool available to major powers when they want to protect their maritime rights and interests. As China is such a large country with such a long coastline and we want to protect our maritime interests, aircraft carriers are an absolute necessity."[59] Zhang's conception of China as facing both challenges and opportunities from the sea is prevalent among Chinese analysts.[60]

Carrier acquisition can also be seen as part of regional power competition. When the Japanese deploy their larger version of the *Osumi*-class LST, or when the Indian navy puts a refurbished *Gorshkov* to sea, the Chinese may be compelled to accelerate their carrier program to maintain the appearance of a great power. But this is more than simply an issue of face. Showing the flag is important, but as Japan itself maintains, some form of carrier is needed for peacekeeping operations, as well as for humanitarian intervention and for defense of vital and lengthy sea lines of communication.

This unique role for aircraft carriers was demonstrated by the 2004 tsunami, after which the PLAN found itself on the outside looking in, especially compared to the U.S. Navy, but more painfully to the Indian navy and, even more unbearably, the Japan Maritime Self-Defense Force (JMSDF).[61] An article in the PLAN publication *Dangdai Haijun* (Modern Navy) assessed that Japan's "first dispatch of a warship overseas [for] search and rescue . . . demonstrated its status as a 'great power of disaster relief.'" The article noted that the U.S. "dispatched [the *Abraham Lincoln*] carrier battle group to the rescue" and that India's "navy served as the daring vanguard." It concludes, "The rescue activities following the Indian Ocean tsunami abundantly illustrated that the use of armed forces is not only to prevent conflict or to wage wars, but also brings into play the key actions

of national construction, disaster relief, and rebuilding." Aircraft carriers and helicopters, it suggests, are vital for such "non-combat military operations."[62]

The final category of potential Chinese carrier missions includes collective maritime security (e.g., sea-lane protection and counterpiracy). This collective-security force structure is obviously a secondary mission of the PLAN, and it would be oriented toward friends and rivals in the South China Sea and the Indian Ocean. Deployment of an aircraft carrier would enable modest force projection to assert Chinese claims in the South China Sea. In this vision, *Varyag* or an indigenous carrier in the mold of India's older *Viraat*, its new *Gorshkov*, Thailand's *Chakri Naruebet,* or Japan's *Osumi* would be all the Chinese would need. A more robust and capable carrier strike group might be needed properly to defend Chinese sea lanes and energy access through the Strait of Malacca to the Indian Ocean, but even an ability to show the flag in this fashion could have valuable psychological effects. In an important article in 1998, noted China Institute of Contemporary International Relations scholar Zhang Wenmu contended that America had historically pursued a strategy of monopolizing access to oil. Land-accessible energy resources in Central Asia offer an important hedge against Chinese reliance on sea-based energy supply, which is far easier for U.S. forces to control and disrupt.[63] But Zhang strongly believed that China must control its sea-based oil supplies as well:

> China is facing fierce competition overseas in obtaining its share of crude oil. . . . [U]nder globalization a nation's energy security is no longer an economic issue alone. Instead, it is also a political issue, as well as a military issue. . . . [It is therefore necessary to] build up our navy as quickly as possible. . . . We must be prepared as early as possible. Otherwise, China may lose everything it has gathered in normal international economic activities, including its energy interest, in a military defeat.[64] China should strive to develop its naval power. China should not only strengthen its naval power and defense to protect imported oil, but also expand its navy to achieve its influence over the offshore resources in the Asia Pacific region with [its] complex rights dispute[s]. [Sea] power has a permanent [significance for] the trade of coastal countries, and the backup of a country's [sea] power is its navy. Therefore, the long term approach toward ensuring open sea lane and potential ocean resources is to [develop] a modern oceangoing navy.[65]

For these reasons and others, Zhang strongly contended, China needs aircraft carriers—although nuclear submarines are even more important (at least at present).[66]

As to the issues of complementary capabilities in Chinese submarine doctrine, the Soviet model might be illustrative. Soviet deck aviation had an important ASW component. In the 1970s and 1980s, the Soviet navy considered bastion strategies of protecting SSBNs, performing area-denial and ASW

centered on helicopter carriers like *Minsk* and *Moskva*. The original approach was later supplemented by the *Kuznetzov*/*Varyag,* designed for force-on-force operations.[67] There is some evidence that China might follow this pattern of integrated air and undersea warfare doctrine, but like all carrier discussions, this is still very hypothetical.

In the near term, if China cannot solve the extended-deployment issue and its SSBNs have to stay close to home, there might be logic in the carriers' protecting an SSBN bastion in the Yellow Sea, Bohai Gulf, or South China Sea. But pursuit of such a strategy was arguably problematic for the Soviet Union. A bastion strategy might be even more counterproductive for China; forces devoted to supporting and defending a carrier are better spent elsewhere if fixed-wing ASW assets cannot be developed and deployed either from land bases or onboard ship. Even then, force protection, as it is in the U.S. Navy, would be a major drain. In an era in which long-distance precision strike has been emphasized—particularly by the U.S. military—it is far from clear how survivable Chinese aircraft carriers might be, particularly in a concentrated bastion, where they would offer dense targeting options for a wide variety of adversary platforms, although targeting the right vessel would still be a complex problem for the adversary.

A SMALLER HELICOPTER CARRIER: CHINA'S INTERIM COMPROMISE?

China already has some experience with a ship that can support multiple helicopters, albeit an extremely modest one. The multirole aviation training ship 0891A *Shichang* has a large aft helicopter deck, accounting for two-thirds of its 125-meter (410-foot) length. The deck has dual landing spots for Harbin Zhi-9A helicopters. Removing equipment containers (designed for rapid reconfiguration) aft could make space for a total of three helicopters. *Shichang* was conceived as both "China's first aerial service capacity ship" and "first national defense mobilization warship" as part of a larger plan to refit merchant vessels rapidly for defense mobilization.[68] This initiative apparently began in 1989, and was motivated in part by British and American use of commercial vessels in the Falklands War and later by Operation DESERT STORM, respectively.[69] *Shichang* is entirely indigenous in its development and production, and reportedly meets all relevant domestic and international standards.[70]

Shichang, which resembles the Royal Navy's Royal Fleet Auxiliary aviation training and primary casualty reception ship *Argus,* was launched on 28 December 1996 in Shanghai; it was dispatched to the Dalian Naval Academy in 1997 following rigorous sea trials, prioritized by the PLAN leadership, ranging as far away as the South China Sea.[71] According to an article that originally appeared in China's *PLA Daily*, *Shichang*, together with the naval cadet training ship *Zheng*

He, serves as an "at sea university," one that has trained two of every three current PLAN officers.[72] *Shichang*'s 9,500-ton displacement, 17.5-knot speed, crew of two hundred, and range of eight thousand nautical miles suggest a serious effort to develop some limited form of deck aviation.[73] It is at sea two hundred days per year, and its crew is accustomed to handling typhoons and thirty-degree rolls.[74] It supports "simultaneous operations of multiple helicopters," which "facilitates training for shipboard helicopter operations, as well as amphibious assault training."[75] *Shichang* "is widely regarded as the prelude to construction of a [true] helicopter carrier or amphibious assault vessel [presumably LPD- and LPH-type ships], and provides a basis for perfecting fixed-wing aircraft carrier operational concepts." With its helicopter module, it can serve as a "transfer station" for "a group of helicopters in wartime."[76] *Shichang* is also envisioned as having an ASW mission.[77]

A detailed 2005 analysis of China's prospects for developing a helicopter carrier states that "arrogant intervention of hostile great power(s) in the cross-Strait divide requires us to prepare for successful military struggle. Moreover, China still has some significant maritime territorial disputes with some peripheral countries." Its author believes that a coastal defense strategy is increasingly inadequate for China's future needs, which include "energy security, economic development, and political stability," all of which "are increasingly intimately connected with the international situation." Developing a helicopter carrier is therefore China's best "springboard" for such a "development strategy."[78]

> Considering funding, technology, and tactical issues, a helicopter carrier's displacement should be approximately 15,000 tons when fully loaded. It should be able to accommodate approximately 15 helicopters (12 ASW helicopters [and] 4 advance warning helicopters. . . .) The [hurdle] of 10,000 ton ship technology is small. China has previously constructed the "*Shichang*" training ship of around 10,000 tons. . . . As a result of limited tonnage, the equipment demands of a helicopter carrier are lower than those of a large or medium aircraft carrier, [helicopter carriers] can use [the] Commercial Off the Shelf Technologies (COTS) method in their construction, and [their] costs can be greatly reduced.[79]

Further, "China's opportunity, funding and technology for developing a helicopter carrier are all mature. Because the superpowers have encircled China's periphery, and the opportunity for developing a fixed-wing aircraft carrier is not mature, the author believes that firmly grasping the opportunity to develop a helicopter carrier is the correct choice. China's Navy should reasonably call [the carrier] its own '*Moskva*' class. I hope this day arrives soon!"[80] Among the models reportedly under consideration is a fifteen-to-twenty-thousand-ton LHD-like amphibious assault ship, featuring a large deck that can handle heavy transport helicopters and a mix of amphibious landing craft.[81]

The wide range of challenges inherent in developing a successful large-scale carrier and questions concerning its mission utility suggest that China may take a creative approach to carrier development, as it has done in other areas. Here it may be useful to examine other platform developments to seek patterns that would reveal PLA decision-making patterns and practices.

The *Kiev* museum at Tianjin contains photographs of other nations' aircraft carriers, perhaps implying that aircraft carriers are a natural part of all great-power navies.

One notable trend in PLAN development has been the production of single, or short-series, platforms. Examples include emulation of Soviet efforts to build a dedicated minelaying vessel.[82] China's initial *Xia* SSBN is another potential example. Some Western analysts might ascribe such activity to mere copying of Soviet failures or to a PLAN experiencing growing pains that reduced its ability to plan for and produce an effective fleet. But another interpretation, one that is supported by some Chinese sources, is that such small-scale experimentation deliberately facilitates learning independent of immediate combat relevance. Viewed in this light, the Chinese navy might attempt to retrofit *Varyag* to begin experimentation with naval aviation—perhaps with little or no intention of ever using the resulting platform in battle.[83]

Such a vessel might also be used to practice operations against foreign carriers. Chinese specialists are acutely aware of aircraft carrier vulnerabilities, having conducted a wide variety of research apparently directed toward threatening aircraft carriers with ballistic and cruise missiles, submarine-launched torpedoes, and sea mines.[84] One Chinese article emphasizes these "trump cards" as well as "neutron bombs [and] stealth missile ships."[85] China's rapidly developing navy might view a carrier-based force posture as entirely premature yet also see the need to begin preparing for a future in which China's maritime interests are more wide ranging and its capability to defend those interests greatly advanced. By that time, improvements in intelligence, surveillance, reconnaissance, and precision weaponry might conceivably have rendered aircraft carriers and other surface vessels ineffective for some missions—the "floating coffins" that Nikita Khrushchev foresaw.[86] But by cultivating a nascent capability, however modest, the PLAN would have hedged its bets.

A second trend has been to improvise and compromise. A case can be made that the PLAN has long recognized its limitations in capability and lived within

them. Some Western analysts appear to engage in "mirror imaging" in assuming that China will automatically emulate American and Soviet large-deck aviation trajectories. But even a serious Chinese carrier development program might look substantially different from that of the superpowers. In August 1986, Liu Huaqing recalled, "when I was briefed by the leaders of the Naval Armament and Technology Department and the Feasibility Study Center, I assigned them a task regarding the development of carriers. I said, 'The method of building an aircraft carrier is a matter of overall naval construction. Whether [we are to build] helicopter carrier(s) and escort carriers in different stages, or [to] directly build escort carriers [is a matter that we] must assess carefully.'"[87] Recently, the Chinese have been surprisingly open minded as to the definition of a "carrier," running as it does the gamut from amphibious warfare ships through helicopter and hybrid carriers, up to the U.S. supercarriers.[88] A senior Chinese official stated to the authors that "China will not develop *Nimitz*-class carriers but rather mid-sized carriers."[89] In this regard, France may be a model for China. According to one article, "Since the 1970s, China has dispatched a large number of military personnel to each of the French Navy's research institutes for exchange. [They] have conducted thorough analysis on aircraft-carrier-related technology. Many people follow France's aircraft carriers carefully, even learning from personal experience how to pilot carrier-based aircraft for deck landings."[90]

Numerous literature and analyses concerning Western helicopter "carriers" suggest that this might be a more logical arc for the PLAN.[91] These smaller, simpler carriers would be substantially easier to build and operate. Helicopter carriers might also better serve Chinese operational requirements, ranging from augmenting China's currently anemic airborne ASW capability to logistical support and even humanitarian missions.[92]

The major obstacle to successful Chinese development of helicopter carriers is the continuing backwardness of its rotary-wing aircraft development and inventory. The entire People's Liberation Army today possesses fewer than 350 helicopters (roughly three hundred in the PLA and forty in the PLAN). Most platforms in the PLA's disproportionately small fleet are either imports (for instance, Super Frelons) or copies of foreign models (like the Z-8 Super Frelon derivative). The only remotely capable versions are based on French platforms, such as the Dauphin (Z-9). China also operates some Russian imports, such as the Ka-28 Helix.[93] It is finally beginning to address this lack by entering into joint ventures with Eurocopter to produce more capable machines and to obtain related technology and expertise. Reportedly, China is developing its first indigenous assault helicopter, the WZ-10 attack variant.[94] For the foreseeable future, however, China may prefer to purchase European helicopters. One Chinese analyst expresses particular interest in acquiring the Anglo-Italian EH101 and the multirole NATO NH-90

helicopter, developed by a joint venture of Italian, French, German, Dutch, and Portuguese corporations.[95] This prospect would be greatly strengthened if Europe's post-Tiananmen arms embargo were to be further weakened or lifted in the near future. In any case, the state of China's rotary-wing capability and inventory will likely serve as a leading indicator of any substantial helicopter carrier initiatives.

The long PRC record of avowedly defensive military development, recently strained by China's rising comprehensive national power and Japanese nationalism, suggests that Beijing would carefully weigh the costs and benefits of deploying so explicit a concept of force projection as a large-deck aircraft carrier.[96] Other methods and platforms might accomplish many of the same ends without alienating neighboring countries. Submarines are less conspicuous than many other major naval platforms. Diesel submarines may be interpreted as defensive in nature. Sea mines, better still, are often invisible even to foreign militaries.[97] Perhaps that is one reason—aside from survivability and cost-effectiveness—why China has recently placed so much emphasis on these platforms. Aircraft carriers, by contrast, are impossible to hide; even to some Chinese leaders they connote gunboat diplomacy and imperialism, particularly in an East Asia still consumed by memories of Japan's bloody attempts to rule it.[98] In fact, it is for precisely these reasons that the Japanese refer to the *Osumi* as an LST. The Japanese public could also become alarmed by Chinese carrier development and be stimulated to support constitutional revision, increased military spending, and even nuclear weapons development. Any form of an arms race with so capable and strategically situated a nation as Japan is clearly something that China would prefer to avoid. These are not reasons why China would *never* develop aircraft carriers, but they do suggest that China will do so only cautiously and with full cognizance of opportunity and contingency costs.

No doubt these issues have engendered substantial debate within China's civilian and military leadership, debate reflected at least in part by the diverse opinions of Chinese analysts in open sources. Perhaps some of the rumors and activities that make the question of Chinese aircraft carrier development so fascinating can be ascribed to just such a process. If and when China does embark on an unmistakable course of acquisition, we can expect to see sophisticated attempts to explain why China's carriers are different from, and serve different purposes than, their Japanese, Soviet, and American predecessors or their Indian, Japanese, Thai, American, and European contemporaries. Whatever carrier China does manage to deploy will likely be framed within peaceful rhetoric. "Our purpose in manufacturing aircraft carrier(s) is not to compete with the United States or the [former] Soviet Union, but rather to meet the demands of the struggle [to recover] Taiwan, to solve the Spratly Islands disputes and to safeguard [China's] maritime rights and interests," Liu Huaqing emphasized in his memoirs. "In peace time,

[aircraft carriers] could be used to maintain world peace, thereby expanding our international political influence."[99] Like other aspects of Chinese maritime development, it will likely be imbued with shades of the Zheng He metaphor, "peaceful" voyages of discovery and goodwill commanded by the fifteenth-century eunuch admiral.[100] A recent series in China's official navy newspaper to commemorate the six hundredth anniversary of Zheng He's voyages emphasized precisely these factors.[101] In fact, Chinese commentators make the case that while China has historically been able to build great ships, it has never used them to dictate terms to others.[102] For instance, the senior Chinese official we interviewed in mid-2006 emphasized that "a Chinese aircraft carrier would not be used to seek hegemony."[103] While the merits of such claims are open to debate, they do hint at one way in which naval power is conceptualized in the contemporary PRC. In a more immediate sense, U.S., Japanese, Indian, and Thai operations in the aftermath of the 2004 tsunami have convinced many Chinese that good carriers make good neighbors and that they are a necessity if China's force structure available for deployment to Southeast Asia is to match and complement its diplomatic initiatives.[104]

The *Kiev* museum includes a display describing the carrier's distinctively large towed sonar body. This illustrates how Soviet carrier design developed very differently from its Western counterparts, raising the fundamental question of how such design elements have influenced Chinese thinking with respect to deck aviation platforms.

In May 1998, for instance, *Shichang* visited Sydney, Australia, with the destroyer *Qingdao* and the hospital ship *Nancang*.[105] This was part of a larger mission of *Shichang* and fellow training ship *Zheng He*—to "reveal the graceful bearing of a new generation of PLAN officers, spread the arena of friendship, understand the world, open the window of a [new] a field of vision, increase experience, [and become] a study platform" by visiting over sixty sea areas and ports, including Hawaii and Vladivostok.[106] *Shichang* has also visited New Zealand and the Philippines.[107] It is designed specifically to deploy to "disaster areas." Under Captain Wang Gexin, its hospital unit has also participated in domestic flood relief efforts.[108] Shichang conducted a "national defense mobilization drill" near Xiamen on 28 July 1999.[109] *Shichang* has proved capable of long-distance open-ocean navigation. In July–August 1999 "it carr[ied] out at-sea defense drills, [the] largest, furthest, and longest in PLAN history."[110] Perhaps *Shichang* was not deployed to help with tsunami relief in 2004 because it is indispensable to PLAN training. If that is the case, maybe China would

consider such a role in the future if its helicopter carriers become more sophisticated and numerous.

The logic Chinese sources outline for the utility of a small carrier for regional purposes raises the interesting ideas of both a naval "ecosystem" and a modern, regional basis for capital-ship calculations. Chinese calculations of a small carrier's utility in regional diplomacy vis-à-vis the Indian navy and the JMSDF are very similar to the logic that Alfred Thayer Mahan used when calculating how many battleships should be posted on America's West Coast vis-à-vis the Royal Navy, French, and German navies to prevent adventurism on the west coast of South America. In a Chinese context, the idea might be to complicate the calculations of others with claims to the Spratlys or other contested areas. The tactical utility of these platforms as disaster relief sea bases offers a positive spin-off for diplomacy. The idea of a regional naval ecosystem is of great potential importance to the development of a global maritime security network, as the U.S. Navy goes about rendering naval security assistance. All U.S. actions will have second and third order effects on these systems. Awareness of such ramifications will be essential for the conduct of effective Phase Zero (precursor) operations.[111]

A NEW GOLD STANDARD

In their excellent article in the Winter 2004 issue of this journal, You Ji and Ian Storey concluded that

> with the retirement of Liu in 1997. . . the aircraft carrier lost its champion in the Chinese navy. At the same time, the need to control the South China Sea as a strategic priority was downgraded as reunification with Taiwan hurtled to the top of Beijing's agenda. In that context, given the relative closeness of Taiwan and improvements in the capabilities of the Chinese air force and missile arsenal, aircraft carriers are not now considered vital.[112]

This and similar U.S. Defense Department assessments of recent years that China's carrier program was sidelined were correct and would likely be confirmed by senior Chinese officials at the time. Following the 2004 tsunami and especially with the advent of the eleventh five-year plan, however, those priorities seem to be changing. What even a modest carrier can do in the near term caught the Chinese by surprise in early 2005, when they watched in horror as Indian and Japanese carriers conducted post-tsunami relief operations. Thus, in reconceptualizing the PLAN carrier, China's two potential role models—and competitors—are not the United States and the former Soviet Union but rather India and Japan. Fixating on the global "gold standard" for aircraft carriers is no longer the only, or even the most appealing, option for China. Beijing's strategic focus on Taiwan militates against developing aircraft carriers, except for small

helicopter carriers serving as antisubmarine-warfare platforms, for that specific scenario. To China's south and southwest, however, especially along the lengthy sea lines of communication, aircraft carriers of all variations could play more useful operational and diplomatic roles. A carrier as a discrete capability fulfilling secondary roles, such as sea-lane security and humanitarian and disaster relief missions, is therefore the most likely trajectory.

Nevertheless, once China has multiple carriers in operation, there is no reason to think that new technologies and doctrines will preclude Beijing from linking the carrier to its more capable and far more numerous submarines. As many as twelve to fifteen helicopter carriers or a mix of modest carriers and somewhat larger variants would represent a significant shift in ASW capability and may better complement the submarine-centered navy, which China is clearly developing at present, than would large-deck fixed-wing alternatives. With the wealth of new models of carriers and operational concepts available to watch, the carrier discussion in China—while still theoretical—has matured. On paper at least, the Chinese have avoided the pitfall of spending too much on the wrong platforms at the wrong time. It remains to be seen, however, exactly what place aircraft carrier development will have in what has been a prolonged, publicized, and increasingly successful attempt by China to become a maritime power.

One thing is clear: Beijing will continually search for the most effective platforms with which to assert control over its maritime periphery. As a recent article in the *PLA Daily* emphasizes,

> We must absolutely no longer be the least bit neglectful regarding the "world without markers" of our vast sea area, our blue frontier. We must no longer customarily assert that the total area of our national territory is 9.6 million square kilometers. To that we must add our sea area of 3 million square kilometers, our blue frontier. Who will protect this vast blue frontier? How should it be protected? Those are questions which every Chinese person, and especially every member of the Chinese armed forces, must ponder carefully. During China's era of weakness and degeneration in the past, in the face of power backed up by gunboats, we lost many things which we should not have lost. It's a different era now. We must not lose anything. We must fight for every inch of territory, and never give up an inch of sea area! We must build a powerful Navy, and protect our coastal defenses, our islands, our vast blue frontier, and everything within the scope of our maritime rights and interests. Cherishing and protecting the seas and oceans is the sacred duty and responsibility of our republic's military personnel. Every intangible "boundary marker" and "sentry post" at sea must always be clearly visible in the minds of every one of us.[113]

NOTES

The photographs were taken by Dr. Erickson during a visit by the authors to the People's Republic of China in early 2006.

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1. See, for example, 王振文 [Wang Zhenwen, editor], "'明思克'号传奇" [The Legend of the *Minsk*], (南海出版公司 [South China Sea Publishing Company], 2002), p. 238. The works of such premier scholars as Tang Shiping of the Chinese Academy of Social Sciences (CASS) emphasize the need for China's leaders to focus on resolving domestic problems and to "make positive advances while not rushing forward blindly . . . to seek a balance between progress and prudence." This would seem to problematize a rapid large-deck carrier program. 唐世平 [Tang Shiping], "2010–2015 年的中国周边安全环境—决定性因素和趋势展" [China's Peripheral Security Environment in 2010–2015: Decisive Factors, Trends, and Prospects], 战略与管理 [Strategy & Management], no. 4 (2001), p. 37, Foreign Broadcast Information Service (FBIS) CPP20021017000169. See also 唐世平 [Tang Shiping], "再论中国的大战略" [Reconsidering China's Grand Strategy], 战略与管理 [Strategy & Management], no. 4, 2001.
2. "Observation Post of the Military Situation" program, Feng Huang Wei Shih Chung Wen Tai [Phoenix Television], 15 March 2006, FBIS CPP20060317515025. *Jianchuan Zhishi* is a monthly publication of the Chinese Society of Naval Architecture and Marine Engineering.
3. 赵卫 [Zhao Wei], 超空泡高速鱼雷技术综合分析 [A Comprehensive Analysis of High-Speed Supercavitating Torpedo Technology], master's dissertation, Harbin Engineering University, 1 January 2001, p. 64.
4. Ibid.
5. Authors' interview, Beijing, June 2006.
6. 吴红民 [Wu Hongmin], "龙游五洋: 中国海军发展新论" [The Dragon Swims the Five Seas: New Ideas on China's Naval Development], 舰载武器 [Shipborne Weapons] (September 2005), p. 18.
7. Ibid.
8. For scholarship concerning China's carrier development, see Ian Storey and You Ji, "China's Aircraft Carrier Ambitions: Seeking Truth from Rumors," *Naval War College Review* 57, no. 1 (Winter 2004), pp. 77–93. This article has been translated into Chinese as 张宏飞 [Zhang Hongfei], "中国人为什么需要或不需要航母?—看清中国的航母雄心 外国专家从传言中探寻真相" [Why Do the Chinese People Need, or Not Need, an Aircraft Carrier?—Foreign Experts Seek from Rumors to Clearly See the Truth about China's Aircraft Carrier Ambitions], 国际展望 [World Outlook], no. 16 (August 2004), pp. 16–21.
9. This is not to imply that the Chinese have across-the-board advantages in either submarine or mine warfare, especially compared to the U.S. Navy, but rather that focused investments in these warfighting specializations seem to promise the highest rate of strategic return in the near term.
10. 刘华清 [Liu Huaqing], 刘华清回忆录 [The Memoirs of Liu Huaqing] (Beijing: People's Liberation Army, 2004), p. 481. All original quotations from Liu's autobiography were checked against the wording in the FBIS translation of Chapters 16–20, CPP20060707320001001. Wording different from the FBIS translation is used whenever the authors felt that it better reflected Liu's meaning or would be more comprehensible to the reader.
11. See Liu Huaqing, *Memoirs of Liu Huaqing,* p. 437; and Bernard D. Cole, *The Great Wall at Sea: China's Navy Enters the Twenty-first Century* (Annapolis, Md.: Naval Institute Press, 2001), pp. 165–68.
12. See "日本军舰跟踪我国科考船" [Japanese Warships Track Our Scientific Research Vessels], 世界新闻报 [World News Report], 17 May 2004, p. 24.
13. For a Chinese argument that the United States cooperates with Japan militarily to contain China, see "西太平洋美军'岛链'情结" [The U.S. Military's Strong "Island Chain" Sentiment in the Western Pacific], 中国国防报 [China National Defense News], 29 June 2004; and "武士刀出鞘: 日本对华政策硬化" [The Samurai Sword Is Out of Its Scabbard: The Hardening of

Japan's China Policy], 国际先驱导报 [International Herald], 21 January 2005.

See "日本军舰跟踪我国科考船" [Japanese Warships Track Our Scientific Research Vessels], 世界新闻报 [World News Report], 17 May 2004, p. 24. For the archipelagoes, see 王京 [Wang Jing, editor], 美航母在台湾周围演习什么？二）[The American Aircraft Carrier Conducts What Exercises around Taiwan? (Part 2)] 央视国际 [CCTV International], 19 June 2004, 6:25 PM, www.cctv.com/program/hxla/20040620/100489.shtml.

14. A recent issue of China's official *People's Daily* mentions only two "island chains," the first and the second. "美军忙著大调整" [U.S. Navy Preoccupied with Major Adjustment], 人民日报 [People's Daily], 9 July 2004. Also, "美国鹰派人物再放狂言—透视美国空中打击中国计划" [Members of the U.S. "Hawk Faction" Rave Again: A Perspective on a U.S. Plan to Attack China from the Air], 国际展望 [World Outlook], no. 9 (May 2005), pp. 27–28.

15. "Memoir of Senior Military Leader Published," Xinhua, 8 October 2004, FBIS CPP20041008000177; "'刘华清回忆录' 已由解放军出版社出版" ["Memoirs of Liu Huaqing" (former Central Military Commission vice chairman) Published], *Jiefangjun Bao,* www.chinamil.com.cn/site1/xwpdxw/2004-10/03/content_28915.htm.

16. Liu Huaqing, *Memoirs of Liu Huaqing,* p. 477.

17. Ibid.

18. Ibid., p. 479.

19. This paragraph is drawn entirely from ibid., p. 478.

20. Ibid., p. 480.

21. Information from this and the preceding paragraph is derived from ibid., pp. 480–81.

22. Ibid., p. 481.

23. Ibid.

24. "Former Deputy Commander of the PLA Navy Vice Admiral Zhang Xusan Is Guest of Sina.com," *Jianchuan Zhishi* (Internet version), 11 July 2005, FBIS CPP20050713000187.

25. For the quote, Liu Huaqing, *Memoirs of Liu Huaqing,* p. 481. For symbolism, ibid., p. 477. For developments in other countries, ibid., p. 479.

26. Ibid., p. 481.

27. See "Aircraft Carrier Programme," *Chinese Defence Today,* available at www.sinodefence.com/navy/aircarrier/default.asp.

28. 余晓军, 高翔, 钟民军 [Yu Xiaojun, Gao Xiang, and Zhong Min], "蒸汽弹射器的动力学仿真研究" [Simulation of Dynamics of the Steam-Powered Catapult], 船海工程 [Ship & Ocean Engineering] 166, no. 3 (2005), pp. 1–4; and 贾忠湖, 高永, 韩维 [Jia Zhonghu, Gao Yong, and Han Wei], 航母纵摇对舰载机弹射起飞的限制研究 [Research on the Limitation of Vertical Toss to the Warship-Based Aircraft's Catapult-Assisted Take-off], 飞行力学 [Flight Dynamics] 20, no. 2 (June 2002), pp. 19–21.

29. The Thai carrier has a full-load displacement of 11,486 tons, making it one of the smaller operational aircraft carriers, if not the smallest. See "Chakri Naruebet Offshore Patrol Helicopter Carrier, Thailand," www.naval-technology.com/projects/chakrinaruebet/.

30. See "Aircraft Carrier Programme."

31. For "military education," 天鹰 [Tian Ying], "1979年中国海军迫近'明斯克'号" [In 1979 the PLAN Approached the Minsk Aircraft Carrier], 舰载武器 [Shipborne Weapons] (January 2005), pp. 87–89; and 区国义 [Ou Guoyi], "前苏联'明斯克'号航母的改装" [The Re-Equipping of the Soviet Aircraft Carrier "Minsk"], 中国修船 [China Ship Repair], no. 4 (2000), p. 15. Also, 吴伦楷 [Wu Lunkai], "'明思克'航空母舰成功系泊之所在" [The Reason of the Successful Mooring of the Aircraft Carrier "Minsk"], 船舶 [Ship & Boat], no. 6 (December 2001), pp. 54–57.

32. 李伟群 [Li Weiqun], "'基辅'号闯关记" [Record of the Retired Russian Aircraft Carrier "Kiev" Braving the Journey], 中国远洋航务公造 [China Ocean Shipping Monthly], no. 10 (2000), pp. 62–64.

33. For tourists, 张俊杰 [Zhang Junjie], "不露文章世已惊—扫描 '基辅'航母世界" [Astonish the World before Publicity: A Glance over the Aircraft Carrier "Kiev"], 中国船检 [China Ship Survey] no. 8 (2001), pp. 26–27. Also, 安飞 [An Fei], "'基辅'号航母探秘" [A Probe into the Aircraft Carrier "Kiev"], 中国船检 [*China Ship Survey*], no. 10 (2003), p. 39.

34. Authors' visit, 滨海航母主题公园 [Binhai Aircraft Carrier Theme Park], June 2006.

35. Maubo Chang, Taiwan Central News Agency, 2

April 1998, FBIS FTS19980402001018. According to one source: "The contract with Ukraine stipulated that the buyer can't use the carrier for military purposes, and that any equipment that could be used to build other warships [be] removed from the craft." The extent to which this was a binding stipulation is unclear, especially as the company that originally purchased *Varyag* from Ukraine no longer exists. Moreover, whether "military purposes" includes training and experimentation is equally unclear. A close examination of the specifics of the contract as well as the larger legal issues of operationalizing the *Varyag* is definitely warranted but is beyond the scope of the current work. "Aircraft Carrier Project," GlobalSecurity.org, available at www.globalsecurity.org/military/world/china/cv.htm.

36. See Xian Qigong, "Chinese Navy's First Aircraft Carrier Strike Group in Commission within Two Years," *Dowel Sinew,* 1 May 2006, FBIS CPP20060512501008.

37. Authors' interview, Beijing, June 2006.

38. For a Chinese claim that *Varyag* may be used for "training," see Wu Hongmin, "Dragon Swims the Five Seas," p. 20.

39. See 苏红宇 [Su Hongyu], "是航母? 还是" [Is It an Aircraft Carrier, Or . . . ?], 船舶工业技术经济信息 [Ship Building Industry Technological & Economic Information], no. 3 (2005), pp. 50–55; and "A Vessel of Choice," *INCAT News,* 22 May 2003, www.incat.com; Michael Lowe, "INCAT's Aircraft Carrier Plans," *Examiner,* 30 July 2003, available at www.examiner.com.au/story.asp?id=188186.

40. For evidence that the shipbuilding sector is among China's most advanced military sectors, thanks in part to its robust civilian counterpart, see "China's Shipbuilding Industry," chapter 3 of Evan S. Medeiros, Roger Cliff, Keith Crane, and James C. Mulvenon, *A New Direction for China's Defense Industry* (Arlington, Va.: RAND, 2005), pp. 109–54.

41. See, for example, such periodicals as 中船重工 [China Shipbuilding Industry], 船舶工业技术经济信息 [Technological and Economic Information of the Shipbuilding Industry], and 中国港口和码头 [Chinese Harbors and Wharves].

42. 励缨, 温玮, 金长江 [Li Ying, Wen Wei, and Jin Changjiang], "舰载飞机逃逸 复飞动力学特性研究" [The Study of the Dynamic Character of Bolting and Going-Around for Carrier Aircraft], 飞行力学 [Flight Dynamics] 12, no. 2 (June 1994), pp. 1–9.

43. 姚熊亮, 瞿祖清, 陈起富 [Yao Xiongliang, Qu Zuqing, and Chen Qifu], "飞机 在航母飞行甲板上着舰时的冲击轮载" [Landing Loads of Airplane Gear on the Deck of Aircraft Carriers], 哈尔滨工程大学学报 [Journal of Harbin Engineering University] 18, no. 2 (April 1997), pp. 8–15; and 姚熊亮, 瞿祖清, 陈起富 [Yao Xiongliang, Qu Zuqing, and Chen Qifu], "爆炸载荷下航母飞行甲板" [The Elastoplastic Responses of Flight Decks of Aircraft Carriers Subjected to Air Blasts], 哈尔滨工程大学学报 [Journal of Harbin Engineering University], no. 3 (1996), pp. 21–30.

44. For VSTOLs, 金长江, 车军 [Jin Changjiang and Che Jun], "斜板滑跳起飞动力学特性研究" [Study of the Dynamic Characteristics of Ramp Ski Jump Takeoffs], 北京航空航天大学学报 [Journal of Beijing University of Aeronautics and Astronautics] 23, no. 3 (June 1997), pp. 356–61. For takeoff issues, 曲东才, 周胜明 [Qu Dongcai and Zhou Shengming], 载机起飞技术研究 [Study of Technologies of Shipboard Plane Taking Off], 航空科学技术 [Aeronautical Science & Technology], no. 4 (2004), pp. 25–29. For deck motion, 余永, 杨一栋 [Yu Yong and Yang Yidong], "基于卡尔曼滤波理论的甲板运动预估技术研究" [Deck Motion Prediction Technique Based on Kalman Filtering Theory], 数据采集与处理 [Journal of Data Acquisition & Processing] 17, no. 4 (2002), pp. 381–84; and 要瑞璞, 赵希人 [Yao Ruipu and Zhao Xiren], "航母运动姿态实时预报" [Real-Time Prediction of Aircraft Carrier Motion], 海洋工程 [Ocean Engineering], no. 3 (1997), pp. 26–31. For air wake, 彭兢, 金长江 [Peng Jing and Jin Changjiang], "航空母舰尾流数值仿真研究" [Research on the Numerical Simulation of Aircraft Carrier Air Wake], 北京航空航天大学学报 [Journal of Beijing University of Aeronautics and Astronautics] 26, no. 3 (June 2000), pp. 340–43. For landing decisions, 余勇, 杨一栋, 代世俊 [Yu Yong, Yang Yidong, and Dai Shijun], "舰载飞机复飞决策技术研究与实时可视化仿真" [Study on Wave-Off Decision Techniques and Real-Time Visible Simulation of Carrier-Based Aircraft], 飞行力学 [Flight Dynamics] 20, no. 2 (June 2002), pp. 31–38. For key technologies, 王钱生 [Wang Qiansheng], "舰载机总体设计主要关键技术概述" [Critical Technologies in

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45. For levitation ejectors, "为什么新一代航母要用磁悬浮弹射装备" [Why the Next Generation of Aircraft Carriers Will Use Magnetic Levitation Ejectors], 国防科技 [National Defense Science & Technology], no. 4 (2004), p. 83. For IFEP, 石艳, 徐惠明 [Shi Yan and Xu Huiming], "21世纪结合全电力推进的航母" [Aircraft Carrier with IFEP for the Twenty-first Century], 船电技术 [Marine Electric Technology], no. 2 (2005), pp. 4–5, 9. Emerging technologies may be able to provide significant combat capability suitable for the Chinese strategy even with a smaller deck. For insight into propulsion and catapult alternatives, see navy-matters.beedal.com/cvf3-2.htm.

46. For an explicit example, see 冯宁 [Feng Ning], "成像型制导系统舰船目标自动识别技术的研究" [Research Concerning Automatic Vessel Target Recognition Technology in Imaging-type Guidance Systems], master's dissertation, 哈尔滨工程大学 [Harbin Engineering University], 2 February 2005.

47. 流星 [Liu Xing], "中国迫切需要航空母舰吗" [Does China Urgently Need an Aircraft Carrier?], 舰载武器 [Shipborne Weapons] (January 2004), p. 27. For a Shenyang Aircraft Design & Research Institute expert's analysis of relevant technological demands, see Wang Qiansheng, "Critical Technologies in Carrier-Based Aircraft Design and Development," pp. 6–10. For other challenges inherent in developing aircraft suitable for a Chinese aircraft carrier, see 宇垣 大成 [Ugaki Taisei], "中国空母はいつ出現するか" [When Will a Chinese Aircraft Carrier Appear?], 世界の艦船 [Ships of the World] (April 2005), p. 112.

48. See "Aircraft Carrier Programme."

49. Ibid. As of June 2006, China had received 24 Su-30 MKK/MK2s. While this is a significant purchase, it might not be sufficient to outfit a CSG.

50. "KJ-2000 Airborne Warning & Control System," *Chinese Defence Today*, available at www.sinodefence.com/airforce/specialaircraft/kj2000.asp.

51. "Y-8 'Balance Beam' Airborne Early Warning Aircraft," *Chinese Defence Today*, available at www.sinodefence.com/airforce/specialaircraft/y8balancebeam.asp.

52. See, for example, "Observation Post of the Military Situation," HK Phoenix TV, *Military News,* FBIS CPP20060626715001, 21 June 06.

53. See "Aircraft Carrier Programme."

54. Sandra I. Erwin, "Navy Aims to Curtail Aviation Mishaps Caused by Crew Error," *National Defense* (October 2000), www.nationaldefensemagazine.org/issues/2000/Oct/Navy_Aims.htm.

55. Liu Huaqing, *Memoirs of Liu Huaqing,* p. 480.

56. Ibid., p. 474.

57. Authors' interview, Beijing, June 2006.

58. 李兵 [Li Bing] 海军英豪: 人民海军英模荟萃 [Naval Heroes: An Assembly of Heroic Models from the People's Navy] (Beijing: Sea Tide, 2003), p. 1.

59. "Senior Military Officer: China to Develop Its Own Aircraft Carrier Fleet," *Wen Wei Po,* 10 March 2006, FBIS CPP20060310508004.

60. See, for example, Li Bing, *Naval Heroes,* pp. 1–3.

61. Author's interviews, Beijing, December 2005.

62. 陈张明, 王积建, 冯先辉 [Chen Zhangming, Wang Jijian, and Feng Xianhui], "印度洋海啸中的海军行动" [Naval Operations in the Indian Ocean Tsunami], 当代海军 [Modern Navy], No. 3, 2005, pp. 44-45. For "non-combat," "让"非战争军事行动'阳光起来" [Letting 'Non Combat Military Operations' Shine Forth], 当代海军 [Modern Navy], March 2005.

63. 张文木 [Zhang Wenmu], "美国的石油地缘战略与中国西藏新疆地区安全—从美国南亚和中亚外交新动向谈起" [America's Geopolitical Oil Strategy and the Security of China's Tibet and Xinjiang Regions: A Discussion Based on New Trends in America's South and Central Asian Diplomacy], 战略与管理 [Strategy & Management] 27, no. 2 (1998), pp. 100–104.

64. Zhang Wenmu, "China's Energy Security and Policy Choices," *Shijie Jingji Yu Zhengzhi* [World Economics & International Politics], no. 5 (May 2003), pp. 11–16, FBIS CPP20030528000169.

65. Liu Xinhua and Zhang Wenmu, "China's Oil Security and Its Strategic Options," *Xiandai Guoji Guanxi* [Contemporary International Relations], no. 12 (December 2002), pp. 35–37, 46, FBIS CPP20030425000288.

66. 张文木 [Zhang Wenmu], "试论当代中国 '海权' 问题" [Discussing Modern China's Problem of Maritime Rights], 中国远海航务公告 [Maritime China], no. 5 (2005), p. 50. For a more moderate view concerning the most effective means of promoting Chinese energy security, see People's University scholar 查道炯 [Zha Daojiong], "中美能源合作及对东亚合作的影响" [Sino-American Energy Cooperation and Its Impact on Cooperation in East Asia], 外交评论 [Journal of the Foreign Affairs College], no. 6 (2005), pp. 34–35.

67. For a Chinese analysis of Soviet successes and failures in carrier design and construction, see 王存琳 [Wang Cunlin], "俄罗斯航空母舰的兴衰" [The Prosperity and Decline of Aircraft Carriers in Russia], 上海造船 [Shanghai Shipbuilding], no. 2 (1999), pp. 55–60.

68. "'世昌'号••中国海军的新式空中勤务舰" ["Shichang": China's Navy's New Type of Aerial Service Ship], 船舶电子工程 [Ship Electronic Engineering] 107, no. 5 (1998), p. 41.

69. 曹金平 [Cao Jinping], "'世昌'号,中国第一艘国防动员舰" ["Shichang": China's First National Defense Mobilization Ship], 航海 [*Navigation*], no. 1 (1998), p. 21.

70. Cao Jinping, "Shichang," p. 22.

71. For the *Argus* similarity, "The Rusted 'Viking' Lives Again: The Strange Tale of a Former Soviet Aircraft Carrier," *Sitrep* (Royal Canadian Military Institute) 65, no. 6 (November/December 2005), p. 15. For the Dalian visit, 曹金平 [Cao Jinping], "探营国防动员舰" [Visit and Operate National Defense Mobilization Ship], 解放军报 [PLA Daily], 29 July 2003, www.pladaily.com.cn/gb/defence/2003/07/29/20030729017107_gfgj.html. For trials, 海司院校部 [Naval Department Academic Section], "'世昌' 舰完成首次远航实习任务" ["Shichang" Vessel Accomplishes Its First Extended Sea Trial Mission], 海军院校教育 [Education of Naval Academies] 217, no. 3 (1999), p. 12.

72. "我海军院校学员实践性课目训练都在训练舰上完成" [Our Naval Academy Students Accomplish Practice of All Their Training Subjects on Training Vessels], 解放军报 [PLA Daily], as reprinted in 人民日报 [People's Daily], 27 September 2004, available at www.people.com.cn/GB/junshi/1076/2810389.html.

73. *Shichang* is named for Qing dynasty hero and Beiyang navy general Deng Shichang (Cao Jinping, "Shichang," p. 21). Deng died a hero's death in the Sino-Japanese War's Yellow Sea Battle after ramming an enemy ironclad when his ammunition had run out. Ammunition supplies were inadequate because of official corruption. Also 陈国芳, 李朝贵, 陈万军 [Chen Guofang, Li Zhaogui, and Chen Wanjun], "'世昌号',我们热烈欢迎您—我国第一艘国防动员船诞生记" ["Shichang," We Warmly Welcome You: A Record of the Emergence of China's First National Defense Mobilization Ship], 中国民兵 [China Commando], no. 4 (1997), p. 26.

74. Cao Jinping, "Visit and Operate National Defense Mobilization Ship."

75. Unless otherwise specified, this quotation and other information in this paragraph derive from "Shichang (Multirole Aviation Ship)," GlobalSecurity.org, www.globalsecurity.org/military/world/china/shichang.htm.

76. Ibid. Addition of medical treatment and hospital ward modules allows *Shichang* to serve as a "true 'at-sea mobile hospital,'" with dimensions similar to a land-based equivalent. With its transport container, it can become a larger transport ship. *Shichang* boasts 108 rooms and compartments. Cao Jinping, "Visit and Operate National Defense Mobilization Ship."

77. 鞭激 [Bian Ji], "中国的航母雏形—'世昌舰'" [China's Embryonic Aircraft Carrier: "Shichang"], 船舶电子工程 [Ship Electronic Engineering] 113, no. 5 (1999), p. 59.

78. 尹岭 [Yin Ling], 中国直升机航母前瞻 [The Outlook for Chinese Helicopter Carrier(s)], 舰载武器 [Shipborne Weapons], no. 8 (2005), p. 43.

79. Ibid., p. 45.

80. Ibid., p. 49.

81. See "Amphibious Assault Ship (LHD) Programme," *Chinese Defence Today*, www.sinodefence.com/navy/amphibious/lhd.asp.

82. See Ling Xiang, "扬威海上的中国水雷战舰艇" [Chapter 6: Raise Mighty Chinese Sea Mine Warfare Ships on the Sea], in 当代水雷战舰艇大观 [Modern Sea Mine Warships Spectacle],

当代军舰大观系列丛书之五 [Modern Warship Spectacle Book Series, vol. 5] (Beijing: World Knowledge Press, 1995), p. 160; and 林长盛 [Lin Changsheng], "潜龙在渊: 解放军水雷兵器的现状与发展" [The Hidden Dragon in the Deep: The Present Situation and Development of PLA Mine Weaponry], 国际展望 [World Outlook], no. 9 (May 2005), p. 32.

83. Taiwan military spokesman Liu Chih-chien is quoted as stating that the *Varyag* will be "used as a training ship in preparation for building an aircraft carrier battle group"; David Lague, "An Aircraft Carrier for China?" *International Herald Tribune,* 31 January 2006.

84. For ballistic missiles, "攻击航母的武器装备" [Weapons for Attack of Aircraft Carriers], 当代海军 [Modern Navy] (October 2004); 顾险峰, 钱建平, 马远良 [Gu Xianfeng, Qian Jianping, and Ma Yuanliang], "鱼雷武器远程精确打击导引模式和技术架构初步探索" [Preliminary Research on the Guidance Pattern and Technique Framework of Long-Range Accurate Attack Torpedo Weapons], 舰船科学技术 [Ship Science & Technology], March 2003; 催绪生, 关国枢, 周德善 [Cui Xusheng, Guan Guoshu and Zhou Deshan], "接受海战的历史教训—加强新世纪的鱼雷研制工作" [Draw Useful Lessons from History and Strengthen R&D of Torpedoes in the New Century], 舰船科学技术 [Ship Science & Technology] (March 2003); 李光普 [Li Guangpu], "美国航母的今昔及与其对抗问题的分析" [An Analysis of American Aircraft Carriers Past and Present and the Problems They Have Faced], 飞航导弹 [Winged Missiles Journal] (March 2002); 张国华, 袁乃昌, 庄钊文 [Zhang Guohua, Yuan Naichang, and Zhuang Zhaowen], "基于前元法的航母雷达散射截面计算" [Calculation of the Radar Cross Section of an Aircraft Carrier Based on the Plate-Element Method], 国防科技大学学报 [Journal of the National University of Defense Technology] 23, no. 5 (2001), pp. 79–83; and "海上霸王--航空母舰" [Maritime Hegemon: The Aircraft Carrier], *Science Initiation* (March 1996). For cruise missiles, 王剑飞, 武文军, 彭小龙, 熊平 [Wang Jianfei, Wu Wenjun, Peng Xiaolong, and Xiong Ping], "美军航母战斗群空袭火力及其效能分析" [Analysis on Effectiveness of the Air-Attack Firepower of a U.S. Carrier Fighting Group], 情报指挥控制系统与仿真技术 [Intelligence, Command, Control, and Simulation Technology] 27, no. 1 (February 2005), pp. 24–30; and 何文涛, 吴加武 [He Wentao and Wu Jiawu], "航母编队特点及对策研究" [A Study on Countering Aircraft Carrier Battle Groups], 现代防御技术 [Modern Defense Technology] 32, no. 5 (October 2004), pp. 18–20, 29. For submarines, [Qin Hang, Lin Hua, and Zhou Feng], "响潜艇战斗群作战性能技术因素分析" [Analysis of Some Technical Factors That Affect the Combat Characteristics of a Group of Submarines], 海军工程学院学报 [Journal of the Naval Engineering Academy] 89, no. 4 (1999), pp. 60–63. For torpedoes, 石敏, 刘晓亮, 逄妍立, 石勇 [Shi Min, Liu Xiaoliang, Pang Yanli, and Shi Yong], "反航母鱼雷远程制导技术的现状和发展" [The Present Situation and Development of Long-Range Homing Technology on Anti–Aircraft Carrier Torpedoes], 舰船科学技术 [Ship Science & Technology] 27, no. 1 (2005), pp. 17–20; and 顾险峰, 钱建平, 马远良 [Gu Xianfeng, Qian Jianping, and Ma Yuanliang], "鱼雷武器远程精确打击导引模式和技术架构初步探索" [Preliminary Research on Guidance Patterns and Technique Framework of Long-Range Accurate Attack Torpedo Weapons], 舰船科学技术 [Ship Science & Technology] 25, no. 3 (2003), pp. 7–11. For sea mines, 刘衍中, 李祥 [Liu Yanzhong and Li Xiang], "实施智能攻击的现代水雷" [Carrying Out Intelligent Attacks with Modern Sea Mines], 当代海军 [Modern Navy], July 2006, p. 29; Jiao Fangjin, "双头鹰的水中伏兵" [The Double-Headed Eagle's Ambush at Sea], 国防科技 [Defense Science] (July 2003), p. 91; Wang Wei, "历久弥新话水雷" [Enduring and Yet Fully Relevant: A Discussion of Sea Mines], 国防 [National Defense] (November 2002), p. 58; Fu Jinzhu, 水雷战 不容忽视 [Mine Warfare Must Not Be Ignored], 现代舰船 [Modern Ships], no. 156 (November 1998), p. 1.

85. 宜恒, 新华 [Yi Heng and Xin Hua], "航母煞星: 对付航母的六大撒手锏" [Six Trump Cards to Cope with Aircraft Carriers], 国际展望 [World Outlook], no. 3 (February 2001), pp. 60–61.

86. For a Chinese account of the influence of Khrushchev's "航空母舰棺材论" [aircraft carrier coffin theory], see Wu Hongmin, "Dragon Swims the Five Seas," p. 17.

87. Liu Huaqing, *Memoirs of Liu Huaqing,* p. 478. In a March 1987 report to the PLA General Staff, Admiral Liu offered possible clarification of what he meant by "escort carriers": "Our analysis shows that, without developing aircraft

carriers, the Navy still has to develop destroyers and escort ships in order to make up a mobile force at sea. If aircraft carriers are developed, these ships can serve as escorts for the aircraft carriers and also as mobile combat vessels." Ibid., p. 480.

88. The Chinese colloquial abbreviation for aircraft carrier, *hangmu,* is also used extensively to describe flagship enterprises and other great achievements. See, for example, 张权 [Zhang Quan], "打造锰业航母—做大做强锰业" [Build Up the Aircraft Carrier of the Manganese Industry and Make the Manganese Industry Stronger], 中国锰业 [China's Manganese Industry] 23, no. 3 (August 2005), pp. 54–55. For use of the term "aircraft carrier" metaphorically to describe a space station, see 卢天贶 [Lu Tiankuang], "居高临下的太空武器" [Space Weapons: Occupying Commanding Heights] (天津科学技术出版社 [Tianjin Science & Technology], 2003), p. 56. For use of the term "aircraft carrier" to symbolize an educational institution, see 顾明远 [Gu Mingyuan], "挑战与应答: 世纪之交的中国教育变革" [Challenges and Answers: A Century of Chinese Educational Transformation], (福建教育出版社 [Fujian Education], 2001), p. 96. These examples suggest a larger Chinese penchant for metaphorical writing that makes literal interpretation of interesting rumors problematic.

89. Authors' interview, Beijing, June 2006.

90. 克里斯蒂.曼巴尔. 丹杰. [Christie Manbar (as transliterated), France, trans. and ed. Dan Jie], "中国早期航空母舰设想" [China's Early Stage Conception of Aircraft Carrier(s)], 舰载武器 [Shipborne Weapons] (July 2005), pp. 18–21. For an article documenting a PLAN officer's attendance at a five-day exercise on the *Charles de Gaulle*, see 纪明周 [Ji Mingzhou], "我随'戴高乐'号出航" [I Set Sail with the 'Charles de Gaulle'], 舰船知识 [Naval & Merchant Ships] (November 2005), pp. 18–22.

91. For a Chinese analysis of the British ASW helicopter carrier HMS *Invincible* (R05), see 陈坚主 [Cheng Jianzhu], 武器装备完全图美册: 英国 [Complete Guide to Weapons: England], (广西人民出版社 [Guangxi People's Press], 2003), p. 74.

92. See 尹岭 [Yin Ling], "中国直升机航母前瞻" [The Outlook for a Chinese Helicopter Carrier], 舰载武器 [Shipborne Weapons] (August 2005), pp. 43–49.

93. See *Chinese Defence Today,* at sinodefence.com/airforce/helicopter/z9c.asp and sinodefence.com/airforce/helicopter/ka28.asp.

94. "WZ-10 Attack Helicopter," *Chinese Defence Today,* www.sinodefence.com/airforce/helicopter/wz10.asp.

95. 银河 [Yin He], 飞向大洋: 中国海军舰载直升机的发展与问题 [Flying toward the Ocean: The Development and Problems of the PLAN's Ship-Based Helicopters], 舰载武器 [Shipborne Weapons], no. 7 (July 2005), p. 30.

96. A third PLAN development trend has been careful consideration of the political impact of its development and deployment activities. China's leaders took great pains to characterize their successful detonation of an atomic bomb in 1964 as "prevention of nuclear blackmail" and the liberation of other developing nations by breaking a "superpower monopoly." In sharp contrast to Soviet expansionism, Chinese leaders insisted, China's military development was inherently defensive. Beijing went so far as to describe the 1978 invasion of Vietnam as a "defensive counterattack." As China has grown more powerful in recent years, Beijing has characterized its rapid military development as a "peaceful rise" designed merely to restore China to its former position of benevolent greatness. Even that slogan was recently deemed too provocative; it was replaced with the concept of "peaceful development."

97. See, for example, 林长盛 [Lin Changsheng], "潜龙在渊: 解放军水雷兵器的现状与发展" [The Hidden Dragon in the Deep: The Present Situation and Development of PLA Mine Weaponry], 国际展望 [World Outlook], no. 9 (May 2005), p. 22.

98. For acknowledgement of this issue, and a claim that it will not stop China from refitting the *Varyag* as an operational aircraft carrier, see "First Aircraft Carrier in Service Three Years from Now," *Tung Chou Kan*, no. 135, 28 March 2006, pp. 54–56, FBIS CPP20060403510006.

99. Liu Huaqing, *Memoirs of Liu Huaqing,* p. 479.

100. For an example of this differentiation, see Wu Hongmin, "Dragon Swims the Five Seas," pp. 12–21.

101. See (all in 人民海军 [People's Navy]), 虞章才, 李慧勇 [Yu Zhangcai and Li Huiyong], "闪光的航迹—郑和七下西洋的真实历程" [A Gleaming

Wake: The True Course of Zheng He's Seven Voyages to the West], 5 July 2005, p. 3; 林一宏 [Lin Yihong], "经略海洋—郑和下西洋对建立现代海洋观的启示" [The Inspiration of Zheng He's Voyages to the West in Establishing a Modern Maritime Outlook], 7 July 2005, p. 3; 陆儒德 [Lu Rude], "捍卫海上利益—郑和下西洋对海军建设的启示" [Defending Maritime Interests: The Inspiration of Zheng He's Voyages to the West in Naval Construction], 9 July 2005, p. 3; 吴瑞虎, 马晓静 [Wu Ruihu and Ma Xiaojing], "中国的'航海日'诞生了!" [China's "Navigation Day" Is Born!], 9 July 2005, p. 1; and 徐起 [Xu Qi], "敦睦友邻—郑和下西洋对中国和平崛起得启示" [A Friendly Neighbor Promoting Friendly Relations: The Inspiration of Zheng He's Voyages to the West in China's Peaceful Rise], 12 July 2005, p. 3.

102. Author's interviews, Beijing, December 2005.

103. Authors' interview, Beijing, June 2006.

104. Ibid.

105. Lonnie Henley, "PLA Logistics and Doctrine Reform, 1999–2009," in *People's Liberation Army after Next,* ed. Susan M. Puska (Carlisle, Pa.: U.S. Army War College, 2000), p. 67.

106. "Our Naval Academy Students Accomplish Practice of All Their Training Subjects on Training Vessels."

107. "'Shichang': China's Navy's New Type of Aerial Service Ship," p. 41.

108. Cao Jinping, "Visit and Operate National Defense Mobilization Ship."

109. Bian Ji, "China's Embryonic Aircraft Carrier," p. 59.

110. 韩学利, 李耸岩, 尹承宇 [Han Xueli, Li Songyan, and Yin Chengyu], "'世昌'舰海上卫勤演练中医疗救护的几点体会" [Several Realizations from Experience Concerning "Shichang" Medical Treatment during At-Sea Defense Drills], 海军医学杂志 [Journal of Navy Medicine] 22, no. 2 (2001), p. 139.

111. The authors are indebted to Professor Robert Rubel for the ideas expressed in this paragraph.

112. See Storey and You Ji, "China's Aircraft Carrier Ambitions," available at www.nwc.navy.mil/press/review/2004/Winter/art6-w04.htm.

113. Yu Xiao, "Pay Attention to a 'World without Markers,'" *Jiefangjun Bao,* 18 June 2006, p. 2, FBIS CPP20060619710001.

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MARITIME GEOSTRATEGY AND THE DEVELOPMENT OF THE CHINESE NAVY IN THE EARLY TWENTY-FIRST CENTURY

Xu Qi
Translated by Andrew S. Erickson and Lyle J. Goldstein

This article, published in 2004 in China's most prestigious military journal, China Military Science, *merits special attention as a cogent explanation for the recent acceleration in China's naval development that has been manifested by the wide array of sophisticated warships that have emerged from Chinese shipyards since 2000. Xu asserts that contemporary Chinese maritime geostrategy is powerfully informed by a tragic history in which "China's rulers shut the door to the outside world [and] the sea . . . was neglected. . . . [Thus,] the sea became a springboard for invaders." But the geostrategic environment for China's maritime expansion is now favorable, because of a confluence of global trends, including the collapse of the USSR, the 9/11 attacks on the United States, the emergence of a "large Chinese economic bloc" as a global force, and Beijing's newly agile diplomacy. The author reviews a number of aspects of China's maritime development, ranging from expanding commerce to new construction projects in the Indian Ocean. Senior Captain Xu's rationale for an expanded PLA Navy rests on his contention that China's "long period of prosperity [as well as] the Chinese nation's existence, development, and great resurgence [all] increasingly rely on the sea."[1] He also is frank in his concern about "a concentration of strategic power in the Asia-Pacific region on [China's] maritime flank."*

Geostrategy represents a country's effort in the world arena to use geographic orientation and principles to pursue and safeguard its national interests.[2] Entering the twenty-first century, China's geostrategic relationships, especially its maritime geostrategic relationships, are undergoing profound change. This will have far-reaching consequences for the development of China's naval strategy. It will require China's navy, when confronted with the new geostrategic environment, to develop a new orientation from the perspective of geostrategic relationships.

I. THE IMPORTANT EFFECTS OF THE KEY ELEMENTS OF GEOGRAPHIC ORIENTATION AND THE MARITIME GEOSTRATEGIC RIVALRY AMONG THE GREAT POWERS

When considering the geographical relationships between states in order to study a given state's geostrategy, the state's geographical position, comprehensive national power, and spaces separating it [from other powers can be seen to] constitute the essential elements of [its] geographic orientation and [to] have a fundamental influence on a nation-state's development, strength, and prosperity.

1. The Interrelation between the Sea and National Power Is a Vital Determining Factor in the Long-Term Prosperity of the State

Two basic factors in geostrategy are geographic orientation and geography. For a given country, the factor of geographic orientation is a variable, but the factor of geography is a constant.[3] The geographical factor consists primarily of the geographical environment and position. In history, the geographic orientation afforded by a nation-state's geographical position and its rise and decline have been closely related. England is a typical case of a maritime state. Enjoying a geographical position of exceptional advantage, which afforded it both relative separation from the European mainland as well as control over northern European sea lanes and critical straits, it held sway over Continental Europe and maintained the balance of power to prevent the emergence of any Continental hegemon, thereby enabling it to create a colossal colonial empire holding sway over the entire world.

The United States, on the other hand, is situated between two great oceans, with its territory surrounded by vast sea areas that place it far away from Eurasian battlefields. This has provided an advantageous environment for national development. Furthermore, [the United States] benefited from the guidance of [Alfred Thayer] Mahan's theories of sea power, and unceasingly pressed forward in the maritime direction, capturing in succession Hawaii and the Marianas Islands in the Pacific Ocean, expanding its strategic depth on its maritime flank, securing an advantageous maritime geostrategic posture, [and thus] establishing a firm foundation for its move into the world's first-rank powers. One can draw a contrast with Germany, which although a nation proximate to the sea, with its location in Central Europe—unlike the maritime powers—more easily got caught up in two-front wars. [Friedrich] Engels, in analyzing why Germany lagged behind England in the nineteenth century, said, "First, Germany's geographic position is disadvantageous, because it is too far from the world trade thoroughfare of the Atlantic Ocean. The second reason is that from the sixteenth century until the present, Germany has been drawn continuously into wars, all

of which were fought on its own territory."[4] Inland states such as Poland, which was stuck between Germany and the Soviet Union, suffered predation from their neighbors, owing to their geographical position. Other inland states, such as those of the Balkan Peninsula, suffered invasion and domination by their enemies even more frequently, causing these states to suffer still more from retarded development.

2. The Sea Has a Profound Influence on a State's Power and Prosperity

A nation's geostrategy, including its national power, the fundamental geographical factor, can more or less determine its levels of development and strength. The American naval strategist Mahan [1840–1914] suggested geographical position, naturally good natural ports, territorial area, population numbers, national qualities, and government system as six key elements that are indicative of a great maritime power. This suggests that, in order to become a great maritime power, it is necessary to possess those key elements of national power related to the sea. It also reflects the profound influence of the key element of maritime geostrategy for a nation's power and prosperity.

美国 . . . 得益于马汉海权思想的引导, 不断向海上方向挺进 . . . 相继夺取夏威夷, 马里亚纳群岛, 扩大了. . . 战略纵深 . . . 走向世界一流强国.

The U.S. . . . benefited from the guidance of Mahan's theories of sea power, and unceasingly pressed forward in the maritime direction, capturing in succession Hawaii and the Marianas Islands . . . expanding its strategic depth [and thus securing] . . . its move into the world's first-rank powers.

In terms of the key factors that constitute comprehensive national power, a nation's territorial area, natural resources, population size, and [national] qualities are the most fundamental conditions. More than other factors, these bases of a nation's economic and military power reflect a nation's geographic orientation. During the Second World War, Nazi Germany made a clean sweep of Europe, capturing much of the territory of the Soviet Union. But the contest of the war was a contest of comprehensive national powers. Although the former Soviet Union occupied a geographical area nine times that of Germany and so possessed massive material resources, it still had to depend on aid from Britain and the United States. Britain at that time could not match Germany's national strength; however, by depending on seaborne aid from the United States [it] was able to mount a tenacious resistance. Only the United States, however, could rely on its solid maritime position as an advantage, [by this means] accumulating massive comprehensive national power, unceasingly providing the Allies with large quantities of goods and materials for lease, [and thus] becoming a powerful world force for justice in defeating the strong forces of the fascists. Entering the twenty-first century, the United States draws support from the economic and military might of other strong maritime powers, [and in so doing] reinforces the

geographical weight of its comprehensive national power. It stubbornly adheres to the path of unilateralism and hegemonism, to such an extent as to violate the spirit of the UN Charter and widely recognized norms of the international system, [by] invading sovereign states under the pretext of counterterrorism, [by] gravely assaulting the existing international order, and [thus] constituting an immense challenge to the trend of multipolarization.

3. The Direct Relationship between the Geographical Significance of Vast Maritime Space and National Security

Oftentimes, threats to a nation's interests—particularly its security interests—increase as their spatial distances decrease. Even before the Second World War broke out, both Germany and the Soviet Union invaded Poland in order to expand their defensive buffer zones. Historically, the states of Central and Eastern Europe have been in a zone of rivalry between the Western great powers and Russia. During the Cold War, the former Soviet Union used Eastern Europe as a protective screen in order to expand its security space. Since the Cold War, the United States, as the head of NATO, has repeatedly infringed on Russia's strategic space, first by moving the line of defense more than eight hundred kilometers toward the Russian border, [and] most recently with another round of expansion, both breaking through the not-to-be-exceeded "red line" stretching from the Baltic to the Black Sea that Russia designated, and approaching to a distance of some tens of kilometers from St. Petersburg, [thereby] causing Russia's northwestern flank to be directly exposed. The vast expanses of the ocean thus establish the direct relationship between maritime geostrategic position and national security interests.

The ancient defenders of China's central plains faced numerous neighbors on the northern flank, [yet] had no benefit of [strategic depth and buffer zones]. From the Qin dynasty [221–207 BC] onward, each dynasty invariably expended much of its manpower and material resources in repairing the Great Wall, in order to resist the harassing attacks from its close neighbors. This had a grave effect on the development of productivity. By contrast, Japan, separated by water from China, succeeded in using the sea as a protective screen. [This screen] was removed only in the mid-twentieth century, by the American occupiers, [Japan] never having before in [its] history suffered invasion by foreigners. Of course, the geographical consequence of maritime space has sometimes also constituted an indirect threat. Take, for example, the Korean Peninsula and China's other adjoining neighbors, which were often conquered by foreign invaders and became a springboard for attacking China, thereby precipitating wars. At present, the crisis on the peninsula remains serious, influencing the stability of the Northeast Asian region.

Moreover, because of the progress of science and technology and developments over time, the function of the geography of maritime space is not really immutable. In the process of industrialization, Western states cut across the natural barriers of the oceans and with their heavily armed ships smashed down China's gate. During the Cold War era, the United States and the Soviet Union undertook an arms race, which was especially intense with regard to increases in the quantity and range of nuclear weapons, and over an even greater space reached a position of mutual [threat]. Since the Cold War, the United States has vigorously strengthened its advanced military machine, relying especially on information superiority and all along maintaining the forward presence of its formidable fleet, which is able to project power over thousands of kilometers. But the 9/11 event caused the United States to recognize that underground nonstate terrorist groups had the capability to organize a network within the United States, with the ability to project power against a target at a distance of fifteen thousand kilometers. This made it clear that the vast ocean space could not allow the United States to avoid being struck, thereby greatly transforming geographical theories regarding space and distance.

4. Throughout History, the Struggles for Supremacy among the Great Powers Have Always Emphasized Maritime Geostrategic Rivalry

Historically, great powers struggling for supremacy have invariably focused their attention on the ocean and spared no efforts in pursuing their maritime geostrategic rivalries. At the end of the eighteenth century, Napoleon sought to expel England from the European continent, and toward that end advanced into the Mediterranean on the southern flank and attempted to cut England off from its foreign markets and natural resources by way of the Persian Gulf. On the other hand, the key elements of England's strategy were its alliance with Russia and maintenance of its maritime power in the Mediterranean. As early as the reign of Peter the Great, Russia initiated a military struggle to gain access to the sea. It successively achieved access to seaports along its northern flank and expanded its influence to the Black Sea and the Persian Gulf, even contending for the Black Sea Straits, as well as nibbling at the Balkan Peninsula. Napoleon's defeat caused the breakdown of the balance of power among the great European powers, as England and Russia emerged as the new hegemonic contenders. Russia's strategic goal was to rise beyond the Baltic littoral and the Black Sea to break through England's blockade line. England's goal was to contain Russia's westward and southward advance, while at the same time preserving maritime hegemony in the Mediterranean Sea and also the Indian Ocean.

Meanwhile, the United States was quietly rising on the western side of the Atlantic Ocean. The First and Second World Wars both spread from the Atlantic

Ocean to the Pacific Ocean. In the Atlantic Ocean, England and Germany struggled for mastery of Europe, following the same path as England and France had in the nineteenth century. In the Pacific Ocean, the struggle for mastery between the United States and Japan mirrored the great power struggle in Europe. During the Cold War era, the focus of the rivalry between the United States and the Soviet Union also expanded from the Atlantic Ocean to the Pacific Ocean, but their contention for supremacy followed the path of West-East containment and counter-containment, with the struggle advancing onto the Balkan and Indochinese peninsulas [and] reaching a final decisive engagement in the northern Indian Ocean. Since the Cold War, the eastward expansion of NATO has once again erected a new "Iron Curtain" stretching from the Baltic to the Balkans. One may view England, the United States, and such maritime powers as the "spear," the sharp point of which is fundamentally directed at containing both flanks, surrounding Central Asia, and then infiltrating into the Indian Ocean. And France, Germany, Russia, and such continental powers constitute the "shield," supporting both flanks for the decisive battle in Central Asia and the ultimate advance into the Indian Ocean.

II. THE PROCESS OF CHINA'S ACKNOWLEDGMENT OF MARITIME GEOSTRATEGY

Although ancient China did not employ a geostrategic conception, there was already geostrategic theory, especially such geostrategies as "uniting the vertical and linking the horizontal," which were directly employed in actual combat.[5] But in the modern era, the development of geostrategic theory fell behind that of the West, and the understanding of maritime geostrategy witnessed a protracted process of development.

1. The Differences between Chinese and Western Maritime Geostrategic Thinking

Western geostrategic theory is principally rooted in aggressive and expansionist goals. This macroscopic geostrategic characteristic is completely obvious. The [scholarship of] Englishman [Sir Halford John] MacKinder [1861–1947] is representative of Western geostrategic theory, which takes a broad, global view. As a result of its origins in the ruthlessly violent struggle for existence and the long period of frequent warfare, this theory emphasized that the primary method of national survival is external expansion. Each state fully emphasizes the building of peripheral arcs of control, in order to increase the state's degree of security. Other geostrategic thought also displays this aggressive and expansionist nature. After the Great Age of Geographic Discovery of the fifteenth century, the mad dash for overseas colonies and colonial empire building unfolded on a global

scale. At the same time, Western geostrategic thought paid close attention to security developments both on land and at sea, and even representatives of the "continental school" such as MacKinder stressed the comparative analysis of land and maritime power, concluding that human history was principally a struggle between land power and sea power. Mahan [, by contrast,] was a representative of the "sea power school," which placed even greater emphasis on the global antagonism between land and sea powers, advocating that maritime states should seek to control a fringe belt on the Eurasian landmass. The modern sea power school emphasizes the problems of continental powers, their sea lanes, and their continental shelves. Thus, Western geostrategic thinkers have not historically had the tendency to emphasize continental power over naval power and have generally created systematic land and sea power theories.

中国濒海度相对较大, 但由于陆海方向毗邻情况特殊, 海洋一度被视为坚固屏障而未及防范. 到了近代, 海洋一变而成外敌人侵的跳板. . . . 海上国门已被近代列强打破.
China's coastline is quite extensive, but its land-sea orientation was powerfully influenced by the special circumstances of its neighbors; for a time, the sea was viewed as a solid barrier and so was neglected. In modern times, the sea became a springboard for foreign invaders [as] the great powers [smashed] in [China's] maritime gate.

Because China was exposed over a long period to the Confucian school notions of benevolence and justice, as well as the "doctrine of the mean" philosophy, the influence of these notions was relatively deep. China has always pursued peaceful coexistence with neighboring countries, taking the form of a national tradition of goodwill and good-neighborliness. China's field of vision was strictly limited to its own territory and borders, [although] the Ming dynasty [Adm.] Zheng He's seven voyages into the Western Ocean opened up a maritime silk route, which preceded the Western Great Age of Discovery by a century.[6] But in comparison to the Western great powers' [ships], loaded to capacity with firearms and gunpowder that wantonly slaughtered and pillaged colonies in a frenzy, all that Zheng He's flotillas carried was silk and porcelain, bringing good will and friendship to each country. The land area of ancient China was vast and its actual power and level of cultural development invariably surpassed those of neighboring countries. The primary threat to the imperial court on the central plains was the northern nomadic peoples moving south, so that successive dynasties all built [up] the Great Wall in order to resist this continental threat. This geographical characteristic determined that most of China's wars were ground campaigns. Even if during the Ming dynasty Japanese pirates and small Western colonial powers invaded China's littoral, they did not pose a threat to imperial rule. Although in the Qing dynasty [Gen.] Zuo Zongtang [1812–85] emphasized paying equal attention to land and sea challenges, he was unable to have any real impact.[7] This kind of land-based survival viewpoint had firm and

deep roots, causing Chinese geostrategic thought from beginning to end to emphasize land power at the expense of sea power.

2. Chinese Maritime Strategic Thought Was Gravely Restricted

From ancient times, China had the beginnings of maritime geostrategic thinking. In the Warring States period [which began in the fifth century BC and culminated in the unification of China for the first time by the Qin dynasty in 221 BC], [China] developed a coastal economy. Zheng He's intercontinental navigation as envoy across the Western Ocean, in particular, had a strong geographical impact on the consolidation of coastal defense, as well as [for] promoting development in Southeast Asia. But after a long period, China's foundation of a self-sufficient agricultural economy and its viewpoint of "China as the center [of the world]" doomed the Zheng He expeditions and such appreciation and accomplishments of maritime geostrategy to the same fate as the continuously declining feudal society, and [it] remained silent thereafter. During the period of the European great powers' unbridled colonial expansion, China's rulers shut the door to the outside world with Decree(s) Forbidding Seafaring.[8] This societal attitude of closing oneself off runs counter to the openness and global circulation characteristic of the ocean itself.

而中国海区虽南北贯通, 四海相连, 但进出大洋的通道被两条岛链所阻断,
海上地缘战略态势处于半封闭状态.
China's sea areas are linked from south to north and connected to the world's oceans; however, passage in and out of the [open] ocean is obstructed by two island chains. [China's] maritime geostrategic posture is [thus] in a semi-enclosed condition.

In the world, island nations surrounded on four sides by water, such as England and Japan; other coastal nations that focused on external development historically, such as Portugal [and] the Netherlands; as well as the contemporary United States; can all be described as strong maritime nations. The major characteristics of their geostrategies include a tendency to emphasize overseas trade and alliance strategy, a greater reliance on threats than actual combat, and the maintenance of supremacy at sea and balance of power on land, etc. The fundamental patterns and characteristics of the geostrategies of coastal nations [are as follows]: first, having a contiguous border with the vast ocean [such that] geostrategy must take [both] land and sea into account; second, having some space on land in which to operate, as well as maritime barriers and transport corridors that can be utilized. When engaged in war with maritime powers, [coastal nations] have been able to bring their strength to bear on land and limit the opportunities of their adversaries to occupy territory. When engaged in war with neighboring land powers, they have had to concentrate forces on their land flanks, especially to avoid being attacked from the front and rear on land and sea

[and in this manner] fall into the trap of being encircled by an alliance of sea and land powers. With respect to military structure, [such powers] have emphasized a balanced mix of land and sea forces and having a geostrategy that comports with this balance.

These characteristics have been reflected to some degree in China's naval geostrategic conception. Both France and Germany are coastal nations, but the extent of their coasts is somewhat different, and the emphasis that they place on land and sea has [also] been somewhat different. Although Russia has a very extensive coastline, most of this coast is frozen during a majority of the year, inhibiting its strategic maritime disposition. Therefore, both Germany and Russia's geostrategies have emphasized land power. China's coastline is quite extensive, but its land-sea orientation was powerfully influenced by the special circumstances of its neighbors; for a time, the sea was viewed as a solid barrier and so was neglected. In modern times, the sea became a springboard for foreign invaders. While the great powers were smashing in [China's] maritime gate, China [simultaneously] confronted the expansionist czarist Russia and dared not let down its guard on its land flank. This clearly illustrates how a nation's maritime geostrategy can be affected by its relationship with its neighbors on land.

3. The Present Situation and Development of China's Maritime Geostrategic Relationships

The geostrategic theory of the People's Republic of China is represented by [Chairman] Mao Zedong's "three worlds" theory, which analyzed the division and composition of world political power from a geographical perspective.[9] Deng Xiaoping applied the "North-South and East-West" theoretical relationships to analyze the world situation and geostrategic structure, [thus] providing an incisive framework for understanding the relationship between global strategic power and geostrategy.[10] These concepts helped to safeguard China's borders and, from geographical factors, established the overall conception of national foreign policy. In particular, serious deliberations on maritime geostrategy within this framework reflect the general direction of the development of China's maritime geostrategy.

A. China's Maritime Geostrategic Development Faces Historical Opportunities. The "collapse of the Soviet Union" that occurred in the twentieth century and the "9/11" event of the twenty-first century caused a great transformation of the international strategic situation and had a profound effect on the global geostrategic situation. At the same time, these events have provided historical opportunities for China's maritime geostrategic development. Along with China's full-speed economic development, the economies of Taiwan, Hong Kong, and Macau [have] gradually integrated, thus forming a large Chinese

economic bloc. This development of economic and geostrategic relations precipitated a turning point. At the same time, the geostrategic environment along China's borders has obviously improved. At the end of the twentieth century, China successively concluded border demarcation talks with neighboring countries and signed a "Friendship Cooperation Treaty" with Russia. With China and Russia in the leading roles, the Shanghai Cooperation Organization, operating on the principles of mutual confidence, equality, and cooperation [and] on the basis of a "New Security Concept," initiated and implemented a model of regional cooperation. In 2003, China and India signed the "Declaration on Principles for Relations and Comprehensive Co-operation" and the two countries' navies carried out joint exercises for the first time. Meanwhile, China, still adhering to multilateral diplomacy, signed a "Joint Declaration on Bilateral Cooperation" with Pakistan. In 2002, at the Greater Mekong Subregion Senior Officials' Meeting [the SOM, held in Phnom Penh, Cambodia, on 25 September 2002] and the ASEAN [Association of Southeast Asian Nations] Leadership Meeting, China adopted toward ASEAN the policies of "eliminating the deep-rooted China threat theory [and] guaranteeing [that] economic development cannot destabilize the peripheral environment" and simultaneously published a declaration on avoiding conflict [concerning] the sovereignty of the Spratly Islands. In 2003, in the ASEAN Forum Ministerial Conference and Asia-Pacific Economic Cooperation conference, China [formally joined] the Treaty of Amity and Cooperation in Southeast Asia. China and ASEAN [also] signed a trade agreement and initiated a dialogue concerning security and cooperation. China's Bo Ao Asia Forum established the theme of "Asia seeking common gains, [and] cooperatively promoting development," [which has] had important significance for promoting peace and stability on China's maritime borders, the region, and even the world.

B. China's Maritime Geostrategic Security Continues to Face Threats. The tension of the world situation has eased overall, but hegemonism and power politics still exist and have become major causes of threats to world and regional peace and stability. There exist many uncertain factors in the security environment along China's borders, especially in the maritime dimension. In particular, China faces a concentration of strategic power in the Asia-Pacific region on its maritime flank. The geostrategic tendency is dangerously uncertain. Since this maritime strategic region and, more broadly, the strategic region of the periphery of the Eurasian landmass constitute points of contention, they are also important arenas for global great-power competition. From a geostrategic perspective, China's heartland faces the sea, the benefits of economic development are increasingly dependent on the sea, [and] security threats come from

FIRST AND SECOND ISLAND CHAINS

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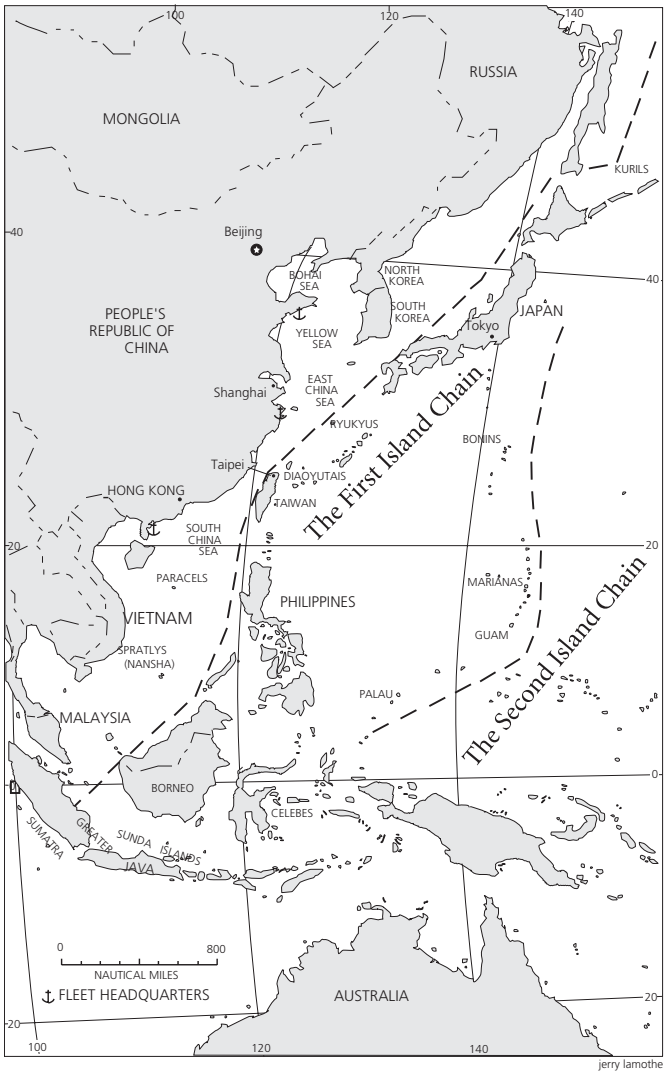

Source: Huang, "Chinese Navy's Offshore Active Defense Strategy."

the sea. The United States has deployed strong forces in the Western Pacific and has formed a system of military bases on the First and Second Island Chains [with] a strategic posture [involving] Japan and South Korea as the northern anchors, Australia and the Philippines as the southern anchors, [and] with Guam positioned as the forward base.[11] Moreover, relations along China's maritime boundary are variable. From the Korean Peninsula and the Taiwan Strait to the Spratly Islands, there exist many uncertain factors. The maritime contradictions between [China] and neighboring nations and regions are rather complicated. The new "Guidelines for U.S.-Japan Defense Cooperation" with respect to "situations in areas surrounding [Japan]" has expanded to [encompass] Taiwan and the South China Sea area. The North Korean nuclear crisis [has] initiated a chain reaction [involving] Japan and South Korea and may transform the East Asian maritime geostrategic situation. India has improved relations with [China] but is still intensifying its military preponderance in the Indian Ocean, while extending strategic feelers into the South China Sea.

C. China's Maritime Geostrategic Relations Are Developing amid Trends of Global Integration. China's maritime strategic development, [spurred by] global integration, is continuously expanding the strategic influence of maritime geostrategic tendencies. On issues of international security, China emphasizes both cooperation and contestation, stressing that any security measure must be taken in the interest of collective security. China has played an active

role in the Six Party Talks pertaining to the North Korean nuclear problem and has also worked with its neighbors such as ASEAN states in an active effort to improve China's maritime geostrategic posture. Through cooperation with nearby countries, during the 1990s, China constructed harbor wharves in the eastern Indian Ocean in Burma [and] cleared the Mekong waterways, in order to gain access to the sea in [China]'s southwest. In 2003, China leased a port in Russia's Far East and negotiated with Russia in an attempt to develop the mouth of the Tumen River.[12] On the Makran seacoast of southwest Pakistan, China invested U.S. $1 billion to construct a deepwater port [at Gwadar], in order to establish a trade and transport hub for Central Asian nations and simultaneously expand China's geostrategic influence. For the past few years, China has provided aid to the South Pacific region and also strengthened economic and trade ties. Particularly since entering the World Trade Organization, [China] has strengthened economic and trade cooperation with Africa and the Caribbean region. These [achievements have] all contributed to the development of China's maritime geostrategic relationships.

III. THE DEVELOPMENT OF CHINA'S MARITIME GEOSTRATEGIC RELATIONS AND NAVAL STRATEGIC CHOICES

China is [part of] what the geostrategist MacKinder termed the "the Inner or Marginal Crescent" on the fringe of the Eurasian landmass, with undoubted geostrategic preponderance on the continent. China's sea areas are linked from south to north and connected to the world's oceans; however, passage in and out of the [open] ocean is obstructed by two island chains. [China's] maritime geostrategic posture is [thus] in a semi-enclosed condition. Entering the twenty-first century, in order to carry out its primary mission of safeguarding the nation's maritime interests, China's navy must make [important] strategic choices with regard to the nation's maritime borders, its maritime domain, the global oceans, and the overall strategic space.

1. The Nation's Strategic Choice Concerning Land and Sea Territory

Reviewing history, China over a long period of time undertook a policy that forbade maritime activities, [thus] precipitating a "deliberate absence" from the world's oceans. These Chinese policies enabled the Portuguese, who did not have an Eastern sea power with which to contend, to rapidly achieve dominance in the Indian Ocean.[13] If the world were forever isolated on the basis of separate oceans, this would perhaps not have a great effect on a nation. But from the beginning of the nineteenth century, the world's oceans melded together into an integrated thoroughfare. In particular, economic and technological development made global integration [both] a requirement and a possibility. An

increasingly connected and inseparable world was reduced in scale to a "global village." If a nation ignored maritime connectivity, it would lack a global perspective for planning and developing, and it would likely have difficulties in avoiding threats to its security.

A. The Interconnection between Land Territory and Maritime Territory. Land territory is a nation's terrestrial territory, [whereas] maritime territory is categorized as a nation's sea territory. China's land territory [encompasses] 9.6 million square kilometers, the fourth largest in the world; hence, China is a great land power. But China's maritime territory is also extremely vast. On the basis of the provisions of the "United Nations Convention on the Law of the Sea" and China's [claims], China has jurisdiction over and administers three million square kilometers of maritime space. This is equivalent to the combined geographical dimensions of twenty Shandong provinces or thirty Jiangsu provinces. Coastal seas and continental-shelf areas [combine to] approach 273 million hectares. This area is more than two times that of China's total arable land. For coastal nations, the development of land and maritime territory are equally important. As for China, with the world's largest population and relatively deficient resources, the sea is even more the most important strategic space for sustainable development. [As land resources are depleted], the sea can serve as a strategic resource replacement area.

B. The Significance of the Maritime Domain for China's Future Development Is Still More Far-Reaching. China is a great maritime power: it has a very long shoreline, numerous islands, vast administered sea areas, and abundant ocean resources. For the past few years, it has become a world energy-development focal point for "methane hydrates"; the reserves in China are vast. The country's long period of prosperity [as well as] the Chinese nation's existence, development, and great resurgence [all] increasingly rely on the sea. At the same time, the sea is an important realm for the nation to participate in international competition. It is the nation's main artery of foreign trade. Along with the accelerating process of economic globalization, China's maritime economy is moving toward the great oceans. By 2020, China's maritime commerce will exceed U.S. $1 trillion. It may be[come] necessary to import three-quarters of [China's] oil from overseas. Sea lines of communication [are] becom[ing] lifelines of national existence [and] development. At the same time, the maritime economy is a burgeoning economic realm with huge development potential. More than twenty clusters of industrial groupings have been developed, while maintaining the relatively rapid pace of [overall] development. In 2001, major maritime industry increased in value to 3.44 percent of GDP [and is] estimated to reach approximately 5 percent by 2010, thus becoming an important pillar and a new

growth point of national economic development. Vigorously developing the ocean economy involves forming a coastal belt economic zone [encompassing the] continental shelf, while also administering maritime economic zones and international seabed mining zones together as a [unified] maritime economic zone. Simultaneously, the drive for further development of the terrestrial economy, by forming great ocean provinces, counties, and cities, with [China's] eastern area taking the lead in modernization and comprehensively constructing a [relatively] affluent society, [will be] an enormous contribution.

C. Naval Strategic Choices Must Be Grounded in the Imperative to Defend National Maritime Territory. The navy is the armed force [with which the nation can] resist threats from the sea. Defending national sovereignty [and] upholding national maritime rights and interests are sacred duties with which the navy has been entrusted. In peacetime, the navy devotes itself to defending each maritime area within the scope of nationally administered sovereignty. National political, economic, and diplomatic policies are closely interrelated and in general directly embody national will. Under specific conditions, [such policies] achieve national political and diplomatic goals. After its founding, the People's Liberation Army Navy, from the north at the mouth of the Yalu River to the south in the vicinity of the Beilun River's mouth, carried out its unshakable historical mission. Along with continuously expanding maritime and overseas interests, the relationship between maritime rights and interests and fundamental national interests becomes ever more significant. To meet the requirements of national security and development interests, the navy must not only develop the important function of defending national sovereignty but also unceasingly move toward [the posture of] a "blue-water navy" [and] expand the scope of maritime strategic defense, in order to contribute to the defense of national maritime rights and interests. To this end, the navy must take to heart the maritime interests of the nation, pay close attention to changes in the circumstances of maritime geostrategy, raise the nation's naval defense combat capability, [and] provide [a] reliable guarantee of national maritime security.

2. The Strategic Choice of Offshore Regions and Open Ocean Areas

The navy is the maritime defense component of the armed forces, which has an important international role because naval vessels are symbols of state power and authority.[14] [Naval vessels] are not only adept at administering waters [over which China has jurisdiction] but also can act as "mobile territory" and freely navigate the high seas of the world.[15] These special characteristics of naval forces determine that their mission is not limited to offshore defense.

Offshore defense is the fundamental guarantee of national maritime security. In the 1970s, Deng Xiaoping promulgated our strategy of preparation for

combat in the offshore area, since the main scope of our maritime strategic defense was close in to shore. This was done for the purpose of designating a practical set of strategic guidelines for China's navy and includes the scope of sovereignty of China's territorial waters and islands, etc. It also covers all maritime areas over which China has jurisdiction under international maritime law. The distinguishing feature of the maritime strategy put forward on this "offshore defense" foundation is the realization of national unification, giving a prominent position to the safeguarding of maritime rights and interests [and] emphasizing that the navy must be able to respond to a regional war at sea, [as well as] to neutralize enemy encroachments. According to the requirements of national interests and the development of naval battle operations capability, the scope of naval strategic defense should progressively expand. In the direction of the South China Sea, the sea area extends 1,600 nautical miles from mainland China, but the scope of naval strategic defense is still within the first island chain.

Open ocean-area defense is an essential shield of long-term national interests. At the end of the twentieth century, the weapons systems of [certain] powerful nations developed extremely rapidly and quickly made other nations' weapons "technologically obsolete." In the future, some maritime powers may employ long-range strike weapons to attack into the depths of China. The vast, unobstructed character of the naval battlefield [is] favorable for military force concentration, mobility, [force projection], [and] initiating sudden attacks. Future at-sea informationalized warfare has characteristics of noncontact and nonlinearity [and] in particular uses advanced informationalized weapons, space weapons, and new-concept weapons, etc. [It] can carry out multidimensional precision attacks in the sea area beyond the first island chain [and] threaten important political, economic, and military targets within strategic depth. The maritime security threat comes from the open ocean. [This] requires the navy to cast the field of vision of its strategic defense to the open ocean [and to] develop attack capabilities for battle operations [on] exterior lines, in order to hold up the necessary shield for the long-term development of national interests.

3. The Strategic Choice of World Maritime Space and Grand Strategic Space

Facing the situation of a new rapid revolution in military affairs, China's navy, in order to adapt [to] the requirements of national interest, must also make strategic choices [with] a vast field of vision, in the world maritime space, in inner and outer space, and in the entire strategic space.

The development of national interests [in] world maritime space. From the composition of geostrategic relations, one can plainly see that the main territory

for human mobility, aside from land, also includes the grand strategic spaces of world ocean space, atmospheric space, and outer space, etc. These do not belong to any nation but rather to regions of global passage [and] are called "common space." The world maritime space comprises three sections, [ranging] from na-

海上安全威胁来自远海, 要求海军将战略防御视野投向远海, 发展外线作战的攻击力量, 为国家利益长远发展竖起必要的盾牌.
The maritime security threat comes from the open ocean. [This] requires the navy to cast the field of vision of its strategic defense to the open ocean [and to] develop attack capabilities for battle operations [on] exterior lines, in order to hold up the necessary shield for the long-term development of national interests.

tionally administered sovereign interior waters [to] the entire "international waters" beyond the territorial-sea exclusive economic zone, [to] the seabed at a depth of 3,000–3,500 meters or more, beyond which nations do not have the right of jurisdiction, as well as the [ocean] bottom's entire "international seabed area" [and] the "international navigation channels" beyond the breadth of national territorial seas. Aside from Antarctica, almost every piece of land in the world has explicit jurisdiction. World oceans beyond the scope of sovereignty and administration, all "international maritime space," comprise a total area of 64.2 percent of total ocean area (approximately 231 million square kilometers). This area is regarded as high seas for humanity's common use. All nations may use it with freedom and equality. In international affairs, China attends globalized maritime scientific research activities, develops ocean science and technological cooperation extensively, and jointly develops the ocean with other countries. We have numerous national interests in "international maritime space" and "international navigation channels," [our] open ocean transport routes pass through every continent and every ocean, [we] navigate through each important international strait, [and we] have experience with over six hundred ports in over 150 nations and [administrative] regions. China is the fifth largest investor in international seabed-area [development]. In 1991, with the permission of the UN International Seabed Authority, China obtained seventy-five thousand square kilometers of special joint exploration [and] development area in the Pacific Ocean southeast of Hawaii and within this area possesses international seabed development rights [to] an abundance of metal nodules.[16] [China's] ocean technology and economy are constantly developing, [and its] national interests are spread all over the world ocean space. This requires the navy to defend a larger scope.

Space warfare has a profound influence on naval warfare. An essential factor in geographic orientation is spaceflight technology development cutting across the atmosphere and space. Outer space has become a hot spot for world powers to race to seize and a strategic space of the utmost importance for

future warfare. Space weapons can not only strike the enemy's satellites in space [but] can also attack any terrestrial target from space. They have a tremendous influence on land and sea warfare. As early as 1964, the U.S. promulgated [the notion that] "control of space means control of the world" and later advanced plans for both "Star Wars" and "Missile Defense." [The United States also] put forward such new concepts as "space deterrence" and "using space to control the sea," striving to seize absolute superiority in the space domain. In 2001, the U.S. had a hundred military satellites and 150 commercial satellites in space, which constituted nearly half the world's satellites. During the Iraq War in 2003, the U.S. used over fifty satellites to support battle operations. U.S. Secretary of Defense [Donald] Rumsfeld planned to emphasize strengthening the military development of space, to define and master the "space control" mission, to spend U.S. $165 billion on space-related activities in fiscal years 2002–2007, [and] to implement long-range precision strike and achieve decisive victory [by] guiding land, sea, and space-based platforms, either through direct sea and land attacks or rapid minimum casualty war in order to capture [objectives]. China's launch of the *Shenzhou 5* manned spacecraft [on 15 October 2003] was successful. China [thereby] became only the third nation, after Russia and the U.S., to be capable of launching a human into space. This demonstrated that our country's national interests already extend to the reaches of outer space. [Space] has become China's strategic interest and new "high ground." At the same time, it also demonstrates that our satellite communications, global positioning, and radar information and transmission systems, etc., have obtained prominent success. [This] is beneficial for enhancing the information strength to safeguard our sea power.

The navy's strategic choice must be oriented toward the world's oceans and formulated with a perspective of the grand strategic space. Confronting a world that [has] enter[ed] the space age, China's navy must aim in the development direction of the new global revolution in military affairs, actively advance a revolution in military affairs with Chinese characteristics, [and] on the basis of informatization leading mechanization, accelerate the achievement of informatization. At the same time, it is still more essential to surmount traditional concepts of geographic orientation, to closely monitor the development of space technology and space weapons in maritime warfare with a long-term perspective, [and] to build a powerful navy that possesses relative space superiority. In order to answer the threat from the sea, it must continue to improve China's maritime geostrategic posture and contribute to peace, progress, and development in the region.

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TRANSLATORS' NOTES

The article originally appeared in Chinese as 徐起 [Xu Qi], "21世纪初海上地缘战略与中国海军的发展" [Maritime Geostrategy and the Development of the Chinese Navy in the Early Twenty-first Century], 中国军事科学 *(China Military Science)* 17, no. 4 (2004), pp. 75–81. Words supplied by the translators are in square brackets.

1. Xu Qi's PLA Navy rank 海军大校 literally means "senior captain." See "中国人民解放军军衔" [Military Ranks of the People's Liberation Army Navy], 中国军事教育学会编 [Edited by the China Military Affairs Pedagogical Association], 汉英-英汉军事大辞典 [The Chinese-English, English-Chinese Military Dictionary] (Beijing: 学苑出版社 [Xueyuan Press], 2002), p. 1701.
2. The meaning of the phrase 地缘 *(diyuan),* which appears throughout this article, is extremely difficult to convey in English when used as an individual term, and it does not appear in most Chinese dictionaries. A close equivalent might be "geographical relationships among nations." For the sake of brevity, the authors have generally translated *diyuan* as "geographic orientation." When used as part of a compound phrase (e.g., 地缘战略, *diyuan zhanlue,* or geostrategy), *diyuan* may be consistently translated as the prefix "geo-." For an example of *diyuan* as used in other Chinese scholarship, see 苏浩 [Su Hao], "地缘重心与世界政治的支点" [Geogravitational Centers and World Political Fulcrums], 现代国际关系 [Contemporary International Relations], no. 4 (2004), pp. 54–61.
3. Here Senior Captain Xu is apparently arguing that each nation possesses both a fixed "geographical position" and a variable "geographic orientation." The latter appears to be a strategic cultural understanding—based on such factors as historical experience, security threats, and economic development—of how best to exploit the nation's predetermined geographical position. As such, a nation's "geographic orientation" can seemingly be altered at least to some degree by its leadership and its populace to either their collective benefit or their detriment.
4. The author cites 马克思思格斯全集, 第8卷 [The Complete Works of Marx, vol. 8] (Beijing: 人民出版社 [People's Press], 1961), p. 8.
5. The phrase "he zong lian heng," or "uniting the vertical and linking the horizontal," in its various forms refers to the general use of diplomacy to further strategic ends. It is taken to be a hallmark of the political culture of China's 战国时代 [Warring States Period], which lasted from the fifth century BC until the unification of China under Qin dynasty emperor Qin Shihuang in 221 BC. By the beginning of this period, regional warlords had consolidated 战国七雄 [Seven Warring States]: 齐 [Qi], 楚 [Chu], 燕 [Yan], 韩 [Han], 赵 [Zhao], 魏 [Wei], and 秦 [Qin]. Thanks to internal reforms ca. 359 BC, Qin emerged as the most powerful of the seven. Coping with Qin's expansionism became a major preoccupation of the rulers of its six competitors. Itinerant tacticians, or 纵横家, traveled among the Warring States peddling strategies that coalesced into two contending schools of thought. The 合纵 [Vertically Linked] school advocated alliance among the six lesser states to

balance against Qin. The 连横 [Horizontally Linked] school advocated allying with Qin to benefit from its rise. Qin ultimately defeated its opponents by using the Horizontally Linked strategy to divide them and its superior power to conquer them one by one.

6. 郑和 [Zheng He], a Muslim eunuch official of China's Ming Dynasty, was sent by the Yongle emperor Zhu Di on voyages to collect tribute and establish friendly relations with neighboring countries. His "Treasure Fleet" is said to have borne over twenty-eight thousand skilled workers and soldiers on sixty-two ships, some as much as six hundred feet in length. Such ships dwarfed those of their European contemporaries, such as Christopher Columbus. Zheng He's seven voyages from 1405 to 1433, which reportedly ranged as far away as the Indian Ocean, have been recorded in "三保太监下西洋" [Zheng He to the Western Ocean]. While these missions were generally exploratory and commercial in nature, it has been widely recorded that they also engaged decisively in substantial armed conflicts in Southeast Asia. On this last point, see Louise Levathes, *When China Ruled the Seas: The Treasure Fleet of the Dragon Throne, 1405–1433* (New York: Oxford Univ. Press, 1994).

7. General Zuo, in three decades of distinguished government service, suppressed numerous internal rebellions and advocated military modernization based on learning from the West. Zuo recorded his greatest military achievement in 1878, when he put down a Muslim uprising and helped negotiate Russian withdrawal from Ili, a border region now in China's Xinjiang province. In 1884, Zuo was given the concurrent appointments of commander in chief, imperial commissioner of an expeditionary force, and Lord Admiral of the Navy. This was part of a larger Qing Dynasty effort to develop four steamship fleets: 北洋 [North Sea], 南洋 [South Sea], 福建 [Fujian], and 广东 [Guangdong]. Zuo marshaled national forces for the Sino-French war in Fujian Province but died shortly before China was forced to conclude a humiliating truce with France in Fuzhou the following year, after its loss of a naval battle at Mawei on 23 August 1884.

8. Rather than building on Zheng He's achievements, the Ming Dynasty Yongle emperor's successors for "several centuries" enforced such restrictions as the "禁海" [Sea Ban]. This and related edicts sought to ban private maritime trade in a counterproductive effort apparently directed at suppressing piracy and other unlawful activities. For this reason, the West's "new theories on sea strategies were rejected by China and did not have a significant influence on it." See 刘华清 [Liu Huaqing], 刘华清回忆录 [The Memoirs of Liu Huaqing] (Beijing: People's Liberation Army, 2004), pp. 433, 524. Admiral Liu served as PLA Navy commander (1982–88) and vice chairman of the Central Military Commission (1989–97). All original quotations from Liu's autobiography were checked against the wording in the FBIS translation of chapters 16–20, CPP20060707320001001. Wording different from the FBIS translation is used whenever the authors felt that it better reflected Liu's meaning or would be more comprehensible to the reader.

9. In 1974, Mao stated, "The United States and the Soviet Union belong to the first world. The in-between Japan, Europe and Canada belong to the second world. The third world is very populous. Except [for] Japan, Asia belongs to the third world." Mao advocated supporting third world nations in their efforts to avoid domination by the first world superpowers. See "Chairman Mao Zedong's Theory on the Division of the Three World[s] and the Strategy of Forming an Alliance against an Opponent," Foreign Ministry of the People's Republic of China, 17 November 2000, available at www.fmprc.gov.cn/eng/ziliao/3602/3604/t18008.htm.

10. In Deng's view, international security hinged on relations between nations in the East and the West, whereas economic development hinged on relations between nations in the North and the South. See "Peace and Development Are the Two Outstanding Issues in the World Today," 4 March 1985, People's Daily, available at english.people.com.cn/dengxp/vol3/text/c1330.html.

11. Notably articulated by Adm. Liu Huaqing, the First Island Chain is formed by Japan and its northern and southern archipelagos, South Korea, Taiwan, the Philippines, and the Greater Sunda Islands. The Second Island Chain runs from the Japanese archipelago south to the Bonin and Marianas islands (including Guam) and finally to the Palau group. See map above and Liu, *Memoirs of Liu Huaqing*, p. 437. Some unofficial Chinese publications even suggest that America's Hawaiian bases are part of a Third

Island Chain. For a detailed graphic from the PRC naval studies community that shows all three "island chains," see 阻明 [Zu Ming], "美国驻西太地区海军兵力部署与基地体系示意图" [A Schematic Diagram of the U.S. Naval Forces Deployed and System of Bases in the Western Pacific], 舰船知识 [Naval & Merchant Ships], no. 2 (January 2006), p. 24. A recent issue of China's official People's Daily, however, mentions only two "island chains," the first and the second. See "美军忙著大调整" [U.S. Navy Preoccupied with Major Adjustment], 人民日报 [People's Daily], 9 July 2004.

Chinese analysts view the "island chains" alternatively as benchmarks of China's progress in maritime force projection and as fortified barriers that China must continue to penetrate to achieve freedom of maneuver in the maritime realm. See, for example, Alexander Huang, "The Chinese Navy's Offshore Active Defense Strategy: Conceptualization and Implications," *Naval War College Review* 47, no. 3 (Summer 1994), p. 18. Because neither the PLA Navy nor any other organization of the PRC government has publicly made the island chains an integral part of official policy or defined their precise scope, however, Senior Captain Xu's reference to island chains must be interpreted with caution.

12. This is apparently a reference to reports that China arranged to lease the Russian Far Eastern port of Zarubino in 2003. See, for example, Vladislav Seregin, Китай Получит Порт в России [China Will Receive a Port in Russia], RBC Daily, December 15, 2003, available at www.rbcdaily.ru/news/company/index.shtml?2003/12/15/49395.

13. The author cites the introduction of 霍小勇等主编 [Huo Xiaoyong et al., editors], 中华海权史论 [A Historical Theory of Chinese Seapower] (Beijing: 国防大学出版社 [National Defense Univ. Press], 2000).

14. Here the Chinese term 近海 *(jinhai)* has been translated as "offshore." The term 远海 *(yuanhai),* like its rough synonym 远洋 *(yuanyang),* may be translated as "open ocean." To avoid confusion with the word 公海 *(gonghai),* which appears later in this translation, these terms are deliberately not translated here as "high seas." The latter term has maritime legal implications that may not correspond to those that Beijing applies to *yuanhai* and *yuanyang.* The related terms 沿海 *(yanhai)* and 海岸 *(haian)* may be translated as "coastal;" 滨海 *(binhai)* and 近岸 *(jinan)* as "inshore" (between "coastal" and "offshore"); and 中海 *(zhonghai)* perhaps as "mid-distance seas" (between "offshore" and "open ocean"). For a detailed diagram and explanation of these terms, see Huang, "Chinese Navy's Offshore Active Defense Strategy," pp. 16–19. These terms do not relate to specific geographic distances per se but rather to conceptual areas for naval defense and power projection progressively further from shore. The distance ranges to which these terms pertain, while relative as opposed to absolute, do appear to have expanded in scope in parallel to growth in the PLA Navy's capabilities. To date, however, perhaps to preserve strategic flexibility, neither the PLA Navy nor any other organization of the PRC government has publicly defined the precise meaning of these terms.

Initially, the PLA Navy was a coastal defense force. During the late 1970s, the PLA Navy sent submarines into the South China Sea and beyond the First Island Chain into the Pacific Ocean for the first time. By the mid-1980s it had developed broader ability to conduct "近海作战" (offshore operations) as part of a larger "海军战略" (naval strategy) of "近海防御" (offshore defense) approved by Deng Xiaoping and articulated and implemented by PLA Navy commander Adm. Liu Huaqing. In 1983, Admiral Liu recalls, "I stressed that we should achieve a unified understanding of the concept of 'offshore' according to Comrade [Deng] Xiaoping's instructions. Our 'offshore' areas are the Yellow Sea, East China Sea, South China Sea, the seas around the Spratly Islands and Taiwan and inside and outside the Okinawa island chain, as well as the northern part of the Pacific." The strategic guidance for the PLA Navy is currently represented by eight characters: 积极防御, 近海作战 (active defense, offshore operations—*jiji fangyu, jinhaizuozhan*). The former "four characters" has a more general application for all service branches of the PLA, as 军事战略 (military strategy—*junshizhanlue*) or a 军事战略方针 (military strategic guideline—*junshi zhanlue fangzhen*). The later "four characters" refers to the PLA Navy's area of responsibility. For quotation, see Liu, *Memoirs of Liu Huaqing*, p. 434; for other data see former PLA Navy commander (1996–2003) Admiral 石云生 [Shi Yunsheng], introduction, 中国海军百科全书 [China Navy

Encyclopedia], vol. 1 (Beijing: 海潮出版社 [Sea Tide Press], 1998), pp. 16–31; Huang, "Chinese Navy's Offshore Active Defense Strategy," pp. 16–19.

15. This, and all other references to "high seas," are derived from 公海 *(gonghai),* a quasi-legal term that literally means "common seas."

16. China Ocean Mineral Resources Research and Development Association (COMRA) filed an application as a preferred "registered pioneer investor" on 5 March 1991 and was recently awarded the right to explore for undersea minerals in the central Pacific. See "Areas for Exploration of Polymetallic Nodules: Pioneer Investor Application Areas," International Seabed Authority, available at www.isa.org.jm/en/default.htm; 李尚诣 [Li Shangyi], "认知海洋, 开发海洋" [Know the Ocean, Develop the Ocean], 矿冶工程 [Mining and Metallurgical Engineering] 26, no. 2 (April 2006), pp. 1–8; 杨晓光, 樊杰 [Yang Xiaoguang and Fan Jie], "我国深海资源产业化模式及其对策研究" [Research on the Operating Modes and Countermeasures of the Industrial Exploitation of Deep Sea Resources in China], 矿业研究与开发 [Mining Industry Research and Development] 24, no. 1 (February 2004), pp. 1–4; 杨金森 [Yang Jinsen], "50年, 中国要建海洋强国" [In 50 Years, China Will Become a Maritime Great Power], 海洋世界 [Sea World], no. 1, 2004, pp. 4–6.

RUMSFELD, THE GENERALS, AND THE STATE OF U.S. CIVIL-MILITARY RELATIONS

Mackubin Thomas Owens

In the Summer 2002 issue of the *Naval War College Review,* the eminent historian Richard Kohn lamented the state of civil-military relations, writing that it was "extraordinarily poor, in many respects as low as in any period of American peacetime history."[1] The article was based on the keynote address that Professor Kohn had delivered as part of a Naval War College conference on civil-military relations in the spring of 1999. Accordingly, the focus of attention was on problems that had bedeviled the Clinton administration.

Some of the most highly publicized of these civil-military problems reflected cultural tensions between the military as an institution and liberal civilian society, mostly having to do with women in combat and open homosexuals in the military. The catalogue included "Tailhook," the Kelly Flinn affair, the sexual harassment scandal at Aberdeen, Maryland, and the very public exchange regarding homosexuals between newly elected President Bill Clinton on the one hand and the uniformed military and Congress on the other.

Other examples of civil-military tensions included the charge that Gen. Colin Powell, then chairman of the Joint Chiefs of Staff, was illegitimately invading civilian turf by publicly advancing opinions on foreign policy. During the 1992 presidential campaign, Powell published a piece in the *New York Times* warning about the dangers of intervening in Bosnia. Not long afterward, he followed up with an article in *Foreign Affairs* that many criticized as an illegitimate attempt by

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a senior military officer to preempt the foreign policy agenda of an incoming president. Critics argued that Powell's actions constituted a serious encroachment by the military on civilian "turf." They argued that it was unprecedented for the highest-ranking officer on active duty to go public with his disagreements with the president over foreign policy and the role of the military.

Closely related to the contention that the military had illegitimately expanded its influence into an inappropriate area was the claim that the U.S. military had, in response to the supposed lessons of Vietnam, succeeded in making military, not political, considerations paramount in the political-military decision-making process—dictating to civilians not only how its operations would be conducted but also the circumstances under which it would be used. This role reflected the post-Vietnam view dominant within the military that only professional military officers could be trusted to establish principles guiding the use of military force.

What does "pushing back" by the uniformed military mean for civilian control of the military?

Taking its bearings from the so-called Weinberger-Powell Doctrine, a set of rules for the use of force that had been drafted in the 1980s, the U.S. military did everything it could to avoid what came to be known (incorrectly) as "nontraditional missions": constabulary operations required for "imperial policing"—for example, peacekeeping and humanitarian missions. The clearest example of a service's resistance to a mission occurred when the Army, arguing that its proper focus was on preparing to fight conventional wars, insisted that the plans for U.S. interventions in Bosnia, Kosovo, and elsewhere reflect the military's preference for "overwhelming force." As one contemporary source reported, the military had a great deal of influence on the Dayton Agreement establishing an Implementation Force (IFOR) to enforce peace in Bosnia-Herzegovina. According to Clinton administration officials quoted in the story, the agreement "was carefully crafted to reflect demands from the military. . . . Rather than be ignored . . . the military, as a price for its support, has basically gotten anything it wanted."[2]

Finally, there were many instances of downright hostility on the part of the military toward President Clinton, whose anti-military stance as a young man during the Vietnam War years did not endear him to soldiers. Many interpreted such hostility as just one more indication that the military had become too partisan (Republican) and politicized.

Some observers claimed that the civil-military tensions of the 1990s were a temporary phenomenon attributable to the perceived anti-military character of the Clinton administration. But civil-military tensions did not disappear with

the election and reelection of George W. Bush as president. If anything, civil-military relations have become more strained as a result of clashes between the uniformed services and Secretary of Defense Donald Rumsfeld over his commitment to the president's agenda of "transforming" the U.S. military—reshaping it from a heavy, industrial-age force designed to fight the USSR during the Cold War to a more agile, information-age force capable of defeating future adversaries anywhere in the world—and the planning and conduct of U.S. military operations in Afghanistan and Iraq.

The actions on the part of some military officers to undercut Rumsfeld and his polices in pursuit of their own goals—anti-Rumsfeld leaks to the press, "foot-dragging," "slow-rolling," and generally what Peter Feaver has called "shirking"—are not indicative of a "crisis" in American civil-military relations. But they do suggest that civil-military relations are now unhealthy and out of balance.[3]

REVOLT OF THE GENERALS?

In April of this year, a number of retired Army and Marine generals publicly called for the resignation of Secretary Rumsfeld. Much of the language they used was intemperate, some downright contemptuous. For instance, Marine general Anthony Zinni, Tommy Franks's predecessor as commander of Central Command, described the actions of the Bush administration as ranging from "true dereliction, negligence, and irresponsibility" to "lying, incompetence, and corruption." He called Rumsfeld "incompetent strategically, operationally, and tactically." One has to go back to 1862 to find a senior military officer, active or retired, condemning a civilian superior so harshly in public.

Observers of what the press called the "revolt of the generals" believed that these retired general officers were speaking on behalf of not only themselves but many active-duty officers as well. While there are no legal restrictions that prevent retired members of the military—even recently retired members—from criticizing public policy or the individuals responsible for it, there are some important reasons to suggest that the public denunciation of civilian authority by even retired officers undermines healthy civil-military relations.

First of all, as Kohn has observed, retired general and flag officers are analogous to the cardinals of the Roman Catholic Church. As such, the public is unlikely to distinguish between the views of retired officers and the views of those who are still on active duty. Second, because of their status, public criticism by retired officers may in fact encourage active-duty officers to engage in the sort of behavior that undermines healthy civil-military relations, signaling to them that it is acceptable, for instance, to undercut policy by leaks to the press and other methods of "shirking." Finally, such actions on the part of retired officers may

convince active-duty officers that, by virtue of their uniforms, the latter are entitled to "insist" that civilian authorities accept the military's policy prescriptions. The implied threat here is mass resignation, which, as we shall see later, is foreign to the American military tradition.

The central charges in the case against Secretary Rumsfeld include willfully ignoring military advice and initiating the war in Iraq with a force that was too small, failing to adapt to the new circumstances once things began to go wrong, failing to foresee the insurgency that now rages in that country, and ignoring the need to prepare for postconflict stability operations.

Criticism of Rumsfeld by uniformed officers is predicated on two assumptions. The first is that soldiers have a right to a voice in making policy regarding the use of the military instrument, that indeed they have the right to *insist* that their views be adopted. The second is that the judgment of soldiers is inherently superior to that of civilians when it comes to military affairs. In time of war, civilians should defer to military expertise. Both of these assumptions are questionable at best and are at odds with the principles and practice of American civil-military relations.

First, in the American system, the uniformed military does not possess a veto over policy. Indeed, civilians have the authority to make decisions even in what would seem purely military affairs. In practice, as Eliot Cohen has shown, American civil-military relations do not actually conform to what some have dubbed the "normal theory of civil-military relations," which holds that civilians determine the goals of war and leave the strategy and execution of the war to the uniformed military.[4] Cohen illustrates in *Supreme Command* that such successful wartime presidents as Abraham Lincoln and Franklin Roosevelt "interfered" extensively with military operations—often driving their generals to distraction.[5]

Second, when it comes to military affairs, soldiers are not necessarily more prescient than civilian policy makers. This is confirmed by the historical record. During the American Civil War, Abraham Lincoln constantly prodded George McClellan, commanding general of the largest Union force during the Civil War, the Army of the Potomac, to take the offensive in Virginia in 1862. McClellan just as constantly whined that he had insufficient troops. During World War II, notwithstanding the image of civil-military comity, there were many differences between Franklin Roosevelt and his military advisers. Gen. George Marshall, chief of staff of the U.S. Army and the greatest soldier-statesman since Washington, opposed arms shipments to Great Britain in 1940 and argued for a cross-channel invasion before the United States was ready. History has vindicated Lincoln and Roosevelt.

Many are inclined to blame the U.S. defeat in Vietnam on civilians. But the American operational approach in Vietnam was the creature of the uniformed

military. The generally accepted view today is that the operational strategy of Gen. William Westmoreland (commanding the U.S. Military Assistance Command, Vietnam) emphasizing attrition of the People's Army of Vietnam forces in a "war of the big battalions"—a concept producing sweeps through remote jungle areas in an effort to fix and destroy the enemy with superior firepower—was counterproductive. By the time Westmoreland's successor could adopt a more fruitful approach, it was too late.[6]

During the planning for Operation DESERT STORM in late 1990 and early 1991, Gen. Norman Schwarzkopf, commander of U.S. Central Command, presented a plan calling for a frontal assault against Iraqi positions in southern Kuwait, followed by a drive toward Kuwait City. The problem was that this plan would have been unlikely to achieve the foremost military objective of the ground war—the destruction of the three divisions of Saddam's Republican Guard. The civilian leadership rejected the early war plan presented by CentCom and ordered a return to the drawing board. The revised plan was far more imaginative and effective.[7]

"PUSHING BACK" AND CIVIL-MILITARY RELATIONS

The cornerstone of U.S. civil-military relations is civilian control of the military, a principle that goes back to the American Revolution and the precedent established by George Washington, who willingly subordinated himself and his army to civilian authority. "Washington's willing subordination, of himself and the army he commanded, to civilian authority established the essential tenet of that service's professional ethos. His extraordinary understanding of the fundamental importance of civil preeminence allowed a professional military force to begin to flourish in a democratic society. All of our military services are heir to that legacy."[8]

The very public attack on Rumsfeld by retired officers flies in the face of the American tradition of civilian control of the military. Should active-duty and retired officers of the Army and Navy in 1941 have debated publicly the Lend-Lease program or the occupation of Iceland? Should Douglas MacArthur have resigned over the Europe-first strategy? Should generals in 1861 have discussed in public their opinions of Lincoln's plan to reprovision Fort Sumter, aired their views regarding the right of the South to secede from the Union, or argued the pros and cons of issuing the Emancipation Proclamation?

In support of their actions, many of Rumsfeld's critics have invoked a very important book by H. R. McMaster, *Dereliction of Duty: Lyndon Johnson, Robert McNamara, the Joint Chiefs of Staff, and the Lies That Led to Vietnam,* the subject of which is the failure of the Joint Chiefs to challenge Defense Secretary Robert McNamara forcefully enough during the Vietnam War.[9] Many serving officers

believe the book effectively makes the case that the Joint Chiefs of Staff should have more openly voiced their opposition to the Johnson administration's strategy of gradualism and then resigned rather than carry out the policy.

But as Kohn—who was McMaster's academic adviser for the dissertation that became *Dereliction of Duty*—has observed, the book

> neither says nor implies that the chiefs should have obstructed American policy in Vietnam in any other way than by presenting their views frankly and forcefully to their civilian superiors, and speaking honestly to Congress when asked for their views. It neither states nor suggests that the chiefs should have opposed President Lyndon Johnson's orders and policies by leaks, public statements, or by resignation, unless an officer personally and professionally could not stand, morally and ethically, to carry out the chosen policy.[10]

This serious misreading of *Dereliction of Duty* has dangerously reinforced the increasingly widespread belief among officers that they should be advocates of particular policies rather than contenting themselves with their traditional advisory role.

Kohn writes that a survey of officer and civilian attitudes and opinions undertaken by the Triangle Institute for Security Studies in 1998–99 discovered that "many officers believe that they have the duty to force their own views on civilian decision makers when the United States is contemplating committing American forces abroad." When "asked whether military leaders should be neutral, advise, advocate, or insist on having their way in the decision process" to use military force, 50 percent or more of the up-and-coming active-duty officers answered "insist," on the following issues: "setting rules of engagement, ensuring that clear political and military goals exist, developing an 'exit strategy,'" and "deciding what kinds of military units will be used to accomplish all tasks." In the context of the questionnaire, "insist" definitely implied that officers should try to compel acceptance of the military's recommendations.[11]

Civil-military tensions did not disappear with the election and reelection of George W. Bush as president.

Ironically, some journalists who normally would reject the idea that military officers should "insist" that elected officials or their constitutional appointees adopt the military position seem to be all for it when it comes to the Bush administration and Donald Rumsfeld. For instance, in a March 2005 column for the *Washington Post* handicapping the field of possible successors to Air Force general Richard B. Myers as chairman of the Joint Chiefs of Staff, David Ignatius, citing *Dereliction of Duty,* raised a central question of U.S. civil-military relations: To

what extent should the uniformed military "push back" against the policies of a president and his secretary of defense if the soldiers believe the policies are wrong?[12] Ignatius wrote that "when you ask military officers who should get the job, the first thing many say is that the military needs someone who can stand up to . . . Rumsfeld. The tension between Rumsfeld and the uniformed military," he continued, "has been an open secret in Washington these past four years. It was compounded by the Iraq war, but it began almost from the moment Rumsfeld took over at the Pentagon. The grumbling about his leadership partly reflected the military's resistance to change and its reluctance to challenge a brilliant but headstrong civilian leader. But in Iraq, Rumsfeld has pushed the services—especially the Army—near the breaking point."

"The military is right," concluded Ignatius. "The next chairman of the JCS must be someone who can push back." But what does "pushing back" by the uniformed military mean for civilian control of the military?

LINCOLN AND MCCLELLAN: A CASE OF "PUSHING BACK"

Perhaps the clearest example of an American general who "pushed back" against civilian leadership because he disapproved of administration policy is Maj. Gen. George B. McClellan. Military historians tend to treat McClellan as a first-rate organizer, equipper, and trainer but an incompetent general who was constantly outfought and outgeneraled by his Confederate counterpart, Robert E. Lee. That may be true, but there is more to the story. McClellan and many of his favored subordinates disagreed with many of Lincoln's policies and indeed may have attempted to sabotage them. McClellan pursued the war he wanted to fight—one that would end in a negotiated peace—rather than the one his commander in chief wanted him to fight. The behavior of McClellan and his subordinates ultimately led Lincoln to worry that his decision to issue the Emancipation Proclamation might trigger a military coup.

There is perhaps no more remarkable document in the annals of American civil-military relations than the letter McClellan gave to Lincoln when the president visited the Army of the Potomac at Harrison's Landing on the James River in July 1862. McClellan, who had been within the sound of Richmond's church bells only two weeks earlier, had been driven back by Lee in a series of battles known as the Seven Days. McClellan's letter went far beyond the description of the state of military affairs that McClellan had led Lincoln to expect. Instead, McClellan argued against confiscation of rebel property and interference with the institution of slavery. "A system of policy thus constitutional and conservative, and pervaded by the influences of Christianity and freedom, would receive the support of almost all truly loyal men, would deeply impress the rebel masses and all foreign nations, and it might be humbly hoped that it would commend

itself to the favor of the Almighty." McClellan continued that victory was possible only if the president was pledged to such a policy. "A declaration of radical views, especially upon slavery, will rapidly disintegrate our present Armies," making further recruitment "almost hopeless."[13]

Advice from a general, however inappropriate, is one thing. But for a general to act on his own without consulting his commander in chief smacks of insubordination. In early June 1862, while the Army of the Potomac was still moving toward Richmond, McClellan had designated his aide, Col. Thomas Key, to represent him in prisoner-of-war negotiations with the Confederates, represented by Howell Cobb. But McClellan had gone far beyond the technical issue at hand, authorizing Key to investigate the possibility of peace between the sections. In response to Cobb's assertion that Southern rights could be protected only by independence, Key replied that "the President, the army, and the people" had no thought of subjugating the South but only desired to uphold the Constitution and enforce the laws equally in the states. McClellan apparently thought it was part of his duty to negotiate with the enemy on the terms for ending hostilities and to explain to that enemy the policies and objectives of his commander in chief, without letting the latter know that he was doing so.

McClellan did not try to hide his efforts at peace negotiations from Lincoln. Indeed, he filed Key's report with Secretary of War Edwin M. Stanton and asked him to give it to the president. Stanton acceded to McClellan's request but reminded him that "it is not deemed proper for officers bearing flags of truce in respect to the exchange of prisoners to hold any conference with the rebel officers upon the general subject of the existing contest."[14]

As for his own proper responsibilities, McClellan's generalship was characterized by a notable lack of aggressiveness. He was accused of tarrying when Gen. John Pope's Army of Virginia was being handled very roughly by Lee at Second Manassas. Indeed, one of Pope's corps commanders, Fitz-John Porter, clearly serving as a surrogate for McClellan, was court-martialed for alleged failure to come to Pope's aid quickly enough. A month later, McClellan was accused of letting Lee slip away to fight another day after Antietam; soon thereafter, Lincoln relieved him.

I have come to believe that McClellan's lack of aggressiveness was the result not of incompetence but of his refusal to fight the war Lincoln wanted him to fight. He disagreed with Lincoln's war aims and, in the words of Peter Feaver, "shirked" by "dragging his feet."[15] At the same time, McClellan and some of his officers did not hide their disdain for Lincoln and Stanton and often expressed this disdain in intemperate language. McClellan wrote his wife, "I have commenced receiving letters from the North urging me to march on Washington & assume the Govt!!"[16] He also wrote her about the possibility of a "coup," after

which "everything will be changed in this country so far as we are concerned & my enemies will be at my feet."[17] He did not limit the expression of such sentiments to private correspondence with his wife. Lincoln and his cabinet were aware of the rumors that McClellan intended to put "his sword across the government's policy." McClellan's quartermaster general, Montgomery Meigs, expressed concern about "officers of rank" in the Army of the Potomac who spoke openly of "a march on Washington to 'clear out those fellows.'"[18]

Such loose talk did not help McClellan or his army in the eyes of Lincoln, who understood that he must take action in order to remind the army of his constitutional role. He did by disciplining Maj. John Key, aide de camp to the general in chief, Henry Halleck, and brother of McClellan's aide, the aforementioned Col. Thomas Key. Lincoln wrote Major Key of learning that he had said in response to a query from a brother officer as to "why . . . the rebel army [was not] bagged immediately after the battle near Sharpsburg [Antietam]," that "that is not the game. The object is that neither army shall get much advantage of the other; that both shall be kept in the field till they are exhausted, when we will make a compromise and save slavery."[19]

Lincoln dismissed Key from the service, despite pleas for leniency (and the fact that Key's son had been killed at Perryville), writing that "it is wholly inadmissible for any gentleman holding a military commission from the United States to utter such sentiments as Major Key is within [i.e., by an enclosure] proved to have done." He remarked to John Hay "that if there was a 'game' ever among Union men, to have our army not take an advantage of the enemy when it could, it was his object to break up that game." At last recognizing the danger of such loose talk on the part of his officers and soldiers, McClellan issued a general order calling for the subordination of the military to civil authority: "The remedy for political errors, if any are committed, is to be found only in the action of the people at the polls."[20]

On the surface, criticism of Bush administration policy by retired officers is not nearly as serious as the actions of McClellan, whose "foot-dragging" and "slow-rolling" undermined the Union war effort during the War of the Rebellion. Nonetheless, the threat to healthy civil-military relations posed by the recent, seemingly coordinated public attack by retired generals on Secretary Rumsfeld and Bush's Iraq policy is serious, reinforcing as it does the illegitimate belief among active duty officers that they have the right to "insist" on their preferred options and that they have a right to "push back" against civilian authority.

But the fact is that the soldier's view, no matter how experienced in military affairs the soldier may be, is still restricted to the conduct of operations and military strategy, and even here, as Cohen shows, the civilian leadership still reserves

the right to "interfere." Civilian control of the military means at a minimum that it is the role of the statesman to take the broader view, deciding when political considerations take precedence over even the most pressing military matters. The soldier is a fighter and an adviser, not a policy maker. In the American system, only the people at large—not the military—are permitted to punish an administration for even "grievous errors" in the conduct of war.

RUMSFELD VS. HIS CRITICS: THE RECORD

While the military must make its point strongly in the councils of government, it will not, as instances adduced above have shown, always be correct when it comes to policy recommendations. In the case of Rumsfeld, it seems clear that although he has made some critical mistakes, no one did better when it came to predicting what would transpire. Did Rumsfeld foresee the insurgency and the shift from conventional to guerrilla war? No, but neither did his critics in the uniformed services.

Indeed, Tom Ricks reported in the 25 December 2004 *Washington Post* that Maj. Isaiah Wilson III, who served as an official historian of the campaign and later as a war planner in Iraq, placed the blame for failing to foresee the insurgency squarely on the Army.[21] Ricks wrote:

> Many in the Army have blamed Defense Secretary Donald H. Rumsfeld and other top Pentagon civilians for the unexpectedly difficult occupation of Iraq, but Wilson reserves his toughest criticism for Army commanders who, he concludes, failed to grasp the strategic situation in Iraq and so did not plan properly for victory. He concludes that those who planned the war suffered from "stunted learning and a reluctance to adapt."
>
> Army commanders still misunderstand the strategic problem they face and therefore are still pursuing a flawed approach, writes Wilson, who is scheduled to teach at the U.S. Military Academy at West Point next year. "Plainly stated, the 'western coalition' failed, and continues to fail, to see Operation IRAQI FREEDOM in its fullness," he asserts.
>
> "Reluctance in even defining the situation . . . is perhaps the most telling indicator of a collective cognitive dissonance on part of the U.S. Army to recognize a war of rebellion, a people's war, even when they were fighting it," he comments.

What about the charge that Rumsfeld's Pentagon shortchanged the troops in Iraq by failing to provide them with armored "humvees"?* A review of Army budget submissions makes it clear that the service's priority, as is usually the case with the uniformed services, was to acquire "big ticket" items. It was only after the

* The "humvee"—as the HMMWV, or High-Mobility Multipurpose Wheeled Vehicle, or M998 truck, in some eleven variants, is familiarly known—replaced the jeep in the U.S. military.

insurgency and the "improvised explosive device" threat became apparent that the Army began to push for supplemental spending to "up-armor" the utility vehicles.

Also, while it is true that Rumsfeld downplayed the need to prepare for postconflict stability operations, it is also the case that in doing so he was merely ratifying the preferences of the uniformed military. When it comes to postconflict stability operations, the real villain is the Weinberger-Powell Doctrine, a set of principles long internalized by the U.S. military that emphasizes the requirement for an "exit strategy." But if generals are thinking about an exit strategy they are not thinking about "war termination"—how to convert military success into political success. This cultural aversion to conducting stability operations is reflected by the fact that operational planning for Operation IRAQI FREEDOM took eighteen months, while planning for postwar stabilization began (halfheartedly) only a couple of months before the invasion.[22]

In retrospect, it is easy to criticize Rumsfeld for pushing the CentCom commander, General Franks, to develop a plan based on a smaller force than the one called for in earlier plans, as well as for his interference with the Time-Phased Force and Deployment List (TPFDL) that lays out the schedule of forces deploying to a theater of war. But hindsight is always twenty/twenty, permitting us to judge another's actions on the basis of what we know now, not what we knew then. Thus the consequences of the chosen path—to attack earlier with a smaller force—are visible to us in retrospect, while the very real risks associated with an alternative option—such as to take the time to build up a larger force, perhaps losing the opportunity to achieve surprise—remain provisional.

Critics argued that General Powell's actions constituted a serious encroachment by the military on civilian "turf."

The debate over the size of the invasion force must also be understood in the context of civil-military relations. The fact is that Rumsfeld believed that civilian control of the military had eroded during the Clinton administration, that if the Army did not want to do something—as in the Balkans in the 1990s—it would simply overstate the force requirements. It is almost as if the standard Army response was: "The answer is 350,000 soldiers. What's the question?" Accordingly, Rumsfeld was inclined to interpret the Army's call for a larger force to invade Iraq as just one more example of what he perceived as foot dragging. In retrospect, Rumsfeld's decision not to deploy the 1st Cavalry Division was a mistake, but again, he had come to believe that the TPFDL, like the "two major theater war" planning metric, had become little more than a bureaucratic tool that the services used to protect their shares of the defense budget.

It is clear that Rumsfeld is guilty of errors of judgment regarding both transformation and the conduct of the Iraq war. With regard to the former, his "business" approach to transformation is potentially risky. Rumsfeld's approach stresses an economic concept of *efficiency* at the expense of military and political *effectiveness*. War is far more than a mere targeting drill: as the Iraq conflict has demonstrated, destruction of a "target set" may mean military success but does not translate automatically into achievement of the political goals for which the war was fought in the first place. But the U.S. military does need to transform itself, and, as suggested above, the actual practice of transformation in the Rumsfeld Pentagon has been flexible and adaptive, not doctrinaire.

With regard to the Iraq war, Rumsfeld's original position was much more optimistic than the facts on the ground have warranted, but he has acknowledged changes in the character of the war and adapted to them. In addition, Rumsfeld's critics have been no more prescient than he. We should not be surprised. As Clausewitz reminds us, war takes place in the realm of chance and uncertainty.

Uniformed officers have an obligation to stand up to civilian leaders if they think a policy is flawed. They must convey their concerns to civilian policy makers forcefully and truthfully. If they believe the door is closed to them at the Pentagon or the White House, they also have access to Congress. But the American tradition of civil-military relations requires that they not engage in public debate over matters of foreign policy, including the decision to go to war. Moreover, once a policy decision is made, soldiers are obligated to carry it out to the best of their ability, whether their advice is heeded or not. The idea that a general or admiral—including those on the retired list—should publicly attack government policy and its civilian authors, especially in time of war, is dangerous.

NOTES

1. Richard H. Kohn, "The Erosion of Civilian Control of the Military in the United States Today," *Naval War College Review* 50, no. 3 (Summer 2002), p. 10, available at www.nwc.navy.mil/press/Review/2002/summer/art1-su2.htm.
2. Warren Strobel, "This Time Clinton Is Set to Heed Advice from Military," *Washington Times,* 1 December 1995, p. 1.
3. Peter D. Feaver, *Armed Servants: Agency, Oversight, and Civil-Military Relations* (Cambridge, Mass.: Harvard Univ. Press, 2005). In his treatment of civil-military relations, Feaver employs "agency theory," which was originally developed by economists to analyze the relations between a principal and an agent to whom he has delegated authority. The problem that agency theory seeks to analyze is this: given different incentives, how does a principal ensure that the agent is doing what the principal wants him to do? Is the agent "working" or "shirking"?

The major question for the principal is the extent to which he will monitor the agent. Will monitoring be intrusive or nonintrusive? This decision is affected by the cost of monitoring. The higher the cost of monitoring, the less intrusive the monitoring is likely to be. The agent's incentives for working or shirking are affected by the likelihood that his shirking will be detected by the principal and that he will then be punished for it. The less intrusive the principal's monitoring, the less likely the agent's shirking will be detected.

In applying agency theory to civil-military relations, Feaver acknowledges the unsuitability of the term "shirking" when describing the action of the military agent when it pursues its own preference rather than those of the civilian principal. But he contends that the alternatives are even less suitable. Feaver argues that shirking by the military takes many forms; the most obvious form of military shirking is disobedience, but it also includes foot dragging and leaks to the press designed to undercut policy or individual policy makers.

4. The origin of this understanding of civil-military relations can be traced to Samuel Huntington, *The Soldier and the State: The Theory and Politics of Civil-Military Relations* (Cambridge, Mass.: Belknap, 1957).

5. Eliot Cohen, *Supreme Command: Soldiers, Statesmen, and Leadership in Wartime* (New York: Free Press, 2002).

6. Lewis Sorley, *A Better War: The Unexamined Victories and Final Tragedy of America's Last Years in Vietnam* (New York: HBJ/Harvest Books, 2000).

7. See Michael Gordon and Bernard Trainor, *The Generals' War: The Inside Story of the Conflict in the Gulf* (Boston: Little, Brown, 1995).

8. William Calhoun, "Washington at Newburg," *Claremont Institute,* www.claremont.org/writings/050315calhoun.html, 15 March 2005. See also U.S. Army Dept., *The Army,* Field Manual 1 (Washington, D.C.: June 2005).

9. H. R. McMaster, *Dereliction of Duty: Lyndon Johnson, Robert McNamara, the Joint Chiefs of Staff, and the Lies That Led to Vietnam* (New York: HarperCollins, 1997).

10. Kohn, "Erosion of Civilian Control," p. 16.

11. Ole Holsti, "Of Chasms and Convergences: Attitudes and Beliefs of Civilians and Military Elites at the Start of a New Millennium," in *Soldiers and Civilians: The Civil-Military Gap and American National Security,* eds. Peter D. Feaver and Richard H. Kohn (Cambridge, Mass.: MIT Press, 2001), pp. 84, 489, and tables 1.27, 1.28.

12. David Ignatius, "Rumsfeld and the Generals," *Washington Post,* 30 March 2005, p. A15, available at www.washingtonpost.com/wp-dyn/articles/A11309-2005Mar29.html.

13. McClellan to Lincoln, 7 July 1862, in Stephen B. Sears, ed., *The Civil War Papers of George B. McClellan, 1860–1865* (New York: Ticknor and Fields, 1989), p. 344, and *Official Records of the Rebellion* [hereafter OR], ser. 1, vol. XI, pt. 1, p. 73.

14. For coverage and discussion of this entire issue, see Joseph Cullen, *The Peninsula Campaign of 1862: McClellan and Lee Struggle for Richmond* (Harrisburg, Pa.: Stackpole Books, 1973), pp. 69–76, and OR, ser. 1, vol. XI, pp. 1052–961.

15. Feaver, *Armed Servants.*

16. McClellan to Mary Ellen McClellan, 11 July 1862, in Sears, ed., *Civil War Papers,* p. 351.

17. McClellan to Mary Ellen McClellan, 10 August 1862, in ibid., p. 390.

18. "General M. C. Meigs on the Conduct of the Civil War," *American Historical Review* 26 (1920–21), p. 294.

19. "Record of Dismissal of John J. Key, Sep. 26–27, 1862," in *Collected Works of Lincoln,* ed. Roy Basler (New Brunswick, N.J.: Rutgers Univ. Press, 1953), vol. 5, pp. 442–43.

20. OR, ser. I, vol. 19, pt. 2, pp. 295–96.

21. Thomas E. Ricks, "Army Historian Cites Lack of Postwar Plan: Major Calls Effort in Iraq 'Mediocre,'" *Washington Post,* 25 December 2004, p. A01, available at www.washingtonpost.com/wp-dyn/articles/A24891-2004Dec24.html.

22. On Rumsfeld and the plans for the Iraq war, see Gordon and Trainor, *Cobra II: The Inside Story of the Invasion and Occupation of Iraq* (New York: Pantheon, 2006). See also Thomas Ricks, *Fiasco: The American Military Adventure in Iraq* (New York: Penguin Books, 2006).

FORT FISHER

Amphibious Victory in the American Civil War

Gary J. Ohls

Historians and military professionals tend to agree on the importance of large armies to the outcome of the American Civil War. So much attention has focused on the major battles and leaders of land warfare that other elements of military significance often receive less attention than deserved. Yet the ultimate victory of Union forces resulted from a total war effort, involving political, diplomatic, economic, military, and naval power. In no arena of conflict did the Union hold greater advantage than in its ability to assert naval force and conduct amphibious operations, and no operation in the entire Civil War better illustrates the Union's ability to leverage amphibious power projection than the assault on Fort Fisher at the mouth of the Cape Fear River. The actions taken to capture Fort Fisher and thereby close down the last effective Confederate port—Wilmington, North Carolina—represent a particularly rich opportunity to study the amphibious elements of that war.

The fighting for Fort Fisher actually involved two separate but related battles. The first attack, in December 1864, failed utterly, and it provides many good examples of bad planning and execution. The second effort, during January 1865, succeeded magnificently; it stands as a sterling example upon which to build an amphibious tradition. In the second attack, commanders learned from the mistakes of the first and applied sound principles for the conduct of complex joint operations.[1] By studying both the success and failure at Fort Fisher, it is possible to understand better the projection of combat power ashore and the evolution of joint operations within the American military system.[2]

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Other examples of the importance of amphibious assault during the Civil War exist, including joint operations on the inland rivers, on the littorals of the Gulf of Mexico, and along the Atlantic coastline.[3] The application of naval strategy and amphibious tactics constituted an integral element of President Abraham Lincoln's thinking, as he sought to maintain pressure on the Confederacy at every point.[4] The effects of this war strategy eroded Confederate strength in many areas, including the tactical power of their armies in the field. As Gen. Ulysses S. Grant and his lieutenants maneuvered against Southern armies, they faced smaller forces than they might have, because of the Confederate strategy of defending all points, including the entire coastline against a free-ranging Union navy.[5] In addition, as the Union navy closed Southern ports to blockade runners, Confederate armies lost important sources of materiel and equipment needed to sustain their war effort.[6]

At the beginning of the American Civil War, leaders understood sophisticated concepts of naval strategy, but very little doctrine or tradition regarding amphibious operations existed.[7] Between the Revolution and the Civil War, the United States had undertaken only one significant amphibious action. During the Mexican-American War, U.S. forces conducted an important joint amphibious operation under the command of Gen. Winfield Scott and Commodore David Conner. Using specially designed landing craft and tactical deception, Scott and Conner landed over ten thousand troops on beaches near Veracruz and sustained their operations ashore for fifteen months during 1847–48.[8] The Veracruz–Mexico City campaign was a masterpiece of strategy and joint service cooperation, providing a superb precedent upon which to build an amphibious program, had one been pursued.

American experience with amphibious operations during the Civil War produced mixed results up to the final action at Fort Fisher in January 1865. Grant made good use of the Navy in maneuvering his army along the Cumberland, Mississippi, and Tennessee rivers in the first two years of the war. These did not represent pure amphibious actions in the classical, blue-water sense, yet they possessed many of the attributes of amphibious warfare, including a supportive relationship between army and naval commanders. In the era before the existence of joint doctrine, nothing required greater attention than cooperation between service leaders. No one in the Civil War could do that better than Grant.[9] Unfortunately, Grant's subordinate commanders did not always prove as skillful in applying this aspect of operational art.

The capture of New Orleans by amphibious forces early in the war established an important strategic advantage for the Union. Yet despite operational success, cooperation between the naval and army elements had not been ideal. In April 1862, troops under Maj. Gen. Benjamin F. Butler arrived at New Orleans nearly one week after Flag Officer David G. Farragut initiated his naval attack on the

city. This delay allowed Confederate officials to remove almost all material and facilities of military value, including an entire armaments factory.[10] Additionally, discord developed between Butler and then-Capt. David D. Porter, commanding a flotilla of mortar craft, regarding the role of each service in tactical operations. This did not bode well for future relations between the two forceful commanders.[11] As a result, the New Orleans operation embodied both good and bad elements of amphibious warfare.

Union forces also conducted a series of amphibious operations along the Atlantic coastline early in the war. The 1862 operations of Flag Officer Louis M. Goldsborough and Brig. Gen. Ambrose Burnside on the North Carolina littorals were highly successful and enhanced the reputation of Burnside, contributing to his subsequent promotion to command the Army of the Potomac.[12] But the lack of determined Confederate defense, coupled with superior Union firepower, created mistaken ideas about the ease of conducting amphibious operations, leading to costly errors in later landings.[13]

Throughout most of the war, the U.S. Navy and Army struggled with the problems of planning, organizing, and conducting amphibious operations effectively against important enemy positions ashore. Such actions proved especially difficult when all support had to come from the sea.[14] Moving and sustaining large armies, such as George B. McClellan's on the York Peninsula in 1862 and General Butler's at Bermuda Hundred, Virginia, in 1864 contained important amphibious elements. From the perspective of power projection and sustainment, both of these operations proved highly successful, whatever failures occurred during subsequent operations ashore. But the real test of amphibious capability is a determined defense that must be engaged during or shortly after the landing, as in the case of Fort Fisher.

The importance of Fort Fisher to the Confederacy lay in the role it played in protecting the port of Wilmington, North Carolina. During the war, Wilmington proved a major irritant to the U.S. government, as a source of military supply and a base for Confederate commerce raiding.[15] Throughout much of the war, tension existed between the Union army and navy regarding what to do about Wilmington. Secretary of the Navy Gideon Wells consistently advocated a joint action against the city and its defenses, becoming more vigorous in his demands during 1864.[16] Although eventually acceding to the operation, Secretary of War Edwin M. Stanton remained indifferent to it even up to the first attack on the fort.[17] But Grant* came to realize that closing Wilmington would eliminate the

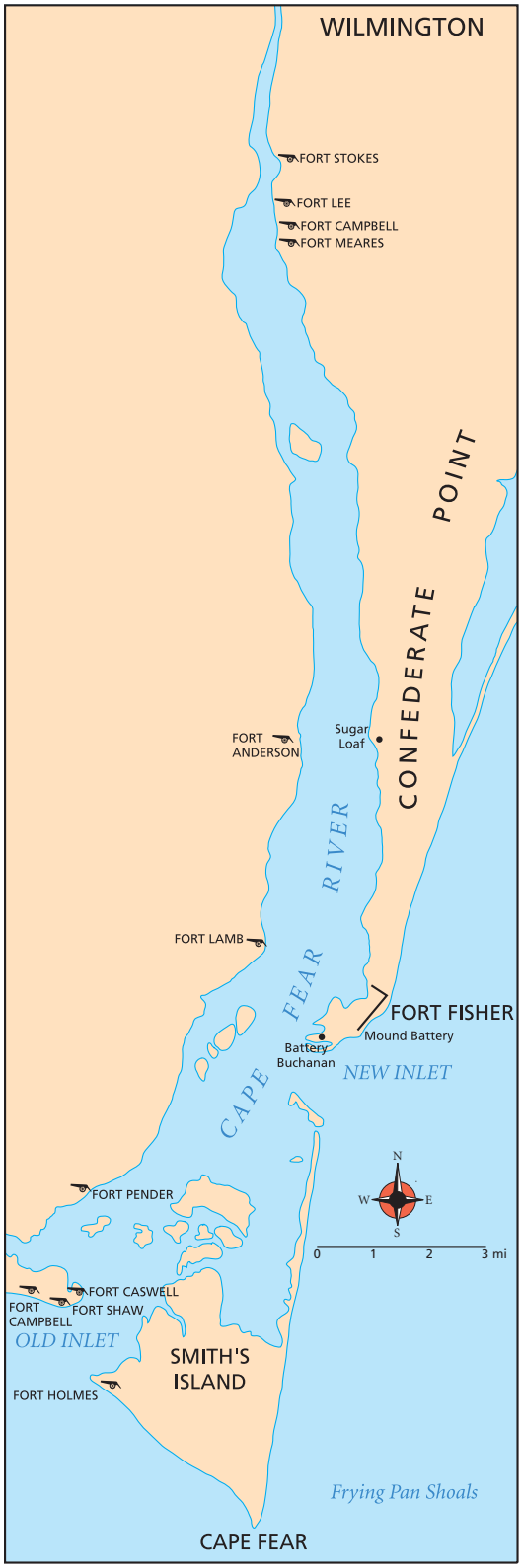
* Promoted to lieutenant general in March 1864 and made general in chief of U.S. forces, Grant established his headquarters in the field with the Army of the Potomac, commanded by General George Meade.

only outside source of supplies to Robert E. Lee's Army of Northern Virginia (with which the Union Army of the Potomac was in nearly constant contact after May 1864) and further isolate it on the battlefield. After the failure of the first Union effort, Grant became even more committed to the destruction of Fort Fisher and the closing of the port of Wilmington.[18]

By December 1864 only Wilmington and Charleston, South Carolina, remained open to blockade runners, as Union forces had either captured or effectively blockaded all other Confederate ports. Of the two, Wilmington proved more important, due to the difficulty it posed to blockading ships and its proximity to Lee's army.[19] Located twenty miles up the Cape Fear River, Wilmington presented a particularly difficult challenge to the Union navy. Offshore bombardment was impossible, and the hydrography of the estuary severely restricted avenues of movement for ships attempting to attack upriver.[20] Access to the Cape Fear River consisted of two inlets separated by Smith's Island and Frying Pan Shoals, which penetrated deeply out to sea. These conditions forced the blockading squadron to disburse its ships over a large sea space, thereby making it easier to penetrate.[21]

Fort Fisher served as the anchor for this powerful defensive complex, and in 1864 it represented the most advanced fortification in the world.[22] In addition to being the strongest defensive structure in the Confederacy, many considered it the strongest earthwork* ever built.[23] For over two and a half years, Fort Fisher's energetic and brilliant commander, Col. William Lamb, had labored to improve, strengthen, and expand its defenses. Working closely with his commanding officer, Maj. Gen. William Henry Chase Whiting, Lamb created a masterful defensive complex that dominated the mouth of the Cape Fear River.[24] As an observer during the Crimean War, Porter had visited formidable Fort Malakoff just after it surrendered to French and British forces. In his view, it did not compare to

* The walls, bastions, and batteries were piled sand, contained by heavy wooden gabions and parapets.



Fort Fisher in either size (the walls were nearly four thousand feet long overall) or strength.[25] As the naval commander during the attacks on Fort Fisher, Porter may have been inclined to overstate his case somewhat, but few would deny that the fort represented a strong defensive structure.

Fort Fisher lies on a peninsula jutting south from Wilmington in what looks like an elongated and inverted pyramid. Confederate Point—or Federal Point, depending on your persuasion—lies on the lower portion of the peninsula, which terminates at New Inlet.[26] New Inlet was one of the two entrances to the Cape Fear River for deep-draft ships. The second entrance, Old Inlet, lies farther south, near Smith's Island, and is controlled by no fewer than four mutually supporting forts. Piloting through these two inlets was slow and hazardous even under the best of conditions, and the guns of the various forts could either protect or destroy any ship attempting passage.[27] Fort Fisher, only one of numerous forts defending the avenues into Wilmington, dominated all traffic through the New Inlet channel. But if Fort Fisher offered advantages of strength and location to its Confederate defenders, these very qualities also offered Union strategists an operational center of gravity for taking Cape Fear and closing the port of Wilmington.[28] By neutralizing Fort Fisher, Union forces could control the entire region.

The design of the fort reflected the tactical and engineering skills of Whiting and Lamb. Fort Fisher lies on Confederate Point like a great numeral *7*, with the horizontal top line stretching roughly west-east about a thousand feet across the peninsula, and the longer vertical stem extending roughly north and south, parallel to the coastline for some three thousand feet.

The horizontal, east-west portion faced north and protected the fort from land attack down the peninsula. Any force large enough to threaten the fortress had to deploy to the north and assault that rampart, a formidable defensive challenge to Union commanders.[29] A direct assault against the ocean-facing wall offered small prospect of success, given the weapons and equipment available to attacking forces of that era. An attack from the rear would first require passage through New Inlet, an unlikely avenue since the fort's guns would destroy the shipping before a landing force could get ashore.[30]

In early December 1864, Grant decided, in conjunction with naval leaders in Washington, to send a joint expedition to attack and capture Fort Fisher.[31] He assigned Maj. Gen. Godfrey Weitzel to lead the assault force but issued his orders through Butler, who commanded the Department of Virginia and North Carolina, as well as the Army of the James.[32] Exercising command discretion, Butler chose to join the expedition off the coast of Fort Fisher and personally take charge of the operation.[33] Porter commanded the North Atlantic Blockading Squadron with responsibility for actions at sea and against the Confederate littoral.[34] The overall plan of attack agreed on by Grant and Porter involved moving 6,500 soldiers from Bermuda Hundred* to a rendezvous point off the North Carolina coast within striking distance of Fort Fisher. The force would wait in readiness until Porter exploded a powder boat near the fort and conducted extensive naval bombardment to destroy the fort's guns and defensive structures. When the defenders appeared sufficiently weakened, the landing force would go ashore and assault Fort Fisher from the north.[35]

The concept of operations seems sound, but the detailed planning proved utterly deficient. For example, the detonation of the powder boat, naval "preparatory fires" (in modern parlance), and the infantry assault required synchronized timing and fluid execution, creating shock for the defenders and momentum in the offensive.[36] Instead, the efforts occurred disjointedly and spasmodically, allowing the defenders to concentrate their full attention on each in turn. The powder boat detonated at approximately two o'clock on the morning of 24 December, with absolutely no effect on the troops, defenses, or subsequent battle.[37] Throughout the 24th Porter's fleet conducted a slow bombardment of Fort Fisher, inflicting only minor damage on its structure and guns. The defenders themselves suffered very few casualties under this fire, moving into protective "bombproofs" whenever they could not serve their own guns to good effect.[38]

On Sunday, 25 December, while Porter continued his naval gunfire, a landing force of some three thousand men went ashore about three miles north of the

* Butler's army, assigned in the 1864 campaign to threaten Richmond from the south, had been blocked since May in the Bermuda Hundred, a bight of land enclosed by a loop of the James River about twenty miles south of the city.

fort, out of range of its guns.[39] Weitzel pushed down the peninsula, capturing several small outposts along the way and scouting the approaches to the fort. In an act of courage and bravado, Lt. William H. Walling of the 142nd New York Infantry Regiment actually ascended the fort's parapet and brought back a Confederate flag knocked down by naval gunfire.[40] After the fact, Weitzel and Grant made much of the incident, along with the capture of a dispatch rider, but none of this had real military significance.[41] Weitzel halted and deployed his main force about eight hundred yards from the base of Fort Fisher to evaluate the situation.[42] An advance force of about five hundred skirmishers had already probed the fort's north-facing defenses, with unsatisfactory results;[43] the Confederate defenders had repulsed the Union line with canister and musket fire from strong positions, inducing anxiety in Weitzel's mind.[44]

In fact, what Weitzel now observed from his reconnaissance of the fort appalled him and caused him to question the prospect of success. Whatever his later tendency to overstate his minor accomplishments at the outposts and to understate his skirmishers' repulse, Weitzel at the time saw Fort Fisher's north wall as very formidable.[45] Attacking it may have been the only viable option, but that did not make the task any more palatable. The assault force had first to overcome an electrically detonated minefield and then an infantry line behind the log-and-earthen palisade, and finally storm a twenty-three-foot rampart holding twenty-four guns and mortars firing shot, shell, grape, and canister.[46] The wall terminated on the west at a slough covered by field artillery, and on the east at the formidable Northeast Bastion, which mounted two eight-inch guns.[47] Weitzel also noted that despite its apparent accuracy, the naval gunfire during the day had done little damage to the guns or structure of the fort.[48]

Thoughts came to Weitzel's mind of Fort Jackson (south of New Orleans in April 1862), Vicksburg (on the Mississippi, besieged May–June 1863), and Charleston (July 1863), where heavy bombardments had failed to destroy enemy defenses. His recollection of two bloody and failed assaults of 10 July 1863 on Battery Wagner in Charleston Harbor, "which were made under four times more favorable circumstances than those under which we were placed," also weighed heavily upon him.[49] Weitzel took a boat out to the army transport *Chamberlain* to meet with Butler and discuss the situation. He reported that in his opinion—and that of his senior officers—an assault under the present circumstances would be "butchery."[50] Butler concurred, conjuring up from Weitzel's vivid description of conditions his own thoughts of Battery Wagner, as well as Port Hudson, Louisiana, on the Mississippi (May–July 1863).[51] After further consideration, Butler ordered the landing force to disengage and reembark.[52]

Porter did not agree with the decision to call off the assault on Fort Fisher and urged Butler to reconsider. He explained that his ships had been bombarding at

only a slow rate of fire; rapid firing, he was confident, would suppress the fort's defenders until the assault force reached to within twenty yards of the ramparts. He further informed Butler that he had dispatched his largest vessels to Beaufort, North Carolina, to replenish their ammunition in order to provide sustained support should Butler and Weitzel resume the attack.[53] Whether because of personal animosity or professional distrust, Butler appears not to have placed any confidence in Porter's commitment. By 27 December all troops had left the beach, and by 28 December most had returned to their bases.[54]

Grant too disagreed with Butler's decision. On the 28th, after receiving a preliminary report, Grant telegraphed President Lincoln that the expedition had "proven to be a gross and culpable failure."[55] "Culpable" was the operative word. On 7 January 1865, Grant forwarded Butler's after-action report to Stanton, stating in his endorsement that he had never intended for Butler to accompany the expedition and that his orders "contemplated no withdrawal, or no failure after a landing was made."[56] It is clear that Grant believed Butler had disregarded his orders and had to assume responsibility for the failure at Fort Fisher. It is also clear that Grant's objection concerned primarily the withdrawal of the troops from the beach rather than the decision not to attack.[57] Grant believed that simply establishing the landing force ashore would have constituted success, because a subsequent siege would have been sufficient to guarantee ultimate victory.[58] Weitzel had recommended against launching an assault on the fort, but did not become associated with the decision to evacuate the beachhead. Because of this and his prestige within the Army, he escaped the full force of Grant's wrath. Yet Weitzel had missed his opportunity to excel and would have no role in future operations against Fort Fisher.

Even the three thousand men Butler and Weitzel had landed, of their 6,500 available, represented a strong and threatening presence ashore.[59] Fort Fisher's garrison consisted only of roughly one thousand men, including infantrymen, gunners, and engineers, both regular and reserve.[60] The formidableness of the defenses would give pause to any prudent commander, but did not—as Grant pointed out—dictate evacuation of the beachhead.[61] Nor did—as Butler later contended, and Porter emphatically denied—developing weather conditions require evacuation.[62] What better explains Butler's decision to withdraw his force was the arrival of Maj. Gen. Robert F. Hoke's division, dispatched from the Army of Northern Virginia by Lee.[63]

As Weitzel's troops came ashore near Fort Fisher, the advance elements of Hoke's division had passed through Wilmington and deployed to a position known as Sugar Loaf, six miles north of the fort. Commanded by Brig. Gen. William Kirkland, the Confederates engaged the lead brigade of the Union amphibious force, under Brig. Gen. Newton Martin Curtis. Seeing himself outnumbered and

not certain when the rest of the division would arrive, Kirkland pulled back. As Weitzel and Curtis began moving their troops south, Kirkland established a cross-peninsula line north of the landing site and awaited reinforcements. Weitzel had no idea of Kirkland's strength, but interrogation of prisoners caused him to inflate it in his mind.[64] Undoubtedly, this later weighed on his mind as he observed the awesome defenses of Fort Fisher's north wall.

In fact, the Confederates were weak both south and north of Weitzel. Braxton Bragg, the new commander of the Department of North Carolina, had pulled forces out of the Wilmington–Cape Fear area, including garrison troops from Fort Fisher. Whiting and Lamb had become alarmed, considering the fort dangerously undermanned. They also deplored Bragg's lack of urgency about the situation, which caused them to distrust his competence.[65] The weaknesses of the Wilmington area had prompted Lee to send Hoke's division to stiffen its defenses. Whiting and Lamb considered these reinforcements essential to the defense of their position.[66] Despite Kirkland's timely arrival, the bulk of Hoke's division did not arrive until after Weitzel and Butler had evacuated their lodgment ashore, due to conflicting railroad priorities.[67]

Union commanders did not appreciate their advantageous position on 25 December 1864, when they decided to end the operation.[68] Similarly, neither Kirkland nor Bragg realized the vulnerability of Weitzel's force once it began to withdraw. Whiting later severely criticized Bragg's failure to send Kirkland against Weitzel's constricting beachhead on the 26th. To Whiting and Lamb, the most important lesson from the December attack on Fort Fisher was the need to coordinate a total military effort throughout the Wilmington–Cape Fear area. Unfortunately for the South, Braxton Bragg appears to have been insensitive to the military situation and its impact on Fort Fisher.[69] In fact, Whiting believed, Bragg demonstrated incompetence throughout both battles for Fort Fisher and deserved the utmost censure.[70] Nonetheless, Confederate forces believed they had won a victory. In the words of Lamb, on "December 27, the foiled and frightened enemy left our shores."[71]

The Union forces did not believe they had been defeated, but they could hardly deny that they had failed. Joint planning existed only on a superfluous level and independent action became commonplace during execution, demonstrating the lack of coordination between the army and navy. Additionally, it is fair to state that Butler and Weitzel exhibited tentativeness, if not outright timidity. Of course, they had no way of knowing the true strength of the fort's garrison or of the troops to their north, but Hoke's entire division was no larger than their own force.[72] The fire support available from Porter's guns would have been superior to anything Hoke could have brought to bear.

Both Porter and Grant contended that the attack lacked vigor and commitment. But Porter's support of Butler and Weitzel had been erratic as well. Certainly he demonstrated the professional capability of his naval force even if the slow rate of fire had not caused much damage to the defenses of Fort Fisher.[73] Yet Porter's cooperation with the army in the explosion of the powder boat and the pre-invasion bombardment had been abysmal.[74] Porter had not only exploded the powder boat too early and without notifying army leaders but failed to establish any means of communicating with forces ashore to direct or evaluate the effectiveness of his gunnery. Additionally, his detailed planning with respect to ammunition and fuel proved deficient. Butler also lacked a logistics plan to support his troops ashore.[75] In general, both commanders failed to integrate their efforts. They acted like separate commanders, merely informing each other of their actions, rather than as a cohesive and synergetic team.

Grant's disappointment in the operation was considerable, but his reaction appears somewhat disingenuous. Although he contended that he had "contemplated no withdrawal or no failure after a landing was made," his initiating order to Butler had been ambiguous in that respect.[76] It clearly stated the objectives but concluded, "Should the troops under General Weitzel fail to effect a landing at, or near Fort Fisher they will be returned to the army operating against Richmond without delay."[77] No doubt this sentence led Butler to believe he had discretion to withdraw—since Weitzel never landed more than half of his troops, he could rationalize that the landing had never been effected.

The best outcome for the Union of the first attack against Fort Fisher was that leaders learned from its failure.[78] Despite their efforts to make Butler the scapegoat, both Grant and Porter realized that their own leadership could stand improvement. Porter and Butler had held several meetings but had conducted no real joint planning and had not communicated on an effective level.[79] Grant had left a certain ambiguity regarding his intentions and expectations.[80] Generals like William T. Sherman or Philip H. Sheridan would probably have discerned Grant's intention better than did Butler or Weitzel. But in any case, Union leaders would avoid similar errors in the second attempt. Grant would make his expectations perfectly clear to everyone and would require most emphatically close coordination between the Army and Navy.[81]

The final lesson from the Fort Fisher failure involved the problem of "operational security." The intention to capture Fort Fisher and close Wilmington in December 1864 had been general knowledge in both armies.[82] Even worse, Confederate spies at Hampton Roads had reported specific intelligence about ship and troop movements to Lee, permitting him to send Hoke's division to interpose.[83] Grant did not intend to permit such compromises in the second attempt, in January 1865. Even his new commander, Maj. Gen. Alfred H. Terry, for instance, had

to wait until he put to sea to open the orders explaining his mission and destination.[84] Rightly perceiving that disinformation could help even more, Grant let the suggestion leak that Terry and his force were to join Sherman's army in Savannah, thus providing a plausible explanation for all the naval activity.[85]

When the fleet assembled off Beaufort on 8 January, Terry met with Porter to plan the amphibious operation.[86] For the second Fort Fisher mission Porter embraced a more cooperative approach at the outset, because he trusted Grant and had confidence in the new army commander.[87] Terry and Porter developed a strong working relationship, which created the synergy so lacking in the first expedition.[88] After the planning sessions the force proceeded through heavy weather toward Cape Fear, arriving off Confederate Point after dark on 12 January, too late to attempt a landing.[89] At eight o'clock the next morning Porter's ships began a bombardment of Fort Fisher, and landing operations commenced about 8:30. By two that afternoon Porter and Terry had landed eight thousand men with twelve days' provisions and all their equipment, again north of the fort.[90]

Terry's advance element threw out pickets, who engaged Confederate scouts and captured a few prisoners. From these Terry learned that Hoke's division was still in the area; it had not left to oppose Sherman's army (which had just seized Savannah, Georgia, and was pushing northward), as Union intelligence had previously indicated.[91] Terry now had to concern himself with a strong force to the north as he moved south against Fort Fisher. He had planned a defensive line across the peninsula to protect his rear, but this new information added urgency to that precaution and increased the size of the force needed.[92] Finding the best place to establish the line became more difficult than expected. Darkness set in before Terry could find ideal terrain, and a lake on the planning map upon which he had intended to anchor the defensive line proved to be only a dried-up sandpit. In the end, Terry felt compelled to commit over half of his force to protect his rear.[93]

By eight o'clock the morning of 14 January, Terry had created a strong north-facing breastwork across the peninsula. His troops continued to improve this position throughout the period of the battle. Terry knew he had a secure foothold, which he made even stronger by emplacing field artillery, creating interlocking fields of fire, and establishing naval gunfire "kill zones." He then conducted a reconnaissance of the fort in conjunction with his engineer officer, Col. Cyrus Comstock, and the assault force commander, the same Brigadier General Curtis who had led it in December. What they saw led Terry to decide to take immediate and aggressive action rather than besiege the fortress.[94] That evening he returned to the flagship to meet with Porter and arrange activities for the next day.[95] Terry and Porter came to a complete understanding, by which a strong naval bombardment by all vessels of the fleet would begin in the morning

and continue until the moment of assault, which would be two-pronged, with army units on the right, attacking the western flank of the north-facing wall, and a detachment of sailors and Marines on the left, simultaneously attacking the Northeast Bastion.[96] Terry sent a signal team to Porter's flagship for communications throughout the battle.[97]

Brig. Gen. Adelbert Ames's 2nd Division—which included Curtis's 1st Brigade—and Brig. Gen. Charles J. Paine's 3rd Division, with attached artillery and engineers, had been present in December. Terry also had a brigade under Col. Joseph C. Abbott and a brigade of sailors and Marines under Lt. Cdr. Kidder Randolph Breese.[98] The naval brigade, specially created by Porter for the attack, did not formally belong to Terry's command but was made available for his use.[99] It consisted of 1,600 sailors and four hundred marines armed with cutlasses, revolvers, carbines, and Sharps rifles.[100]

At approximately nine o'clock on the morning of 15 January, most of Porter's North Atlantic Squadron began moving into position for the preparatory gunfire against Fort Fisher, the remainder supporting Terry's defensive line north of the fort. By eleven the ships opened fire initiating a furious duel with the guns of Fort Fisher.[101] The ground attack had been set for two in the afternoon, but not all of Terry's forces had reached their positions by that time. At about three, Terry signaled the fleet to shift to new targets and launched his two-pronged assault against the Confederate bastion.[102]

Furious fighting developed on both flanks over the next several hours as Terry sent in one unit after another to break through the fort's defenses.[103] Despite stiff resistance, Terry made progress on the Confederate left, due in large part to the defenders' having mistaken the naval brigade at the other end of the line for the main Union effort and concentrated their forces against it.[104] On the Union left, despite the courage of Breese's troops, confusion in the assault formation exposed it to a devastating fire from the ramparts and ultimately defeated the effort.[105] Breese would later declare that the failure of his attack resulted from organizational problems and lack of cohesiveness within his naval brigade. His force, assembled from small elements of every ship in the fleet thrown together, had no training as an integrated unit. Their first opportunity to work together came in storming the revetments of one of the strongest forts in the world.[106] But Breese had no need to apologize or rationalize, as his attack allowed Terry to establish a lodgment at the other end of the Confederate line.[107]

As Breese and his brigade struggled with devastating fire on the Union left, Terry's brigades made gradual progress on the right. Having fed in all three brigades of Ames's division, Terry sent in an additional brigade and regiment drawn from his northern defensive line.[108] Reinforced, Terry pressed the attack and entered the fort around six o'clock, although resistance continued into the

night.[109] Fearing an attack from Hoke, Terry moved Breese's spent naval brigade into the defensive line to replace the troops that he had withdrawn.[110] By ten that night, the Union army had taken Fort Fisher, having killed or captured all its defenders. Whiting and Lamb, both seriously wounded, became prisoners when the fighting finally ended at Battery Buchanan, roughly a mile south of the fort proper.[111]

By any standard, the second attack against Fort Fisher stands as a superb example of naval competence, military efficiency, combat effectiveness, and the value of joint operations. But like all great victories, the results at Fort Fisher reflect both competence in the victor and deficiencies in the defeated.

Robert Hoke's division, sent to protect Fort Fisher and keep Wilmington open, numbered six thousand effectives.[112] As we have seen, only Kirkland's lead brigade arrived during the first attack in December, and it did very little to oppose that landing, aside from the psychological pressure on Weitzel and Butler its presence created. As it turned out, however, that presence alone, coupled with the strength of Fort Fisher's north wall, proved sufficient. In January 1865, the entire division was present and available, yet it proved of little more value. The division remained in defensive positions well north of the fighting, posing a threat to Terry's force but taking no action against it. The most charitable view is that Hoke's proximity required Terry to maintain a strong defensive line in his rear, manned by over half his troops. Yet even that had no impact on the outcome of the battle. Hoke and his division were little more than spectators.

In Whiting's view, Fort Fisher fell to the Union for two principal reasons. First and most important, as has been noted, was Braxton Bragg's generalship. Whiting's second reason was the naval bombardment on 14–15 January, which he believed the most powerful of the war.[113] If Whiting thought the bombardment in December "diffused and scattered," the next one he considered ferocious and tenacious. The shelling destroyed all the guns on the north wall, swept away the palisade, and plowed the minefield, cutting most of the detonating wires. Nevertheless, Whiting claimed, the garrison could have held out if supported by Bragg. Even if not, Lamb believed that a fresh brigade could have retaken the fort immediately after it fell but had none in position.[114] In Whiting's evaluation, ultimately the defeat at Fort Fisher resulted from Bragg's failure to send in Hoke's division during the fighting.[115]

Whatever Hoke's division might have accomplished, the amphibious lessons are apparent. The most important prerequisite of amphibious success is effective integration between the naval and landing forces.[116] This element was not entirely missing in the first attack, as exhibited by the fire support on 25 December, but compared to January it was almost feeble. The army signalers aboard

Porter's flagship in January illustrates the lengths to which he and Terry went in order to coordinate. The close and continuous planning that occurred between Porter and Terry throughout the operation contrasts with the minimal communication in December. The potential existed for victory or defeat during both attacks on Fort Fisher. Synergy between the Army and Navy is an important reason why the first failed and the second succeeded.

The rapid transfer of combat power from sea to shore is another key to success in landing operations.[117] In the first attack, Butler and Weitzel were almost leisurely. They never got more than half their troops ashore, and even that fraction could not have sustained itself more than a few days. In contrast, Terry and Porter landed eight thousand troops in about five hours with all their equipment and supplies for twelve days. This illustrates the difference between a tentative effort and a determined commitment. Terry also organized his force—including the naval brigade—in such a manner as to provide his operation flexibility and fluidity.[118] His units could be reinforced tactically without creating undue vulnerability elsewhere. There is no evidence of Butler or Weitzel having given any thought to "task organization" during the first attack.

Related to integration between naval and landing forces is the concept of unity of effort, or operational coherence.[119] Simply stated, this goes beyond integration of effort to imply a unified approach at all levels, based upon a single-minded commitment to accomplishing the mission. This unity and coherence emerged in the second attack in great part due to the failure of the first. Determined not to experience another such ignominy, the secretaries of war and the Navy, Admiral Porter, and Generals Grant and Terry realized they had to produce a common, unified effort, a coherent operation. This resulted at the highest levels in a unity of effort that flowed down through all ranks and permeated the entire operation—perhaps more completely than in any other episode of the Civil War. Certainly, it stands in stark contrast to the disunity and disjointedness among the defenders. The concept of unity of effort and operational coherence appears not to have entered into the thinking of the Confederate leadership in the Wilmington–Cape Fear area.[120]

As we have seen, despite the superb example of the Veracruz landing, naval and military commanders of the American Civil War had no doctrine or specially trained officers with which to plan or execute amphibious operations. Neither did they have a systematic way to capture, analyze, or document lessons from their own experience. The lessons of Fort Fisher were not formally preserved for use during the next major conflict—the Spanish-American War of 1898. Nonetheless, it is apparent that some institutional memory survived from one war to another.[121] Of the four major landings undertaken by American forces in 1898, all proved successful, if not models of efficiency.[122] The commanders associated with

these amphibious operations—George Dewey and William T. Sampson of the Navy; Nelson A. Miles, William R. Shafter, and Wesley Merritt of the Army; and Robert W. Huntington of the Marines—all had had combat experience during the Civil War. In every case, the planners of 1898 ensured that the landings would be unopposed at the water's edge and that sufficient naval gunfire would support operations ashore.

Interestingly, the most outstanding example of interservice cooperation in both planning and support from the Spanish-American War occurred between Dewey and Merritt during complex amphibious operations in the Manila-Cavite area.[123] Dewey, who had served on the steam frigate *Colorado* under Porter during the fight for Fort Fisher, brought firsthand battle experience to the Manila-Cavite campaign. In comparison, the Daiquirí landings near Santiago, Cuba, lacking sound doctrine and officers with direct amphibious experience, appeared amateurish.[124]

Fort Fisher, Veracruz, and to a lesser extent the Spanish-American War all contributed to the U.S. amphibious tradition and historical record, in ways useful for the future. They provided twentieth-century military and naval thinkers with solid examples on which to develop their theories, doctrine, and war plans. By then a melding of military history with the diligence of professional officers ensured that the amphibious experiences of the nineteenth century, especially the example of Fort Fisher, would be available for future commanders. Today, even in a substantially changed operational environment, many of those lessons remain valid and instructive.

NOTES

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SUEZ, 1956

A Successful Naval Operation Compromised by Inept Political Leadership

Michael H. Coles

This article was originally undertaken to note the fiftieth anniversary of the Suez Affair, the November 1956 Anglo-French invasion of Egypt, which, although originally headed for rapid success, was quickly halted by a combination of political and economic pressure. As work progressed it became apparent that much of what happened fifty years ago, and the political and military thinking (or lack thereof) behind it, has relevance for today's strategic planners. Indeed, as one contemplates the present situation in Iraq, Santayana's oft-quoted axiom—that those who cannot learn from the past are condemned to repeat it—remains extraordinarily relevant. Suez was a war of choice in a time of peace, one that, we now know, was largely justified by clandestine political arrangements. It was extraordinarily divisive both politically and among the military leadership, the latter going to unusual lengths in their attempts to halt it. The politicians responsible, anxious to sustain their fictitious casus belli in the face of rapidly moving events, interfered with tactical operations in a manner that went well beyond the political/military relationship normal in democracies. Perhaps the most important conclusion to be drawn from Suez is that flawed political decisions are likely to lead to flawed operational strategy. Nevertheless, as we look at the actual military performance during the invasion, taking into account the constraints imposed, we see near copybook performance by the airmen, commandos, and

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paratroopers involved. Suez goes down in history as a bad event and carries a bad name, yet from a half-century's perspective it appears that those who fought there, however briefly, performed well. It is to recognize this point that this article concentrates on the operational side of the affair as much as, or more than, on the political.

Following the end of World War II the Middle East became an area of increasing tension. Many factors were responsible, but the most significant was the continuing conflict between the new state of Israel and its Arab neighbors. In 1950, Britain, France, and the United States issued a Tripartite Declaration in which they agreed to take action to prevent any violation of the 1947 armistice lines separating Israel from its Arab neighbors. Intended to defuse the situation, the declaration did little to calm tensions, but it did become a central factor in Washington policy making. In the fall of 1955, Moscow and Cairo concluded a major arms contract, at which point relations between Egypt and the West started to deteriorate rapidly. Nevertheless, at the end of the year the United States, Britain, and the World Bank offered to fund construction of Egypt's prestigious Aswan High Dam. However, Gamil Abdel-Nasser (Egypt's new head of state) and his proposed dam were equally unpopular with Congress, and on 19 July 1956 the financing offer was withdrawn. A week later Nasser announced that the Suez Canal would be nationalized. The French and British, its principal owners and users, deemed this unacceptable, fearing restrictions on the use of this vital international waterway.[1]

Although Anglo-French diplomacy throughout the affair appeared at the time to be primarily directed at regaining the canal, events following the nationalization owe much to the fact that Prime Minister Anthony Eden of Britain and Prime Minister Guy Mollet of France wanted also to eliminate Nasser, believing, respectively, that he was undermining British prestige in the Middle East and providing support for the Algerians in their rebellion against France. Such feelings resonated with much of popular opinion in the two countries; comparisons with Hitler and Mussolini were rife. Removing Nasser from power, however, if a potentially valuable collateral outcome of a successful recovery, represented a confusing alternative priority for military planners. Even though the two governments decided within days after nationalization to use military force, they never properly defined their political objectives—regime change or canal access—and could thus give little clear guidance to their military staffs. As historian Hugh Thomas later noted, "The political aims of the campaign remained somewhat obscure to the officers designated to carry it out."[2]

British post–World War II defense policy contemplated two kinds of war: full-scale operations against the Soviet Union within the framework of NATO, and

suppression of small-scale colonial insurgencies. In the summer of 1956, on one hand, a major portion of Britain's active-duty army was assigned to its Army of the Rhine, where it represented a significant component of NATO's military strength; on the other hand, Royal Marines and paratroopers (Britain's main rapid-deployment units) were largely employed on anti-insurgent duties in Cyprus and lacked current jump and amphibious assault training, respectively, while other infantry units and Royal Air Force (RAF) squadrons were occupied in the long-running Malayan Emergency. French troops, barely recovered from their disaster in Vietnam, were heavily engaged in Algeria. Although Anglo-French planners were fortunate to have significant naval surface and air power available for what would prove to be principally a littoral operation, much preparatory work would be necessary before a significant eastern Mediterranean offensive could be contemplated. Many units had to be redeployed and retrained, army reservists recalled, and landing craft and troop transports brought out of reserve or requisitioned.[3]

London was concerned that Washington remain at least neutral throughout any conflict, but American thinking was dominated by the upcoming 1956 presidential election. Dwight D. Eisenhower, who was seeking a second term, urged a diplomatic resolution, but such ran counter to the Anglo-French desire for military action. The transatlantic relationship was further frayed by extraordinarily bad relations between Eden and the American secretary of state, John Foster Dulles, and by Washington's irritation at Britain's apparent inability to accept its reduced status in the world. Evidence of this reduced status was available for all to see in the fact that the U.S. Sixth Fleet constituted by far the largest collection of naval power in the Mediterranean, a sea the British had once dominated and historically had regarded as a natural extension of its empire.[4]

For several weeks following the nationalization, high-level meetings involving the British, French, and American governments (collectively the largest users of the Canal) and the United Nations struggled to develop compromises acceptable to all. The diplomatic process was slow, but by early October private negotiations with the Egyptians at the United Nations seemed close to meeting most of the canal users' concerns, while Egyptian canal pilots had successfully taken the places of European waterway operators. The Anglo-French casus belli appeared to be melting away and with it any excuse for destroying Nasser. At this point the Israelis, increasingly concerned with their security in the face of a rising level of Egyptian *feydaheen** attacks, provided the alliance's political leadership with a convenient solution.[5]

* Holy warriors sworn to defend the prophet and serve the cause of freedom.

On 22 October, representatives of the French, British, and Israeli governments meeting in a Paris suburb secretly agreed that the Israelis would at the end of the month launch a major preemptive attack on the Suez Canal Zone. The French and British would then demand that the Israeli and Egyptian governments withdraw all troops ten miles back from either side of the canal. If the Egyptian government did not agree to this ultimatum by the morning of 31 October, Anglo-French forces would begin military operations. Although its relationship with Israel was uneasy, Britain had an essential role to play: it alone had the air power deemed necessary to destroy the Egyptian air force, whereas the Israelis were understandably reluctant to risk their army in the open desert until that had been done.[6]

Port Said. Imperial War Museum, by permission

Future planning was complicated by the fact that almost no one who would be concerned with the Anglo-French operation had any knowledge that the three-way plot existed. A treaty providing that Britain would come to the aid of Jordan in the likely event of hostilities between that country and Israel further confused matters on the British side. Indeed, there was a moment in October when two distinct planning staffs were preparing for war—one against Israel, the other against Egypt—both assuming the use of largely the same military forces. One Royal Navy squadron commander recalled expecting to be fighting the Israelis, and his surprise when he found the opposite to be true. As Israeli general Moshe Dayan commented later, "I must confess to the feeling that, save for the Almighty, only the British are capable of complicating affairs to such a degree."[7]

During October the normal free flow of intelligence information between London and Washington largely dried up. Heavy communications traffic between London and Paris aroused suspicion in Washington but overwhelmed American deciphering capacity. Reports from Israel indicated a possible large-scale mobilization. Nevertheless, unknown to anyone but a small circle in Washington, a new and highly secret presence was watching what was going on. On 27 September America's recently introduced U-2 spy planes were instructed to conduct high-level reconnaissance over the eastern Mediterranean. In the ensuing weeks CIA pilots, including the soon to be famous Francis Gary Powers, photographed most of the Middle East. U-2 reports indicated that the number of French jet fighters in Israel significantly exceeded the number the French were permitted to transfer under the Tripartite Declaration, while high-resolution photographs indicated large quantities of weapons being loaded onto French and British ships in Toulon, Malta, and Cyprus. However, even though the military preparations of the British and French had become well known to the Americans, their intentions remained unclear. Still, as CIA director Richard Bissell commented when he saw the photos, all those vessels were not there getting ready for a regatta.[8]

The Anglo-French ("allied," for this purpose) naval forces available for the Suez operation would be asked to perform their traditional roles in military expeditions: to bring the invasion force safely to the enemy shore, soften up defenses prior to the landing, transport the landing force onto the beaches, and provide cover for the troops while they established a secure beachhead. Royal Marine commandos, together with army paratroopers, would form the initial assault force. The Royal Navy and its marines were thus following a tradition that went back through Cunningham at Cape Matapan at least to Nelson at the Nile—countering a threat to Britain's vital eastward lines of communication—although in 1956, oil from the Middle East rather than trade with India was the prime motivator.[9]

The British at the time had a well-developed network of military bases in the Mediterranean. However, those in Libya and Jordan (made available by treaty) were largely unusable for political reasons, while more accessible colonial facilities had their own drawbacks: airfields and harbors in Cyprus had limited capacity; Royal Air Force ground-attack aircraft operating from Cyprus would do so at their maximum range, thus reducing their effectiveness; and Malta was some thousand miles to the west of any likely action. It was thus clear that carrier aviation would prove a vital part of the invasion plans.[10]

The Royal Navy that went into action at Suez had just undergone a major and innovative carrier modernization program. Three years earlier, during the Korean War, it had provided close air support for United Nations land forces

using World War II–era straight-flight-deck light fleet carriers and propeller-driven attack planes. Now its operational carrier strength consisted of five recently commissioned ships equipped with early-model angled decks and a new mirror landing system, which together provided improved flight deck safety and reduced the accident rate. Steam catapults had not yet been installed, so the ships remained much at the mercy of their old hydraulic models, and these gave considerable trouble. HMS *Eagle,* a modern fleet carrier already in the Mediterranean, was hastily reinforced by its smaller contemporaries, *Bulwark* and *Albion.* (*Eagle*'s operational efficiency was significantly reduced before the outbreak of hostilities by the failure of its port catapult.) Two obsolete World War II carriers, *Theseus* and *Ocean,* were rapidly prepared for troop carrying and sailed for Malta in early August. The French navy promised a battle group consisting of the older carriers *Arromanches* (a sister ship of *Theseus* and *Ocean*) and *Bois Belleau* (formerly USS *Langley*) and the fast fifteen-inch-gun battleship *Jean Bart*. South of Suez the Royal Navy assembled a task force consisting of the cruiser HMS *Newfoundland* and French and British escorts. The initial allied assault force would have eighteen tank and troop landing vessels. Troopships with larger combat organizations were to follow some hours behind. Altogether, with escorts and auxiliary vessels, the assault force numbered over a hundred ships.[11]

The British carrier air groups, other than helicopters and airborne early warning (AEW) aircraft, were all modern jet or turboprop, comprising a hundred Seahawk and Sea Venom fighter-bombers, nine Wyvern attack planes, and eight AEW aircraft. The twenty-five radar-equipped Sea Venoms embarked in *Eagle* and *Albion* had night and all-weather capability, giving the Royal Navy for the first time the ability to mount around-the-clock operations. The French carriers operated thirty-six F4U Corsair fighter-bombers and ten TBM Avenger antisubmarine aircraft, all propeller driven and of World War II vintage; in his subsequent report the (British) Flag Officer Aircraft Carriers was particularly complimentary regarding the aging Corsairs' operational versatility. In mid-October, belatedly concerned about a possible underwater threat, the Admiralty rapidly equipped *Theseus* with a helicopter antisubmarine squadron, which would later prove invaluable in another context. French Avengers also provided antisubmarine capability.[12]

There were three other navies operating in the rather crowded southeast corner of the Mediterranean in October 1956. The Egyptian navy in the early 1950s had two former *Hunt*-class destroyers, six frigates, and a sloop (a small destroyer-escort equivalent), all World War II vintage and all acquired from Britain. In 1955 Nasser had acquired two more modern Soviet-built *Skori*-class destroyers, as well as four armed minelayers and twenty motor torpedo boats (MTBs). The

possibility that Nasser had also purchased Soviet submarines was of some concern to the allied navies. The Israeli navy believed that the training of Egyptian navy crews, by Poland and the Soviet Union, had been considerably more effective than that received by Egyptian soldiers.[13]

Israel's much smaller navy consisted at the outbreak of hostilities of two formerly British Z-class destroyers, and a frigate, as well as several MTBs and landing craft. As will be seen, it soon received reinforcement from an unexpected quarter.

Finally there was the powerful American Sixth Fleet, mustering fifty ships, twenty-five thousand personnel, and two hundred aircraft. Two modernized *Essex*-class carriers, USS *Randolph* (CVA 15) and *Coral Sea* (CVB 43), made up the fleet's principal striking force. Its air groups included swept-wing F9F Cougar fighters—a fact that would cause considerable confusion to Anglo-French air crews—and, probably unknown to the rest of the world, small detachments of F2H Banshees trained to deliver the nuclear weapons that carriers now routinely carried. The British and American navies in the theater, normally friendly rivals used to a high degree of informal cooperation, had essentially stopped speaking to each other by mid-October. The Americans claimed that they knew nothing of British plans; apart from having been told to evacuate American civilians from the combat area, the Sixth Fleet's commander, Adm. Charles R. Brown, had no better instructions than a message from Adm. Arleigh Burke, the Chief of Naval Operations, saying: "Situation tense, prepare for imminent hostilities." Other participants, though unaware of the highly secret U-2 activities, believed that Washington knew exactly what was going on. In fact, however, Washington still did not.[14]

The Egyptian air force, which represented the principal threat to both the Anglo-French invasion and the Israelis, consisted of 110 MiG-15 supersonic fighters and forty-eight Il-28 medium bombers, as well as some older fighters. These aircraft were spread among seven airfields. The MiGs, which outclassed anything possessed by the allies, were of particular concern, especially if flown by Eastern bloc "volunteers." However, these new fighter planes had only just been delivered, and Egyptian pilot training in them was incomplete. The "volunteers" never did appear, and throughout the campaign it would be a lack of pilots, not of aircraft, that would inhibit Nasser's air forces. The Egyptian pilots who resisted were more competent than the Israelis had expected.[15]

By the end of July the British staff had prepared a preliminary plan and an interservice command structure; the codeword was MUSKETEER. The planning staff became Anglo-French in early August, under British leadership. Although inevitable differences would occur throughout the planning process, the matter that most distinguished between the allies was British insistence on massive and

well-prepared force, an approach that contrasted with French emphasis on speed of preparation and execution. It appears that Eden initially favored the French view until dissuaded by his military advisers, whose thinking was predicated on World War II experience, and by serious concern about the new weapons with which the Soviets had generously equipped the Egyptian forces. In fact the British military apprehensions were misplaced, while the French political judgment was proved right: the long time that elapsed between inception and action allowed the many voices calling for peace to become mobilized, while the reasons for war became less convincing.[16]

In the event, and to the chagrin of the French, who were urging rapid action, and the bored and occasionally mutinous British reservists, who badly wanted to go home, the operation was postponed several times while diplomacy ground on. London eventually approved the final plan of attack on 19 September. The landings would be at Port Said, but there was still no definite date. Postponements resulted in equipment problems—weapons and vehicles at sea suffered from the effects of salt air, without proper maintenance. The Royal Navy's Mediterranean command emphasized to the Chiefs of Staff in London the weather-related perils of attempting a landing on defended beaches after 1 November.[17]

By a curious coincidence (one that appeared too good to be true and probably was), the invasion plans called for a command and communications exercise (BOATHOOK) to be carried out in early November. Thus on 27 October the headquarters ship HMS *Tyne* sailed from Malta with Royal Navy and Air Force commanders on board. The following day French naval units sailed from North

African ports. On 29 October the Israelis began their Sinai offensive. The British carrier task force left Malta for BOATHOOK with destroyer and cruiser escorts, and more cruisers and destroyers sailed from Aden toward the Gulf of Suez. All naval units likely to be involved were thus assembled in the war zone by 30 October. Unknown to the various combatants, all of this activity was carefully monitored and photographed by the unseen U-2s.[18]

Hostilities began at 5:00 PM on 29 October when 395 Israeli paratroopers landed just east of the strategic Mitla Pass. The promised Anglo-French ultimatum was delivered to the Israeli and Egyptian governments on the 30th. Accusations of collusion were already bedeviling the British, despite Foreign Secretary Selwyn Lloyd's flat denial. Israel immediately accepted the (previously agreed upon) *diktat,* which, since the Sinai Peninsula was at the time Egyptian territory, meant they could advance some one hundred miles to positions only ten miles east of the canal. Nasser, for the same reason, rejected it out of hand. The British and French went to war, the latter with much more conviction than the former.[19]

Already bedeviled by confused strategic goals, MUSKETEER suffered from three related tactical constraints. The first was Prime Minister Eden's obsession with maintaining the fiction that the allied armada would be landing in Egypt solely to separate the Israelis and Egyptians. Second, and because of this, the convoy that would bring the main body of the landing force from Malta could not be loaded, let alone sailed, until the ultimatum had expired and been rejected. The third constraint was the speed of the convoy; although even the slowest vessels could make eight knots, the passage was planned for six and a half knots, to allow for possible bad weather and the mechanical problems likely with ships only recently taken out of reserve, meaning that a week would elapse before it could arrive off Port Said. Although diplomatic negotiations had provided just enough time to assemble and train the troops, ships, and aircraft deemed necessary by the British, the French clearly feared that the preparations were overdone and that London's ponderous time schedule was likely to result in the failure of the operation.[20]

The campaign began with surface actions. During the night of 31 October the cruiser *Newfoundland* encountered the Egyptian frigate *Domiat* in the Red Sea. The Egyptian captain ignored an order to heave to, and *Newfoundland* opened fire at less than a mile. *Domiat* bravely returned fire until incapacitated, after which it was rammed and sunk by *Newfoundland*'s escorting destroyer. Only sixty-nine of the *Domiat*'s crew were rescued. The same evening a series of confused actions took place off the Israeli port of Haifa. As the midnight deadline of the ultimatum approached, the Egyptian frigate *Ibrahim El-Awal* was able to approach within five miles of the Israeli coast and open fire. Israeli security forces had assumed that the ship was part of an American flotilla that had been cleared

into Haifa to evacuate American nationals. Fortuitously, a small French squadron was in Haifa for refueling. One of these units, the destroyer *Kersaint,* opened fire on the Egyptians, removing any doubt as to whose side the French were on but causing little damage. Soon after, a small force of Israeli ships approaching from seaward also attacked the Egyptian vessel, assisted by a pair of Israeli air force jet fighters. Given the assembled firepower it is not surprising that the *Ibrahim El-Awal* surrendered, allowing an Israeli boarding party to bring it into port. (After repairs it was given the name *Haifa* and sent back to sea under the Israeli flag.) On 1 November, as the Israelis crossed from Gaza into Egypt, the French cruiser *Georges Leygues* bombarded Egyptian positions around the border town of Rafah, but without notable success.[21]

The remaining time before the arrival of the invasion fleet, expected on 6 November, was occupied by a sustained air offensive against Egyptian military targets, designed to soften up defenses and reduce the population's will to resist. Phase I of the air offensive began at dusk on 31 October and was intended to eliminate any threat from the Egyptian air force. After rather ineffective night attacks by Cyprus- and Malta-based RAF heavy and medium bombers, naval and RAF ground-attack aircraft attacked Egyptian airfields, concentrating on runways and parked aircraft. Great effort was made to avoid damage to civilians, and it became evident early in the campaign that under such constraints medium- and high-level bombing was ineffective against small military targets. Nearly all the meaningful Phase I damage was achieved by low-level ground-attack aircraft using bombs and rockets. Naval aircraft performed the bulk of this work, since RAF fighters operating out of Cyprus carried a reduced weapon load and even so could only spend some fifteen minutes over their targets. Eight Sea Venoms operating at night destroyed six MiGs on the ground outside Cairo. As the attacks began the Egyptian air force began evacuating its bomber force to airfields in the south of Egypt or to friendly Arab countries. Egyptian antiaircraft fire was light and inaccurate, and the few fighters that got off the ground avoided combat. By dusk on 2 November the Egyptian air force had been effectively neutralized. Flight to safety proved illusory: on 4 November French F84s destroyed thirteen out of fourteen Il-28s that had taken refuge at Luxor, some 350 miles south of Port Said.[22]

Phase II of the air offensive (3 through 5 November) consisted of attacks on nonairfield military targets, such as stores, barracks, and military road and rail traffic south of Port Said. Of particular importance was the Gamil Bridge, which carried the only road linking Port Said with its hinterland. Because of poor intelligence (what was thought to be a swing bridge was actually a causeway for much of its length) twenty-seven bombing sorties were required to render it impassable (the British carriers were close enough to the target, however, to permit

returning aircrews to advise changes in bombing technique). Heavy and accurate flak protected the bridge, causing the loss of one Wyvern. Destruction was finally achieved by a low-level "skip-bombing" attack by eight Seahawks, each carrying two five-hundred-pound bombs. High priority was also given to preventing the Egyptian blockship *Akka,* which was moored nearby, from obstructing the canal. Two attacks were unsuccessful, giving the Egyptians time to tow the ship into place and scuttle it, together with another forty-seven concrete-filled ships, effectively closing the waterway. The Syrian army then destroyed pumping stations on the Western-owned Iraqi Petroleum Company pipeline. As Hugh Thomas has pointed out, the Anglo-French action thus precipitated what the two governments had most feared from Nasser's nationalization, an interruption in the flow of oil.[23]

The U.S. Sixth Fleet had been ordered to the area in order to protect the evacuation of American nationals, and its commander, Admiral Brown, was to insist afterward that that was all he did. However, early in the morning of 4 November the carrier *Coral Sea* passed through the middle of the British task group. The British admiral asked his American counterpart to clear the area. The latter refused but signaled Washington, "Whose side am I on?" Admiral Burke replied, "Take no guff from anyone." Further, American submarines and aircraft created problems for Anglo-French air and underwater defenses, and risk of an international incident remained high. The Egyptian MiG-15s, although less of a threat than previously feared, remained of considerable concern to French and British pilots, especially since U.S. Navy swept-wing F9Fs, easily confused with the MiGs, were reported to be making "attacking" passes at allied formations. Flag Officer Aircraft Carriers believed that the Sixth Fleet was deliberately obstructing his operations; its adjacent air activities rendered his air-warning radar surveillance virtually useless.

Fortunately, both sides showed restraint, although, as the allied commander in chief, Vice Adm. M. Richmond, later reported, "The danger of shooting down an American aircraft with its international repercussions was ever present." Later Admiral Burke vividly recalled what the international repercussions could have been. When asked by Dulles whether the Sixth Fleet could halt the operation, Burke responded, "Mr. Secretary, we can stop them, but we will blast hell out of them." A French attack on an Egyptian PT boat off Alexandria brought a quick rejoinder from the British command that American ships were present in the harbor and no attacks should be made until they were well clear. The problem of the Sixth Fleet became the subject of "polite signals" between the local British and American commanders, and it was a great relief when the evacuation was completed and the latter withdrew, with some two thousand American civilians.[24]

It is fairly clear that Washington wanted to stop, or at least slow down, the allied operation but was uncertain what course to adopt if diplomacy failed. But there may have been a further consideration driving the U.S. Navy's actions. Ever since the Declaration of Independence in 1776, freedom of the seas had been a basic element of American diplomacy and a constant source of friction with the British, who had long insisted on their right when at war to stop and search any ship, belligerent or neutral. The War of 1812 had been fought largely over this issue and had done little to settle it. It was Germany's resumption of unrestricted U-boat warfare in 1916 that had brought the United States into World War I in 1917, and freedom of navigation had been an essential component of President Woodrow Wilson's "fourteen points." On this issue Washington recognized no exceptions: "We would as soon fight the British as the Germans," wrote Adm. William Benson, the first Chief of Naval Operations (1915–19). Each of these actions, as with countless more over the years, was taken to demonstrate that Washington would not accept any abridgment of its fundamental maritime rights. Although Admiral Brown's instructions do not appear to reflect this policy directly, it is fair to assume that President Eisenhower was unwilling to allow the Anglo-French action (of which he strongly disapproved) to set a precedent contravening rights fought for over the previous two centuries. As noted earlier, Admiral Burke would have been firmly behind him.[25]

Not surprisingly, the Anglo-French-Israeli attacks on Egypt had produced a keen negative reaction around the world. The British Commonwealth nations, other than Australia and New Zealand, were strongly opposed, while British public opinion, fairly supportive of tough action the previous summer, was by now bitterly divided. Debate in the House of Commons became so acrimonious that the speaker had to suspend a session, for the first time in twenty years. Eden was paying the price for going to war without keeping the parliamentary opposition fully informed, an unprecedented action. Among the invasion forces, there was considerable resentment toward the opposition, which, it was felt, should be supporting those at risk. Britain's armed forces, like America's before Vietnam, were unused to military action opposed by much of the civilian population. Only the French and the Israelis appeared united and untroubled.[26]

In Washington, President Eisenhower was furious at what he perceived as an Anglo-French double cross, given the fact that the Tripartite Declaration required both Britain and France to come to Egypt's aid if attacked by Israel. In New York, on 30 October, the British and French added fuel to the president's anger by vetoing a U.S. resolution in the United Nations Security Council calling for a cease-fire. Two days later the United States took a similar resolution to the veto-proof General Assembly, where it passed by an overwhelming majority, as did a plan for the UN to occupy the canal in place of the British and French.[27]

The Soviet Union added a further political complication, attempting to use the crisis to distract attention from its brutal behavior in Hungary, where, while the Anglo-French invasion was proceeding, Moscow was using its troops to overturn a short-lived rebellion against Soviet domination. The premier, Nikolai Bulganin, threatened Britain and France with "rocket weapons" and suggested that the U.S. and Soviet militaries join forces to protect Egypt, an offer that was summarily rejected.[28]

45 Commando leaves HMS *Theseus*. Imperial War Museum, by permission

Beset by political opposition at home and abroad, Eden was beginning to show signs of the breakdown that would eventually cost him his job. Disapproval also came from the professional head of the Royal Navy, Adm. Lord Louis Mountbatten, a cousin of the queen with considerable political influence. Mountbatten felt that the operation was both morally and militarily wrong and that the adverse political impact of the impending invasion had been poorly thought through. Most importantly, he felt that the British, if successful, would have to occupy the Canal Zone for a considerable period of time, at significant cost and with a serious impact on their other global responsibilities. He attempted to resign but was overruled by his civilian superior in the Admiralty. Mountbatten made a final and extraordinary telephone call to Eden, appealing to him to turn back the assault convoy before it was too late. Eden said no and hung up the phone.[29]

Meanwhile, the assault force steamed on, still due to arrive off Port Said on 6 November. The French, desperate to move before the tide of international opinion overwhelmed their already precarious diplomatic position, urged that the landings be accelerated. The British reluctantly agreed that a parachute drop, originally planned to precede landings on the 6th, would instead take place on the 5th. Awkwardly, however, Israel had by then captured all its objectives and wanted to obey the UN cease-fire resolution, thus removing any rationale for further Anglo-French action. The allies managed to persuade Tel Aviv to attach sufficient conditions to its cease-fire acceptance that it could not become effective immediately. The landings would go ahead.[30]

At dawn on 5 November, a small force of six hundred British and five hundred French paratroopers descended on Port Said, landing four miles west and a mile south of the town, respectively. The risks they ran were considerable, since there was no way in which they could be given significant assistance for the next twenty-four hours. Historian H. P. Willmott later noted of this event that the British paratroopers proved "better than their equipment," while the French operation was a "model of how an airborne operation should be carried out." The drop was successful, largely due to the effective support provided throughout the day by naval aircraft directed by air contact teams dropped with the paratroopers; "cab ranks" of Seahawks and Corsairs were available to be called in as needed. There were never less than twelve aircraft patrolling above the British troops, plus six Corsairs for the French. Missions could be effectively planned, on a minute-by-minute basis. The British eastward advance was slowed down on the beach road by an old coast guard barracks that had been turned into an Egyptian strongpoint. The structure, which had proved impervious to Seahawk rocket attacks, was quickly devastated by thousand- and five-hundred-pound bombs placed with great precision by Wyverns of *Eagle*'s 830 Squadron. While this was happening, French paratroopers, well-trained veterans of colonial wars unburdened by their ally's inhibitions about civilian casualties, were blasting their way northward. Allied paratroopers emphasized later that their rapid advance and low casualty rate would have been impossible without naval air support.[31]

The main assault force arrived on time on 6 November and took up position five miles out to sea. The passage in to Port Said had already been swept for contact and magnetic mines by an Anglo-French minesweeping force. Preliminary bombing runs against the landing beaches were followed at dawn by naval gunfire. Initially all naval bombardment had been vetoed by Downing Street, due to concern about civilian casualties. However, the British task force commander determined that what he was about to deliver was "support fire," not "bombardment," and decided to go ahead. Last-minute instructions from Downing Street limited the fire to no greater than 4.5-inch caliber, lasting no

longer than an hour. This restriction eliminated from the invasion force the main batteries of the French battleship *Jean Bart* and the British cruisers *Jamaica* and *Ceylon*. In his after-action report the invasion fleet commander noted how "the development of modern communications, though intrinsically of great value, is inclined to produce a number of last-minute queries and instructions from London which cannot fail to upset the Command on the spot."[32]

Warship fire ceased when naval aircraft started strafing the beaches, the air attack continuing until a few minutes before the arrival of the first assault craft. Royal Marines of 42 Commando went over the beaches at 6:15 AM, just to the west of the canal, followed by tanks of the 6th Royal Tank Regiment. By 9:30 they both had reached their first objective south of the town, supported by air strikes. By noon they had linked up with the French paratroops, who had been well supported by their Corsairs. Forty Commando, on 42's right, advanced south to link up with British paratroopers moving in from the west. An incident in which Royal Navy aircraft accidentally attacked a British commando unit, inflicting considerable casualties, evidenced the risks inherent in providing close air support in built-up areas.[33]

Forty-five Commando, held in reserve, came in an hour after 40 Commando in order to clean up the port area. In a battlefield "first," this commando was brought in by a mixed collection of twenty-two RAF and Navy helicopters, which in an hour and a half brought ashore 415 men and seven tons of stores. None of the aircraft had been designed for the purpose, but the successful operation vindicated Mountbatten's long-held belief in the use of helicopters in battle. Having landed the commando brigades and related supplies, the helicopters turned their attention to evacuating the wounded out to *Ocean* and *Theseus*. On 7 November the weather deteriorated; strong winds and heavy seas over the next few days would have made landings over the beaches impossible. Since *Eagle*'s second catapult had failed a day earlier, rendering the ship incapable of flying operations, the Royal Navy's ability to complete its mission on time owed much to good fortune.[34]

The allied carrier force made 1,616 sorties during MUSKETEER, of which 1,164 were offensive, 359 combat air patrols, and the remainder for reconnaissance and transport. The proportion of defensive sorties dropped to under 20 percent in later days as the Egyptian air force was seen to represent less of a threat. Seahawk and Sea Venom aircraft, which undertook the bulk of the operations, averaged 2.8 sorties per day, compared with the 1.4 per day by RAF ground-attack aircraft. Naval aircraft flew two hundred "cab rank" sorties in support of the parachute operations on 5 November. Two Seahawks, two Wyverns, and one Corsair were lost due to enemy action. The Corsair pilot was killed, as was the pilot of a Seahawk involved in a deck landing accident. These were the

only naval losses. Total allied casualties were twenty-six killed and 129 wounded.[35]

The Anglo-French forces now on the ground were aware of the possibility of a cease-fire and made every effort to move as far south along the canal as possible. However, the final outcome of the battle was being decided not by the military or by the politicians but by anonymous central bankers in capitals as far flung as Washington, New Delhi, and Beijing.[36]

In 1956 the pound sterling was the currency most widely used in world trade. It was also an important reserve currency, particularly with respect to the British Commonwealth and those countries that did not wish to trust their financial assets to Washington. Willingness to hold sterling was very much a matter of trust, loss of which could well precipitate major sales by central banks and speculators. This is what happened in November 1956: for London to maintain trust required holding the prevailing sterling dollar parity, and doing so in the face of massive selling pressure required aggressive use of Britain's own reserves, which had begun to hemorrhage. In theory the reserves could be replenished from Britain's balances with the International Monetary Fund, but this would require American approval, and the Eisenhower administration made it clear that such would not be given until all Anglo-French troops were withdrawn from Egypt. Astonishingly, this development took the British by surprise; the French, less trusting of Washington, had prudently arranged a stand-by credit three weeks before the invasion. Eden attempted to bargain for time but with little success; faced with the possibility of national bankruptcy, he had no choice but to agree to a cease-fire. The French reluctantly went along. It was all over.[37]

Arguably Suez represents a seminal turning point in European history. Eden resigned and was replaced by the chancellor of the exchequer, Harold Macmillan, who took immediate steps to repair the "special relationship" with Washington. Britain would never again conduct a significant foreign policy initiative without at least token American support. Although the British Empire suffered a gradual decline throughout most of the twentieth century, many would say that Suez marked its end. As historian Niall Ferguson argued in his account of the Suez affair, "It was at the Bank of England that the Empire was effectively lost." In France, Suez led to further military disenchantment with the Fourth Republic, the soldiers' revolt, the recall of Charles de Gaulle, and the creation of the Fifth Republic. France turned itself toward Europe and the Treaty of Rome—and, some might say, would never again trust America.[38]

More generally, Arab nationalism remains a potent force in the world. Egypt continues to own the canal, which still seems to work, although its importance to world trade is vastly diminished. The Middle East remains a danger to world

stability, although Egypt and Israel do have a peace treaty. Wars of choice remain highly controversial.

Fifty years have gone by, yet it appears that some of the lessons of Suez still require relearning. Clearly defined political goals, well supported domestically and well communicated to the military, are arguably more important in wars of choice than they are in wars of national survival. Smaller powers should not assume that long-standing friendship with a great power provides them with a military blank check. The political wisdom of high-ranking generals and admirals may possibly exceed the military acumen of their constitutional masters; in any event, when the question is whether or not to go to war, the senior commanders should be listened to with care. Sea-borne expeditions take time, and the longer the time the more opportunity for the voices of those demanding peace to drown out the voices of those arguing for force, and the more opportunity for weather to change for the worse—something even the best-organized military cannot control. Shore bases continue hostages to political fortune, while floating airfields still retain their freedom of action. Task force commanders today must expect political micromanagement to an extent unimaginable by Nelson, Jellicoe, or Halsey. An expeditionary force must go in equipped with either an exit strategy or an occupation strategy; in small wars winning is often deceptively easy—what you do after you win is more difficult; Mountbatten was right, no one had thought about what to do with a defeated Egypt and the associated cost. And finally, debtor nations that value their currency's reserve asset status must be very, very, careful when they choose to go to war.[39]

NOTES

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2. Thomas, *Suez,* p. 114; Anthony Nutting, *No End of a Lesson, the Story of Suez* (New York: Clarkson N. Potter, 1967), p. 34; *Times* (London), lead editorial, 1 August 1956; Scott Lucas, *Britain and Suez: The Lion's Last Roar* (Manchester, U.K.: Manchester Univ. Press, 1996), p. 53.

3. Nutting, *No End of a Lesson,* p. 55; Robert Murphy, *Diplomat among Warriors* (New York: Doubleday, 1964), p. 378; Keith Kyle, *Suez* (New York: St. Martin's, 1991), pp. 167–69; Eric Grove, *Vanguard to Trident*: *British Naval Policy since World War II* (London: Bodley Head, 1987), p. 186; Admiralty, Naval Report on Operation Musketeer, ADM 116/6209 [hereafter Naval Report], The National Archives (TNA): Public Record Office (PRO), p. 45.

4. Chester L. Cooper, *The Lion's Last Roar: Suez, 1956* (London: Bodley Head, 1987), pp. 63,

80; Philip Alphonse Dur, *The Sixth Fleet: A Case Study of Institutionalized Naval Presence, 1946–1958* (unpublished PhD thesis, Harvard University, 1975); Jan Morris, *Fisher's Face; or, Getting to Know the Admiral* (New York: Random House, 1995), p. 136.

5. Nutting, *No End of a Lesson,* pp. 77–78; Thomas, *Suez,* pp. 64, 83, 86–87; Grove, *Vanguard to Trident,* p. 187.

6. There are several accounts of this meeting, including a summary in FRUS, p. 776, but the account in Kyle, *Suez,* pp. 315–31 and app. A, is the most recent and thus probably the most complete. Also Kennett Love, *Suez: The Twice Fought War* (New York: McGraw-Hill, 1969), pp. 461–63.

7. Air Marshall D. H. F. Barnett, *Report of the Air Task Force Commander on Operation Musketeer, November 27, 1956* [hereafter Air Task Force Report], TNA, PRO, p. 2; Lt. Cdr. Roy Everleigh, RN, quoted in Brian Cull, David Nicolle, and Shlomo Aloni, *Wings over Suez: Air Operations during the Sinai and Suez Wars of 1956* (London: Grub Street, 1996), p. 169; Love, *Suez,* p. 449; Dyan comment in Thomas, *Suez,* p. 107.

8. Michael R. Beschloss, *Mayday: Eisenhower, Khrushchev and the U-2 Affair* (New York: Harper and Row, 1986), pp. 137–38; Leonard Mosely, *Dulles* (New York: Dell, 1978), p. 446.

9. See note 39.

10. Thomas, *Suez,* p. 73; Kyle, *Suez,* pp. 168–69; Naval Report, p. 69.

11. Thomas, *Suez,* p. 72. See Norman Friedman, *British Carrier Aviation: The Evolution of the Ships and Their Aircraft* (Annapolis, Md.: Naval Institute Press, 1989), for technical descriptions of contemporary British carriers. Also Donald Neff, *Warriors at Suez* (New York: Linden/Simon and Schuster, 1981), p. 289; Naval Report, pp. 40–43, 69–72.

12. *Carrier Operations in Support of Operation Musketeer*, *1959,* ADM 1/27051 [hereafter Carrier Operations], The National Archives (TNA): Public Record Office (PRO), p. 18; Naval Report, pp. 70, 72.

13. Robert Henriques, *A Hundred Hours to Suez: The Epic Story of Israel's Smashing Victory in the First Sinai Campaign* (New York: Pyramid Books, 1957), pp. 180–81; Carrier Operations, pp. 19, 43.

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17. Naval Report, pp. 29–30, 68; André Beaufre, *The Suez Expedition 1956* (London: Faber and Faber, 1969), p. 64; Grove, *Vanguard to Trident,* pp. 188–89; Kyle, *Suez,* p. 340.

18. Naval Report, pp. 30, 171–72; Beschloss, *Mayday,* p. 137.

19. *Times* (London), 31 October 1956, 1 and 2 November 1956; Thomas, *Suez,* p. 130; Beaufre, *Suez Expedition 1956,* p. 82.

20. Naval Report, p. 173; H. P. Willmott, "The Suez Fiasco," in *War in Peace, Conventional and Guerilla Warfare since 1945*, ed. Robert Thompson (London: Orbis, 1981), p. 93; Kyle, *Suez,* p. 341.

21. Kyle, *Suez,* pp. 409–10, 413; Love, *Suez,* pp. 512–13; Henriques, *Hundred Hours to Suez,* pp. 184–88; Cull, Nicolle, and Aloni, *Wings over Suez,* pp. 125–27; Naval Report, p. 173.

22. Grove, *Vanguard to Trident,* p. 192; Carrier Operations, pp. 44–47, 93; Naval Report, pp. 73–74, 78, 173.

23. Naval Report, pp. 7, 74–78; Thomas, *Suez,* p. 134; Neff, *Warriors at Suez,* p. 398; Cull, Nicolle, and Aloni, *Wings over Suez,* p. 271.

24. Naval Report, p. 73, Air Task Force Report, Appendix A, p. 3; Vice Admiral Charles R. Brown, USN, Commander Sixth Fleet, interview, *U.S. News & World Report,* 14 November 1956*;* Burke quotation from Kyle, *Suez,* p. 412; Grove*, Vanguard to Trident,* p. 194; Papadopoulos, *"Steel Grey Stabilizer,"* p. 38; Cull, Nicolle, and Aloni, *Wings over Suez,* p. 240.

25. Stephen Howarth, *To Shining Sea: A History of the United States Navy 1775–1991* (New

York: Random House, 1991), pp. 299, 323–24; Ernest J. King [Capt., USN], *The Influence of the National Policy on the Strategy of a War* (unpublished thesis, Newport, R.I.: Naval War College, 1932).

26. *Chicago Tribune,* 31 October 1956; *Pittsburgh Post-Gazette,* 31 October 1956; *Times* (London), 1 November 1956; Neff, *Warriors at Suez,* p. 388; Thomas, *Suez,* p. 143; Nutting, *No End of a Lesson,* pp. 128–29; John Hackett [Lt. Cdr., RN], *Fly Navy: The View from the Cockpit, 1945–2000* (London: Barnsley, 2000), p. 75.

27. FRUS, pp. 867, 873; Neff, *Warriors at Suez,* pp. 377–97; Anthony Gorst and Lewis Johnman, *The Suez Crisis* (New York: Routledge, 1997), pp. 106, 115.

28. *New York Times,* 23, 25, 27 October, 2, 4 November 1956; Gorst and Johnman, *Suez Crisis,* p. 123.

29. Nutting, *No End of a Lesson,* p. 165; Jackson and Bramall, *The Chiefs,* p. 298; Grove, *Vanguard to Trident,* p. 193; "File on the Suez Affair of 1956," notes written in 1966, Mountbatten Papers, Univ. of Southampton Archives, MBI/N106, paper 3; Neff, *Warriors at Suez,* p. 400.

30. Thomas, *Suez,* p. 141; Beaufre, *Suez Expedition 1956,* pp. 89, 90.

31. Willmott, "The Suez Fiasco," p. 94; Carrier Report, p. 75; R. W. Rathbun [Maj., USMC], "Operation Musketeer: A Military Success Ends in Political Failure," paper delivered at War since 1945 Seminar, Quantico, Virginia, 1984, pp. 63–66; Naval Report, p. 75.

32. Grove, *Vanguard to Trident,* p. 191; Thomas, *Suez,* p. 147; Naval Report, pp. 1, 75–76, 98–99; Neff, *Warriors at Suez,* p. 407.

33. Kyle, *Suez,* p. 462; Willmott, "The Suez Fiasco," p. 96; Carrier Report, p. 62; Naval Report, p. 76.

34. Carrier Report, p. 61; Hackett, *Fly Navy,* p. 75; Air Task Force Report, p. 7; Gen. Sir Charles Keightley, *London Gazette,* 10 September 1957 (supplement), p. 5334; Naval Report, pp. 81, 178.

35. Admiralty Dept. of Operational Research, report, ADM 1/27051, 10 July 1958, pp. 2–4; Carrier Report, pp. 36, 129; Love, *Suez,* p. 635.

36. Willmott, "The Suez Fiasco," p. 97.

37. For an excellent description of the Suez-related sterling crisis see Kunz, *Economic Diplomacy of the Suez Crisis,* esp. pp. 131–45. I am indebted to Professor Paul Kennedy of Yale University for drawing my attention to this work. See also Cooper, *Lion's Last Roar,* p. 192, and Thomas, *Suez,* p. 149.

38. Beaufre, *Suez Expedition 1956,* p. 14; Harold Macmillan, *Riding the Storm, 1956–1958* (New York: Harper and Row, 1971), p. 259; Niall Ferguson, *Empire: The Rise and Demise of the British World Order and the Lessons for Global Power* (New York: Basic Books, 2003), p. 347; Tony Judt, *Postwar: A History of Europe since 1945* (New York: Penguin, 2005), pp. 298–99; Alistair Horne, *La Belle France: A Short History* (New York: Knopf, 2005), pp. 387–88, 393–96, 397–404; Cooper, *Lion's Last Roar,* pp. 269, 275; *New York Times,* 13 May 1958. For a general review of the "special relationship," see William Hopkinson, *The Atlantic Crises: Britain, Europe and Parting from the United States,* Newport Paper 23 (Newport, R.I.: Naval War College Press, 2005), available at www.nwc.navy.mil/press/npapers/np23/NP23.pdf.

39. Horatio Nelson: legendary British admiral, victor at Trafalgar; Adm. Sir John Jellicoe: commanded the British Grand Fleet at Jutland; Adm. Sir Andrew Cunningham: commanded the Royal Navy's Mediterranean Fleet, 1939–42; Adm. William ("Bull") Frederick Halsey, Jr.: commanded the U.S. Third Fleet in the Pacific at the end of World War II.

IN MY VIEW

THE SSGN: SOMETHING WRONG WITH THIS PICTURE?

Sir:

The article "SSGN: A Transformation Limited by Legacy Command and Control" by Capt. Charles Sykora (Winter 2006, pp. 41–62) fails to answer many of the questions being asked by congressional staffers, Department of Defense analysts, and even fellow naval officers. These questions about the SSGN can be addressed in three categories:

(1) *Mission crossover:* What happens if an *Ohio*-class SSGN has landed people on the beach and receives a Tomahawk "fire order"? Will she launch missiles, which will reveal that a U.S. submarine is in the area? Or, perhaps to reach the launch (wave) point the SSGN will have to leave the area, essentially abandoning people on the beach. Will the SSGN be a truly dual-mission submarine?

(2) *Missile role:* What is the scenario in which a submarine (clandestine) launch of perhaps 150 missiles will be of value? (Remember, almost every SSN carries twelve vertical-launch Tomahawks, and additional missiles can be launched from their torpedo tubes.)

What is the availability of Tomahawk missiles? The fleet already has many more Tomahawk "holes" than can be filled. With the plan to keep two-plus SSGNs deployed at all times—using the Blue and Gold crew concept—will the U.S. Navy be able to purchase at least three hundred additional Tomahawk missiles?

The Tomahawk-launch role, especially employing the Tactical Tomahawk (TacTom), will undoubtedly require two-way communications. Will this compromise the SSGN's location?

(3) *Special operations role:* How will special forces reach the beach? The Advanced Swimmer Delivery System (ASDS)—hailed for years as the principal means of SSGNs putting people on the beach—has been canceled. Thus, the only means of getting SEALs to the beach will be the few, outdated Mark VIII "wet vehicles" and rubber raiding craft. What is the relative vulnerability of these

craft to hostile detection? What is the time-versus-fatigue factor for troops being carried in a wet vehicle whose mission may require them to remain in the water at the objective?

What are the probable distances from the beach that an SSGN would operate while launching wet vehicles or rafts? An 18,750-ton, 560-foot submarine requires a significant depth of water for safe operation.

And is there "something wrong with this picture" when one considers an SSGN with a crew of 150-plus men being employed to put a half-dozen people on the beach or into an enemy harbor for a clandestine mission? Indications are that not since 1950 have more than a dozen Americans been sent onto a hostile beach or into a hostile harbor by submarine. (In 1950 the submarine *Perch* landed sixty-seven British marines behind communist lines in Korea to blow up a railroad tunnel.)

What are the scenarios in which the sixty-six troops carried by an SSGN would be landed for a clandestine operation? Or even two geographically linked operations of thirty-plus SEALs, or . . . ?

Again, effective operations with special forces will require a high degree of communications. Will such connectivity be possible from a submarine, especially without revealing the submarine's presence in the area?

These and other questions about SSGN operations should be answered by Captain Sykora. These questions should have been satisfactorily answered before the decision to convert four Trident ballistic-missile submarines to the SSGN configuration.

NORMAN POLMAR
Author, Ships and Aircraft of the U.S. Fleet
and coauthor, Cold War Submarines

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Dr. Valencia has published over 150 articles and books and is a frequent contributor to the public media, such as the Far Eastern Economic Review, International Herald Tribune, Asia Wall Street Journal, Japan Times, *and* Washington Times. *Selected works include* The Proliferation Security Initiative: Making Waves in Asia, *Adelphi Paper 376 (International Institute for Strategic Studies, October 2005),* Military and Intelligence Gathering Activities in the Exclusive Economic Zone: Consensus and Disagreement *(co-editor,* Marine Policy Special Issues, *March 2005 and January 2004);* Maritime Regime Building: Lessons Learned and Their Relevance for Northeast Asia *(Martinus Nijhoff, 2002);* Sharing the Resources of the South China Sea *(with Jon Van Dyke and Noel Ludwig, Martinus Nijhoff, 1997);* A Maritime Regime for Northeast Asia *(Oxford University Press, 1996);* China and the South China Sea Disputes, *Adelphi Paper 298 (Institute for International and Strategic Studies, 1995);* Atlas for Marine Policy in East Asian Seas *(with Joseph Morgan, University of California Press, Berkeley, 1992); and* Pacific Ocean Boundary Problems: Status and Solutions *(with Douglas Johnston, Martinus Nijhoff, 1991).*

Dr. Valencia has been a Fulbright Fellow, an Abe Fellow, a DAAD (German Government) Fellow, an International Institute for Asian Studies (Leiden University) Visiting Fellow, and a U.S. State Department–sponsored international speaker. He has also been a consultant to international organizations and NGOs (e.g., IMO, UNDP, UNU, the Nautilus Institute, PEMSEA); government institutions and agencies (in, e.g., Brunei, Canada, Japan, Malaysia, the Republic of Korea, Singapore, Taiwan, Vietnam, and the United States); and numerous private entities (e.g., Shell, CONOCO, and legal firms handling maritime issues).

IS THE PSI REALLY THE CORNERSTONE OF A NEW INTERNATIONAL NORM?

Mark J. Valencia

This essay was written in response to the article "The Proliferation Security Initiative: Cornerstone of a New International Norm," by Joel Doolin, published in the *Naval War College Review* (Spring 2006, vol. 59, no. 2, pp. 29–57).

Doolin's article contains some serious substantive flaws in interpretation, logic, and conclusions. The general thrust and conclusion of the paper is that through the Proliferation Security Initiative (PSI) it has become or is becoming customary international law to be able to interdict and board vessels on the high seas without flag-state consent to search for and seize weapons of mass destruction (WMD) and related materials. This contention, however, is not supported by the relevant facts and is deleterious to the regime of freedom of navigation, which the U.S. Navy has held sacrosanct and zealously defended for centuries.[1]

Doolin's specific arguments marshaled to support the contention that interdiction of vessels on the high seas without flag-state consent has become or is becoming customary international law include widespread support for the PSI, state sovereignty in its territorial sea, an "overwhelming majority" of nations having signed conventions "outlawing" the proliferation of WMD, United Nations Security Council (UNSC) Resolution 1540, and Article 51 of the UN Charter (Right of Self-Defense). The following summarizes problems with these arguments.

The paper repeats without analysis the U.S. government contention that "more than sixty countries have signaled that they support the PSI and are ready to participate in interdiction efforts" (page 31). As Sharon Squassoni of the U.S. Congressional Research Service has pointed out, it is unclear what "support" for the PSI means and how robust it is.[2] The "concrete steps" for contribution to the PSI listed on the U.S. State Department website are rather vague and conditional.[3]

First and foremost, participating states are encouraged formally to commit to and publicly endorse, *if possible* [my italics], the Statement of Interdiction Principles. Follow-up steps are also replete with conditional language, such as "indicate willingness," "as appropriate," "might contribute," and "be willing to consider."

It is true that sixty-six countries attended a closed-door meeting in Warsaw on 23 June 2006, marking the third anniversary of the initiation of the PSI.[4] However, no list of participating countries has been made available, and the definition of "supporting" countries remains unclear. Indeed, it is nigh impossible to obtain an "official" list of PSI-supporting countries. Apparently this is because some—perhaps many—so-called supporting states have not publicly endorsed the PSI principles. Reasons given include not wanting to provoke North Korea, wanting to avoid possible reprisals for cooperating with the United States, fearing that interdictions on the high seas will jeopardize international trade and undermine international law, and not perceiving the PSI as a top security priority.[5] This reluctance to publicly endorse the PSI principles in itself indicates less than stalwart support in general, let alone in time of specific need. Indeed, given the flexibility of cooperation, many if not most of the so-called supporters would not automatically participate in interdictions of vessels or aircraft at the behest of the United States. Thus, in a pinch, support could easily evaporate. In any case, such soft support does not warrant a conclusion that PSI activities will change international practice regarding interdiction on the high seas without flag-state consent.

Moreover, while there is indeed a growing list of nations willing to associate themselves with different aspects of the PSI on a case-by-case basis, support in Asia—a major focus of proliferation concern—is weak. Despite considerable U.S. pressure to participate fully and publicly, key countries like China, India, Pakistan, Indonesia, and Malaysia remain outside the "coalition of the willing," and the cooperation of others that have nominally joined, such as Japan, South Korea, and Russia, for various reasons is lukewarm at best.

A state may "approach, visit, and search any vessel in its territorial sea and contiguous zone" (page 35). Navigation in the territorial waters of any coastal state is subject to the innocent-passage regime—that is, it is allowed as long as it is not prejudicial to the coastal state's peace, good order, or security.[6] Specific non-innocent acts are listed in the 1982 United Nations Convention on Law of the Sea (1982 UNCLOS) Article 19, and transporting WMD components or missiles is not among them. Moreover, the 1982 UNCLOS Article 23 implicitly gives ships carrying nuclear weapons the right of innocent passage. These articles were a U.S.-led compromise with those nations that wanted the Convention to explicitly declare carriage of nuclear weapons in foreign territorial seas to be

non-innocent. Thus for a coastal state to legally interdict a vessel in its territorial sea without flag-state consent because the vessel is thought to be carrying WMD or related materials, the coastal state would probably have to have in place legislation criminalizing WMD transport or demonstrate that the vessel is threatening its security due to the presence on board of WMD destined for persons intending to undertake terrorist activities in areas under its jurisdiction.[7] Perhaps in a stretch the coastal state could argue that because the recipient of the WMD is unknown, it has to assume they are bound for an enemy. But a coastal state cannot, as the author contends, simply "approach, visit, and search any vessel in its territorial sea."

WMD are subject to seizure because "the overwhelming majority of nations have signed treaties outlawing the proliferation of nuclear, chemical, and biological weapons" (page 37). *"The NPT [Nuclear Nonproliferation Treaty], CWC [Chemical Warfare Convention], and BWC [Biological Weapons Convention] are arguably enforceable against nonsignors. The implication for military operations would seem to be that seizure of WMD items found aboard foreign ships or aircraft may be authorized"* (page 37). Doolin provides his own counterargument to this extreme statement. "No interpretation is permitted when the text of a treaty is clear—and none of the WMD or terrorism conventions authorizes maritime interdiction. Each treaty was the product of negotiation by states, and subsequently changed security needs, however compelling, cannot add a right to maritime interdiction that does not exist in its language" (page 38). Indeed!

UNSC Resolution 1540 strengthens the evolution of customary international law toward accepting "the boarding of vessels on the high seas to search for [WMD]" (page 51). Doolin hedges by implying that flag-state consent is still needed. Indeed, this is made clear in the background to UNSC Resolution 1540.

In March 2004 the United States tried to obtain a UN Security Council resolution specifically authorizing states to interdict, board, and inspect any vessel or aircraft if there were reason to believe they were carrying WMD or the technology to make or deliver them, and to seize or impound missiles or related technology or equipment. This was a difficult—and, as it turned out, frustrating—tacit admission by the United States that it needs a UN mandate to legitimize high-seas PSI interdictions.

There were several initial objections to the draft. Foremost was the question of what constitutes "weapons-related materials"—a definitional problem that continues to undermine the legitimacy of the PSI. Another particular area of debate was the text's proposal that parties "to the extent consistent with their national legal authorities and international law" cooperate on preventing, and if necessary interdicting, shipments of WMD and related materials. In other words, the United States sought UN support for PSI interdictions. The text did

not include a British proposal for a UN counterproliferation committee or a French proposal for a permanent corps of UN weapons inspectors. In other words, according to the U.S. proposal, enforcement would be outside the UN system.

After considerable debate in and outside the Security Council, a revised draft resolution emerged that asked all UN members to "criminalize" the proliferation of WMD, enact strict export controls, and secure all sensitive materials within their own borders.[8] The final resolution that emerged after further debate was introduced to the Security Council on 24 March 2004 and passed on 28 April 2004 (UNSCR 1540). It requires all 191 UN members to "adopt and enforce appropriate effective laws to prevent any nonstate actor from being able to manufacture, acquire, possess, develop, transport or use nuclear, chemical or biological weapons and their means of delivery."[9] Specifically, it compels all countries to adopt laws to criminalize the spread of weapons of mass destruction, to ensure that they have strong export controls, and to secure sensitive materials within their borders.[10]

Significantly, Russia and China prevented a specific endorsement of interdiction and the PSI in the resolution.[11] Indeed, the text was agreed upon only after the United States accepted China's demand under a threat of a veto to drop a provision specifically authorizing the interdiction of vessels suspected of transporting WMD, a cornerstone of the PSI. China also objected to any suggestion that the Council would endorse ad hoc frameworks like the PSI.

With these amendments, China, France, and Russia supported the revised draft. However, a vote was delayed because Council members wanted every UN member state to be briefed on the resolution.[12] Ironically, Pakistan, a prominent U.S. ally in the war on terror, led opposition to the resolution until it was assured it would not be retroactive and a provision allowing intrusive inspections was deleted.[13] Opponents of the resolution were also concerned by the Security Council's assumption of the authority essentially to make national law and by possible sanctions against UN members that do not comply. They also objected to the secret and arrogant manner in which the text was negotiated among only the Permanent Five before its introduction. In the end, the resolution did little to strengthen the effectiveness of the PSI, since it focused only on nonstate actors and did not clearly authorize interdiction or any action outside current international law.

Without a clearly worded UNSC resolution specifically authorizing high-seas interdiction, any such interdiction over the objection of the flag state would be tantamount to aggression and could be considered an act of war. Even if a country were to enforce the PSI principles only in its own territorial waters, each

interdiction may require Security Council approval,[14] or only be legal in very specific circumstances.

Kofi Annan, the Secretary General of the United Nations, supports the goals of the PSI.[15] But he would prefer that such issues and actions be addressed and undertaken collectively through and by the United Nations.[16] He has said that the Security Council must be "the sole source of legitimacy on the use of force."[17] Other core PSI members such as France favor this approach and have proposed a Security Council summit meeting to frame a UN action plan against proliferation and to create a corps of inspectors to carry it out.

Article 51 of the UN Charter could be used "as a trump card" [to interdict without flag-state consent vessels on the high seas carrying WMD] (page 46). Preemptive self-defense includes anticipatory self-defense and preventive self-defense.[18] For an action to be compatible with current international legal interpretations of anticipatory self-defense, the United States and its coalition partners would probably have to demonstrate not only that the interdicted cargo required such action because it posed a specific and imminent threat of attack on the United States or its allies, but also that the necessity of self-defense was instant and overwhelming, leaving no choice of means, and no time for deliberation.[19] That is, a response was necessary, proportional to the threat, and the threat was imminent.[20] Otherwise such action and argument would be greatly expanding the traditional definition of self-defense to include preemptive self-defense regarding non-imminent threats and would set a very dangerous precedent that could undermine the very foundations of the United Nations. In fact, Article 51 provides the right of self-defense only in the case of an armed attack, and only until the UN "Security Council has taken measures necessary to maintain international peace and security."[21]

Doolin himself acknowledges that "universal condemnation of [WMD] and terrorism cannot be used as justification for violation of another state's sovereignty" (page 48). Indeed, as he says, the only time national defense could be used to justify maritime interdiction on the high seas without flag-state consent would be "if the facts established that the transport of [WMD] toward the coastal nation constituted an imminent threat of an armed attack" (page 48).

In sum, the underpinnings of Doolin's argument are not substantiated. International law does not permit high-seas interdictions and boardings without flag-state consent except in very specific circumstances that do *not* include transport of "WMD, related materials and delivery systems." It is highly questionable whether such interdictions are allowed even for a vessel in innocent passage in the territorial sea. Neither the PSI, existing nonproliferation treaties and weapons conventions, UNSC Resolution 1540, nor Article 51 support interdiction on

the high seas in violation of the freedom-of-navigation regime. Such interdiction without flag-state consent is not, and is not likely in the foreseeable future to become, customary international law.

As for amending Article 110 of the 1982 UN Convention on the Law of the Sea as suggested by Doolin (pages 50, 51), the United States as a non-party has no official role in the matter. Indeed, one of the most egregious inconsistencies of this piece is that it frequently cites the 1982 UNCLOS to support its arguments. The United States is not a party to this grand bargain and cannot "pick and choose" which provisions it will follow.

The sad fact is that the PSI and ancillary measures have done little or nothing to restrict the movement of WMD and closely related materials on flagged ships and planes of North Korea, Iran, or other "countries of proliferation concern," especially those owned and operated by their governments.[22] Another sad fact is that the implementation, if not the conception, of the PSI was and is seriously flawed. Yet the PSI's proponents and its defenders continue to ignore many of its problems and to exaggerate its progress and effectiveness.

All this is not to say that trade in WMD and related items should be ignored, although it may not be possible to prevent it altogether. To help nonconsensual high-seas interdictions for WMD transport to become customary international law, wider and more robust state support is required. To engender this support, the PSI's shortcomings must be acknowledged and addressed. Most of the PSI's shortcomings stem from its ad hoc, extra–United Nations, U.S.-driven nature. Bringing it into the UN system would rectify many of these shortcomings by loosening U.S. control, enhancing the initiative's legitimacy, and engendering near-universal support. Whether or not the PSI is formally brought into the UN system, its reach and effectiveness could be improved by eliminating hypocrisy and double standards (e.g., when it comes to India, Pakistan, and Israel), and increasing transparency. Needed is a neutral organization to assess intelligence, coordinate and fund activities, and to make decisions regarding specific or generic interdictions. Such an organization could provide more objective and legitimate definitions of states "of proliferation concern" and "good cause" (for interdiction). It would also help avoid erroneous judgments, resolve disagreements, provide consistency and a concrete structure and budget, and ensure compliance with international law—or be a vehicle for any agreed changes therein.

NOTES

Parts of this commentary are derived from Mark J. Valencia, *The Proliferation Security Initiative: Making Waves in Asia,* Adelphi Paper 376 (London: International Institute for Strategic Studies, October 2005).

1. This regime is customary international law, and several of its relevant components are also enshrined in the 1982 United Nations Convention on the Law of the Sea. Freedom of the high seas comprises among others the freedoms of navigation and of overflight (art. 87 and art. 90). The right of visit is severely constrained (art. 110). Ships on the high seas are subject to the exclusive jurisdiction of the flag state (art 92). And ships owned or operated by a state, and used only on government noncommercial service, shall, on the high seas, have complete immunity from the jurisdiction of any other state (art. 96).
2. Sharon Squassoni, "Proliferation Security Initiate," Congressional Research Service, 7 June 2005, Order Code RS21881.
3. U.S. State Dept., *The Proliferation Security Initiative* (Washington, D.C.: Bureau of Nonproliferation, 26 May 2005), available at www.state.gov/E/np/rls/fs/46839.htm.
4. "Proliferation Security Initiative High Level Political Meeting," Cracow, Warsaw, 23 June 2006, available at www.psi.msz.gov.p1/.
5. Brendon Pearson, "Tokyo Treads Warily in Use of Interdiction Force," *Australian Financial Review,* 12 July 2003; Takashi Ono and Yoshiro Mino, "Japan Nervous as Star of WMD and Exercise," *Asahi Shimbun,* 15 September 2003; "Russian Diplomat Says Interception Training May Prolong Nuclear Crisis," *ABCNews Radio Online* (Australia), 11 September 2003; "China Voices Concern over WMD Non-proliferation Plan's Legality," 9 December 2003, as quoted in Andreas Persbo and Ian Davis, "Sailing into Uncharted Waters: The Proliferation Security Initiative and the Law of the Sea," *BASIC Research Report 2004,* 2 June 2004, available at www.basicint.org/pubs/Research/04PSI.htm; Ye Ru'an and Zhao Qinghai, "The PSI: Chinese Thinking and Concern," *Monitor* 10, no. 1 (Spring 2004), p. 23; Stephen Rademaker, Assistant U.S. Secretary of State for Arms Control, Testimony before the House Internal Relations Committee, Subcommittee on International Terrorism and Nonproliferation, Washington D.C., 9 June 2005, available at www.State.gov/t/ac/rls/rm/47715.htm.
6. United Nations, *Official Text of the United Nations Convention on the Law of the Sea* (New York, 1983), Article 19, available at ww.un.or/Depts/los/convention_agreements/texts/unclos/closindx.htm.
7. Natalino Ronzitti, "The Law of the Sea and the Use of Force against Terrorist Activities," in *Maritime Terrorism and International Law,* ed. Natalino Ronzitti (New York: Kluwer Law International, 1990), pp. 1–15; Benjamin Friedman, "The Proliferation Security Initiative: The Legal Challenge," *Bipartisan Security Group*, 4 September 2003, available at www.fas.org/nuke/control/npt/text/npt2.htm.
8. Mark Turner, "U.S. Drafts UN Move to Reduce Flow of Weapons," *Financial Times,* 18 December 2003.
9. Colum Lynch, "U.S. Urges Curb on Arms Traffic," *Washington Post,* 25 March 2004, p. A20; Jim Wust, "U.N. Draft Resolution Could Require States Deny Terrorists WMD," *U.N. Wire,* 25 March 2004.
10. Maggie Farley, "Resolution Seeks Ban on Spread of Weapons," *Los Angeles Times,* 29 April 2004.
11. Ralph Cossa, introduction to "Countering the Spread of Weapons of Mass Destruction: The Role of the Proliferation Security Initiative," *Issues and Insights* 4, no. 5 (July 2004), pp. 1–6.
12. Evelyn Leopold, Reuters, 25 March 2004.
13. William Varner, "Pakistan Leads Opposition at UN to Terrorism Measure," *Bloomberg,* 5 April 2004; *Daily Times*, editorial, 1 May 2004.
14. Foreign Policy Association, *Proliferation Security Initiative: Principles and Practices*, 7 September 2003.
15. "World Leaders Urged to Act Boldly," *Financial Express,* 22 March 2005.
16. "Listen to Annan," *International Herald Tribune*, 26 September 2003, p. 8.

17. Quoted in John R. Bolton, "Remarks at Proliferation Security Meeting," Paris, France, available at www.state.gov/t/us/rm/23801.htm.

18. Anticipatory self-defense is an attack upon another state that actively threatens violence and has the capacity to carry out the threat but has not yet done so; preventive self-defense is an attack against another state when a threat is feared or suspected but there is no evidence that the threat is imminent. Daniel H. Joyner, "The PSI and International Law," *Monitor* 10, no. 1 (Spring 2004), pp. 7–9.

19. Gerald F. Seib, "A Bush Doctrine Is Put in Jeopardy by Weapons Hunt," *Asian Wall Street Journal,* 9 October 2003; Robert A. Hamilton, "International Maritime Expert: Law Supports War on Terror—German Law School Vice Dean Speaks to Coast Guard Class," *The Day* website, 9 November 2003.

20. Ibid.

21. United Nations, "Charter of the United Nations," chap. VI, art. 51.

22. UNSC Resolution 1695 of 15 July 2006 does prohibit all UN member states from providing to or receiving from North Korea WMD and related materials or technology, specifically including missiles. But this resolution was passed after the Doolin paper was published. Besides, it is not part of the PSI (although it has similar objectives), it does not authorize the use of military force to ensure compliance, and it does not apply to other states seeking or supplying WMD-related materials (except to North Korea). Edith M. Lederer, "U.N. Imposes Limited Sanctions on N. Korea," Associated Press, 15 July 2006; Warren Hoge, "U.N. Demands End to North Korean Missile Program," *New York Times,* 15 July 2006. Although the United States insists that the resolution is "mandatory" and "binding" and that all UN member states are "required" to comply, it is unclear if and how it will be enforced. "UN Resolution on North Korea Result of Multilateral Efforts," *USINFO,* available at www.state.gov, 16 July 2006; "U.S., Japan Turn Up Heat on N. Korea," Asahi.com, 18 July 2006; Kwang-Am Cheon, "U.S. Mulls Own Sanctions on N. Korea," Asahi.com, 24 July 2006. Moreover, enforcement by military means would be counter to both the intent of the compromise Resolution and to the 1982 UNCLOS.

REVIEW ESSAYS

TECHNOLOGIES THAT MAY YET REVOLUTIONIZE WARFARE

William C. Martel

Beason, Doug. *The E-Bomb: How America's New Directed Energy Weapons Will Change the Way Future Wars Will Be Fought*. Cambridge, Mass.: Da Capo, 2005. 256pp. $26

This work examines the development of directed-energy technologies and their implications for future warfare. From the principle that the "first DE [directed energy] weapons [will] . . . be more revolutionary than the longbow, machine gun, stealth airplane, cruise missile, nuclear submarine, or nuclear bomb," Beason argues that directed-energy weapons represent the next development in the "revolution in military affairs." His thesis is that directed energy represents "a completely new way of thinking, a new way of employing both strategic and non-lethal force, and interacting in the international community." If his analysis is correct, the age of kinetic weapons (which destroy targets by explosions or impacts) will be transcended by weapons based on lasers and microwaves.

This book reviews the origins of directed-energy weapons and how these weapons may alter warfare. The observation that directed-energy technologies and weapons are revolutionary is not new. The military services have been developing these technologies for decades. In fact, the U.S. Air Force and the Defense Advanced Research Projects Agency (DARPA) have invested billions of dollars in directed-energy

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technologies. Since their invention in the early 1960s, lasers have been heralded as the preeminent technological advance in military capabilities, but the laser (often described as a "solution in search of a problem") has only recently begun to match these expectations. In examining the development of directed-energy technologies and weapons, Beason pays particular attention to technical and engineering difficulties that complicate the task of translating energy into effective and practical weapons.

Perhaps the most significant aspect of *The E-Bomb* is its detailed analysis of the history of the development of directed-energy technologies. We should expect nothing less from Beason, whose work in the trenches of directed energy has given him firsthand knowledge of those who struggled to make it a reality. This history alone makes this book worthwhile.

In contemporary terms, Beason argues convincingly that recent strides have made it possible for policy makers to believe that significant advances in military capabilities are truly on the immediate horizon. Perhaps the best and most visible example is the Airborne Laser (ABL), which is being developed by the Missile Defense Agency and the U.S. Air Force. Despite significant technical and engineering difficulties, the concept of using a laser on a 747 aircraft to destroy ballistic missiles will soon become an operational reality. At the other end of the spectrum, advances in microwave technology have put within reach the possibility of nonlethal weapons that disable, but do not harm, people.

Although *E-Bomb* offers the reader the basis for understanding the technological and operational forces that will determine whether directed-energy technologies will change U.S. defense capabilities, the book is plagued by several weaknesses that diminish its overall value. First, the author shows a none-too-subtle enthusiasm for the merits of directed energy. As one would expect, Beason has unmitigated, sometimes even contagious, zeal for these technologies. Despite cautionary notes about significant technical and engineering problems to be overcome and a chapter on "The Problem with Directed Energy," with its extensive discussions of the challenges in using directed energy for military purposes, Beason's unabashed advocacy weakens the analysis. Having said that, there is still a balanced feel to these discussions; the reader is left with the sense that directed-energy technologies may yet revolutionize warfare—which is essentially the same conclusion, with notable amendments, that we would have drawn a decade or two ago.

Second, the book is characterized by uneven discussions that shift between analyses of directed-energy issues using scientific language and casual discussions often bordering on the mundane. They range from "If the new photon is emitted in the same direction and has the same phase as the incoming photon, this is known as coherent emission," to references to "Disco Duck," "megapecking

order," "our government—you know, the one you pay taxes to support," "The summer of love: 1969," and "blowing the enemy to hell." I could go on. None of this language belongs in a serious work, and its presence raises unsettling questions about editorial control. My suspicion is that Beason was trying to make a work written primarily for members of the defense community more accessible to lay readers. Third, the book's credibility and persuasiveness are weakened by what could best be thought of as numerous cases of editorial sloppiness: "foyer" rather than "foray"; using the acronym "ATCD" for "advanced concept technology demonstrator" along with the correct one, "ACTD," twice in the same paragraph; citing the Air Force "science advisory board" rather than the correct "Scientific Advisory Board."

By what standard should we judge this book? *E-Bomb* is a useful work, one that contributes to the literature on the relationship between advanced technologies and defense. It provides new and useful background and insights into an arcane area of technology that could have a decisive influence on the future of warfare. In the end, it will help policy makers evaluate directed energy in terms of the limitations and costs of making decisions to invest scarce resources in defense. My only wish is that the author had kept a tighter rein on editorial comments, and on his enthusiasm for directed-energy technology, and avoided the unevenness associated with the shifting back and forth between scientific language and casual discussions—all of these detract from the work. My recommendation, however, is that the reader overlook these shortcomings and focus instead on the fact that this book is a valuable aid in understanding the development of the next set of technologies that *could* revolutionize military operations.

PART AND PARCEL OF A NATION'S TOTALITY

John B. Hattendorf

Rodger, N. A. M. *The Command of the Ocean: A Naval History of Britain, 1649–1815.* New York: W. W. Norton, 2005. 907pp. $45

It is no exaggeration to say that this multivolume study is the single most important contribution to scholarship on British naval history that has been written in more than a century. It clearly surpasses the previous multivolume general history: Sir William Laird Clowes's *The Royal Navy: A History from the Earliest Time to the Present,* originally published in seven volumes between 1897 and 1903. *The Command of the Ocean* is the second volume of a projected trilogy. The first volume, *The Safeguard of the Sea: A Naval History of Britain, 660–1649,* appeared in 1998, so the volume allotted for the two centuries from 1815 through the end of the twentieth century may be expected some years hence.

Rodger's purpose in the trilogy is not to write an institutional or operational history of the Royal Navy but rather to present a naval history of Britain that puts naval affairs into context as part of general British history. This means that the focus is not limited to isolated battles, organizational development, or prominent leaders but includes and stretches beyond these aspects to see naval activity within the multiple contexts of all kinds of history, including political, social, economic, diplomatic, administrative, medical, religious, scientific, and technological. Rodger's intent is to spread the meaning of naval history beyond the naval service itself and to see it, much more appropriately, as the national endeavor that it is. Reflecting the best scholarly views of our era, Rodger strives to understand naval affairs as they involve all parts of government and society in Britain. In doing this, his trilogy is a trailblazing effort and a masterful achievement in the making.

Professor Hattendorf, chairman of the Naval War College's Maritime History Department, has served since 1984 as the College's Ernest J. King Professor of Maritime History. His service to the U.S. Navy extends over three decades—as an officer with combat experience at sea in destroyers, at the Naval Historical Center, and as both a uniformed and civilian Naval War College faculty member. He earned his master's degree in history from Brown University in 1971 and his doctorate in war history from the University of Oxford in 1979. Kenyon College, where he earned his bachelor's degree in 1964, awarded him an honorary doctorate in 1997, and the National Maritime Museum, Greenwich, awarded him its Caird Medal in 2000 for his contributions to the field of maritime history. Since 1988 he has directed the Advanced Research Department in the Center for Naval Warfare Studies. He is the author, coauthor, editor, or coeditor of numerous articles and more than thirty books on British and American maritime history, including Sailors and Scholars: The Centennial History of the Naval War College, *studies on Alfred Thayer Mahan and Stephen B. Luce, and* America and the Sea: A Maritime History. *His most recent works include coediting* War at Sea in the Middle Ages and the Renaissance *(2002) and a major exhibition catalog for the John Carter Brown Library,* The Boundless Deep: The European Conquest of the Oceans, 1450–1840 *(2003).*

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Any attempt to write naval history on the broad level where Rodger operates immediately faces the problem of how to deal simultaneously with so many diverse levels of understanding and interpretation. Rodger takes his cue from John Ehrman's famous comment that "if national history may be compared to a cake, the different layers of which are different aspects of national life, then naval history is not a layer, but a slice of that cake." Rodger sees his slice of cake as one with four layers: the first, policy, strategy, and naval operations; the second, finance, administration, and logistics, including their technical and industrial interconnection; third, social history; and fourth, ships and weapons. Rather than trying to deal with these matters simultaneously in a way that would clot the brain, Rodger wisely shifts from one layer to another in a kind of symphonic orchestration that varies in its concentration and intensity. Each of his chapters has a thematic title, but each also has a short subtitle that tells the reader to which of the four levels the author is now turning his focus. Of the thirty-six chapters, nineteen deal with operations, nine with social history, six with administration, and two with ships.

The text itself occupies only 65 percent of the 583 pages of this weighty volume. In addition to the running text, sixty-one pages are devoted to seven appendixes that provide, respectively, a chronology of the period 1649–1815; statistics on the comparative strength of the Royal Navy with respect to four other powers; the size of the fleet and the types of vessels constituting it at eleven key points in this period; tables of rates of pay for officers and men at seven different points; a list of the admirals and officials who successively held eight key positions; annual statistics for the total number of seamen from 1688 to 1815; and annual statistics for naval expenditures from 1649 to 1815. Additionally, there are twenty-seven pages devoted to a glossary of English and foreign naval terms, eighty-nine pages of bibliography, ninety-nine pages of endnotes, and forty-two pages of index. Then, there are sixteen unnumbered pages of black-and-white illustrations in two sections. Thus, this volume and its predecessor are (as undoubtedly their successor will be) not only substantial works of fundamental interpretative importance but major reference works, books that belong in every library, personal or institutional, that has anything to do with naval affairs and its history.

Beyond such substantial statistics of girth and weight, this volume is even more importantly a new interpretation, one that arrived on the historiographical scene at a very timely moment to set the tone and provide the background for the bicentenary commemorations of Nelson's victory at Trafalgar. Unlike many works that preceded it, Rodger's does not glory in famous victories won but looks beyond them to think about the Royal Navy's more fundamental meaning to the nation. Rodger concludes that the significance of seapower for

British history lies equally in domestic politics and in foreign policy and war. The basic and fundamental foundation of British naval power was the ability of the state to maintain a strong national economy that could provide the state enough revenue to allow it to spend a huge proportion on a navy, with domestic political support for doing so. The ability to find such economic resources, in turn, was based on the broad relationships between domestic agricultural and industrial productivity, the system of international trade, and the defense of that trade and the nation in general—defense that the navy provided as its fundamental contribution. In bringing all of this about and making it a successful venture for national purposes, the skill, courage, and professional abilities of naval men were essential, as was an effective and efficient naval administration that built the ships, supported the fleets at sea, and fed and provided for the health of their crews. A navy is not an isolated feature of a nation or of a nation's history; it is fundamentally part and parcel of a nation's totality. Nicholas Rodger deftly explains all that with grace, wit, penetrating insight, and a brilliant command of the language.

BOOK REVIEWS

NUCLEAR ESCALATION AND CHINA

Quester, George. *Nuclear First Strike: Consequences of a Broken Taboo.* Baltimore, Md.: Johns Hopkins Univ. Press, 2006. 159pp. $22.95

Bolt, Paul J., and Albert S. Willner, eds. *China's Nuclear Future.* Boulder, Colo.: Lynne Rienner, 2006. 221pp. $52

George Quester's *Nuclear First Strike: Consequences of a Broken Taboo*, is a thought-provoking speculative analysis. His first chapter appeared in modified form as an essay in the Spring 2005 issue of the *Naval War College Review*. With well over three decades of experience in the field of security studies and deterrence theory, Quester backs up his examination of this speculative topic with very impressive credentials that span the disciplines of analysis, writing, and teaching. Quester has taught at a number of universities and colleges and is currently a professor of government and politics at the University of Maryland.

Having chosen his topic well, Quester could not fail to deliver a fresh, insightful piece of scholarship. The book is solidly framed on a structure that identifies a range of potential nuclear crises and propagates each through the various phases of use decision-making, from pre-use considerations to post-response international reactions. Essentially, Quester divides the spectrum of use into seven generic scenarios along functional lines as follows: ambiguous use, use involving little or no collateral damage, use under conditions of compromised or uncertain command and control, government-directed nuclear use with weak international reaction, government-directed nuclear use with strong international reaction, full nuclear warfare, and limited nuclear warfare. Clearly, since the third and fourth generic scenarios differ only in the international responses they evoke, he probably ought to have combined them—they diverge temporally (that is, through the phases of use decision making) rather than functionally.

Quester then sequentially evolves these representative scenarios of use through the crisis phases that he envisions: pre-use considerations and use itself, likely world reactions, likely U.S. public reactions, and appropriate U.S. policy responses. He rightly makes and adeptly demonstrates the valuable point that in analyzing possible U.S. policy responses, we should be careful to avoid limiting

our examination to the case per se but rather look also to the potential precedents set by such use. He also documents his background material and speculations quite well and extensively—a distinct strength of the book.

One curiosity is that he did not choose to carefully examine the specific case of nuclear escalation between the United States and China in a Taiwan Strait conflict. Such a scenario not only would have to rank fairly high on the probability-of-occurrence spectrum but also receive a good deal of attention, and would have benefited from Quester's insightful analysis.

There may be one other way in which this otherwise very useful book could have been improved. Quester's decision to cut his speculative analysis "horizontally"—essentially handling each nuclear use decision phase separately, while spanning the entire range of scenarios within each phase—does not help the management of this complex topic. A "vertical" cut, in which each scenario is played out from cradle to grave before moving to the next, would have been more helpful to the reader. His resulting digressions and diversions into other scenarios and other crisis phases become confusing at points, detracting slightly from the otherwise enjoyable readability of his style.

In *China's Nuclear Future*, Paul Bolt and Albert Willner have edited an exceptional volume, which should be read by both nuclear strategists and China experts. Bolt is a professor of political science at the U.S. Air Force Academy, having also taught in China, and Willner is a colonel in the U.S. Army and chief of the Liaison Affairs Section at the American Institute in Taiwan.

The volume presents valuable scholarship across quite a range of issues under the umbrella of China's nuclear weapons future: strategy, doctrine, force development, political perceptions, and the Taiwan issue. Though all seven chapters are strong, three in particular stand out as exceptionally valuable to researchers: Evan Medeiros on Chinese nuclear strategy and doctrine, Ronald Montaperto on the effects of Beijing's political perceptions, and Brad Roberts on possible future paths for China's nuclear force and doctrine.

Evan Medeiros marshals substantial new Chinese-language materials to probe the history, development, and future evolution of China's nuclear doctrine. His historical outline of the maturation of strategic doctrine within China and its subcommunities of interest is well researched, crisp, and accurate. Equally important, however, the historical context sets the stage for his argument that China's deterrent strategy ought to be looked at, not in typically Western terms, such as "minimal" or "limited," but rather as embodying the Chinese decision to maintain an "effective" and "sufficient" posture. This is a highly informative, well written, and thought-provoking chapter, but it is possible that the distinctions raised in the deterrent terminology may be more of a semantic than substantial nature. Clearly, this is an issue ripe for further research, and the field would be well served by more of the same scholarly, analytic thinking from Medeiros.

In Ronald Montaperto's chapter on the effects of Chinese perceptions upon the nuclear weapons program, particular attention is devoted to how U.S. actions and policy might affect the direction of force planning and doctrine.

Montaperto keenly states China's overarching political dilemma as: "How does a rising nation committed to achieving reunification and a world class level of economic development so order its external relations that it is able to achieve its objectives and not provoke the opposition of a suspicious great power that possesses overwhelming comprehensive national power?" Four particular issues are claimed as critical in defining the evolving character of the China-U.S. relationship: counterterrorism, Taiwan, participation in international and multilateral organizations, and proliferation and arms control. Arguably, this short list should include missile defense, which strikes directly at the credibility of China's deterrent, in turn striking at U.S. freedom of action, U.S. intentions vis-à-vis China, and the nature of the bilateral relationship. Nevertheless, Montaperto makes the most salient point in the chapter when he concludes that both the Taiwan issue and the future character of the U.S. nuclear posture (including missile defense) strike directly at Chinese vital interests. On these matters, Montaperto claims, Beijing will not compromise, putting these two issues in a transcendent category of their own in the bilateral relationship.

With characteristic clarity, Brad Roberts outlines both the broad paths open to China's nuclear force over the coming decades and identifies the external and internal factors that will drive the decision making in choosing what Beijing calculates is the appropriate path. This chapter is perhaps the best in the book, giving the most accurate assessments regarding the current shape of the Chinese force, as well as the motivators and challenges to its evolution and maturation. Roberts makes the good point that regardless of external stimuli, such as U.S. development of missile defense, the Chinese force will modernize along a certain predictable baseline. Beyond that baseline, the greatest driver to the size and character of China's future nuclear force will be the exact character of the coevolving U.S. national missile defense architecture. Since that architecture's final shape is uncertain, so is, to a large extent, the final shape of China's nuclear force.

Finally, Roberts lays out three broad paths along which the Chinese nuclear force may evolve: one defined largely by modernization and incremental response to U.S. missile defense, another in which China "sprints" to a window of maximum strategic leverage (particularly with an eye to a Taiwan conflict) vis-à-vis the not-yet-fully-mature "new triad" of the 2003 Nuclear Posture Review, and a third that would posture China for Eurasian nuclear superiority and avoid any near-term competition with the United States. Roberts concludes by offering a bit of very penetrating advice on dissuasion: a prudent course for the United States, especially with respect to missile defense, might be characterized by some amount of transparent restraint, attempting in the process to engender reciprocal restraint by China in its nuclear force evolution.

CHRISTOPHER YEAW
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Fukuyama, Francis, ed. *Nation-Building: Beyond Afghanistan and Iraq.* Baltimore, Md.: Johns Hopkins Univ. Press, 2006. 262pp. $21.95

Given that Francis Fukuyama publicly retracted his support for the 2003 invasion of Iraq, it is not surprising that his edited volume *Nation-Building: Beyond Afghanistan and Iraq* should be generally critical of America's reconstruction efforts in those two countries. Still, readers of every perspective will find this volume a collection of well informed and insightful critiques of the American-led efforts at nation building in both countries, one that offers numerous useful caveats for the future.

Minxin Pei, Samia Amin, and Seth Garz offer an overview of the profound challenges of nation building. The record is not encouraging. For the fifteen reconstruction efforts America has concluded since 1989, a full eleven have failed to establish and sustain democratic governments. Based on their analysis, the often-cited examples of Japan and Germany are not representative.

Also, institutional shortcomings abound in the U.S. government. Michèle Flournoy observes that, outside the military, the U.S. government lacks a systematized effort to identify lessons learned from past experiences. Learning from such failures, while politically awkward, may be of crucial importance in the long struggle against terrorism. Sadly, there are also many institutional failures. Fukuyama observes that, strikingly, the United States put more effort into preparing for oil fires and a refugee crisis for the 2003 invasion of Iraq, largely because these were the challenges that arose during the 1991 liberation of Kuwait.

One unfortunate aspect of the book's organization is the considerable overlap between the six chapters that focus on Iraq and Afghanistan. In the three chapters on Afghanistan, foci more readily emerge. S. Fredrick Starr's discussion of the prelude to international involvement in Afghanistan, Marvin Weinbaum's assessment of the social impediments to reconstruction, and Larry Goodson's treatment of provincial reconstruction teams are all distinctive contributions.

The chapters on Iraq, however, are more vulnerable in this regard. There is certainly virtue in having three knowledgeable authors—Larry Diamond, Johanna Mendelson Forman, and James Dobbins—opine on all aspects of these occupations. However, when one reads for the third time that disbanding the Iraqi army was a serious mistake, the revelation has by then lost some of its punch.

Diamond's piece on Iraq, though critical of the Bush administration, must receive special consideration, given that Diamond worked with the Coalition Provisional Authority (CPA) in early 2004. His criticisms, in particular of the CPA, are often telling. Still, he argues that many of the Iraqis he met genuinely crave opportunities for democratic political expression, and he believes that analysts and politicians who promote the idea of propping up a benevolent strongman "do not grasp the divisions and aspirations in Iraqi society."

Nation building can be a dangerously tempting enterprise; the clearly malignant nature of such governments as Saddam Hussein's can generate unwarranted optimism regarding a society's susceptibility to political reengineering. As Fukuyama argues, the United States must be "far more cautious" about how it engages in such vastly complicated endeavors.

ANDREW STIGLER
Naval War College

Hart, Gary. *The Shield and the Cloak: The Security of the Commons*. New York: Oxford Univ. Press, 2006. 194pp. $22

Gary Hart offers a bold grand strategy to deal with the complexities of security in the twenty-first century. He states that America will fail in defining its role in the world if it does not recognize a broader definition of security. Security narrowly defined as "prevention of physical harm by creating a protective shield" is insufficient. The "cloak" of economic, environmental, health, energy, educational, and government security provides "genuine security."

Hart argues against the Bush administration's "narrow" focus on the war on terrorism, the promotion of democracy, and its emphasis on unilateralism and preemptive use of military force.

Hart's cooperative security strategy embraces liberalism expanded to deal with a multidimensional security environment. A major theme is securing the "commons." "Central, is a sense that we are not alone, that our security, in an age of global integration, is reliant on a global community—a commons—with increased opportunity and responsibility."

Three principles inform Hart's grand strategy. First, "Our economic cloak is the basis of our strength, and our strength is the basis for our world leadership." Hart calls for investment in knowledge through a new national security education act to increase scientists, engineers, and teachers. His energy policy would encourage moves toward independence (zero imports). A Persian Gulf treaty alliance comprising oil-producing and consuming nations would guarantee oil flow. Hart's economic agenda would reward savings, investment, and productivity and penalize borrowing, debt, and consumption.

Second, "America's role in the world is to resist hegemony without seeking hegemony by the creation of a new global commonwealth focused on stability, growth, and security." Hart proposes reforming international institutions, focusing global development assistance on individuals, and increasing control of weapons of mass destruction. He suggests an international "peace-making" force that would be "part constabulary and part special forces . . . inserted into zones of violence."

Third, "to respond to this century's new threats, the U.S. military shield must be comprised of these principles: flexibility, reform, and intelligence." Hart recommends appreciation of fourth-generation warfare and establishment of a human intelligence corps within the CIA. He consolidates all special forces into a fifth service, and brings the National Guard home to reassume its traditional duties of guarding the homeland.

One minor weakness is repetition in successive chapters.

Hart has served as a U.S. senator for twelve years, serving on the Armed Services Committee—the first congressional committee to investigate the CIA. Most important is his work as co-chair of the U.S. Commission on National Security for the Twenty-first Century, which in 1999 predicted catastrophic terrorist attacks on the United States, and in January 2001 recommended a department of homeland security.

Readers will do well to consider his proposed grand strategy. It is rare to

find a single plan laid out in such complete detail.

RICHMOND M. LLOYD
William B. Ruger Chair of
National Security Economics
Naval War College

Turner, Stansfield. *Burn before Reading: Presidents, CIA Directors, and Central Intelligence.* New York: Hyperion, 2005. 319pp. $23.95

Presumably Stansfield Turner did not devise the nonsensical title of this history of the DCI's (Director, Central Intelligence) relationship with the president of the United States.

In twelve chapters on chief executives from Franklin D. Roosevelt through George W. Bush, Turner discusses the nineteen men who headed America's intelligence organization. "Within six months of Pearl Harbor, FDR's enthusiasm for 'Wild Bill' [Donovan's] 'innovative thinking' had evaporated," Turner writes, noting that Donovan was never given access to the ULTRA/MAGIC code-breaking program, and he regularly lost struggles with the Joint Chiefs of Staff and J. Edgar Hoover.

In January 1946, Harry Truman created the Central Intelligence Group and appointed Sidney Souers as the first director of central intelligence, with simple expectations: "to keep him personally well-informed of all that was going on in the outside world." By September 1949, however, the CIA had not been privy to Atomic Energy Commission information, so the day after Truman learned that the Soviet Union had exploded its first atomic bomb, he read Intelligence Memorandum 225: "The earliest possible date by which the USSR might be expected to produce an atomic bomb is mid-1950 and the most probable date is mid-1953."

Turner recounts subsequent intelligence failures, but because the manuscript was submitted to the CIA for security review, few readers should be surprised by this history.

While most facts are familiar, Turner's thesis is that the director of Central Intelligence serves the president in two capacities: leading the CIA in providing unbiased intelligence; and heading the intelligence community, "fifteen federal agencies, offices, and bureaus within the executive branch." Turner evaluates the eighteen DCIs before Porter Goss on how each performed both tasks, including his own service under Jimmy Carter.

If Turner is frank about errors he made, he excoriates his successor, Bill Casey. "Overall, I found this transition group to be as unbalanced, opinionated, and unwilling to listen as any group I have ever encountered. They came to their task with their minds made up, and no facts were going to change their conclusions." Fifteen blistering pages recount Casey's politicization of the agency and obsession with covert actions, culminating in his leading Ollie North to undertake "two highly illegal operations—selling arms to Iran and funneling the money to the contras in Nicaragua."

Turner devotes the final chapter to reflections on the 2005 Intelligence Reform Act. "The big question, then, is whether President Bush will line up with the presidents since FDR who have favored giving more authority to the DCI or whether he will give in to the Defense Department's persistent efforts to keep the DCI's authority limited." Noting that "the CIA's reputation in the country is at

a nadir today," Turner calls for "the dissolution of the CIA" as part of "a bold transformation" of U.S. intelligence.

The 444 endnotes citing interviews, NARA files, articles, and many books prove that Turner has maintained a scholar's interest in the field he once practiced. A surprise may be that no endnote cites John Ranelagh's *The Agency* or any book written by Jeffrey Richelson—or perhaps Langley's reviewers extirpated every one of them.

TOM GRASSEY
Naval War College

Herrick, Robert Waring. *Soviet Naval Doctrine and Policy 1956–1986*. Lewiston, N.Y.: Edwin Mellen, 2003. 3 vols., 1,415 pp. $129.95, $129.95, $139.95

It is no accident that each volume in this set comes with Fleet Admiral Sergei Gorshkov's picture on the cover. In fact, the time period encompassed by this trilogy coincides precisely with the Gorshkov era—the central figure in all of the strategic and doctrinal debates of this study. This massive series is the capstone achievement of Robert Waring Herrick, a former U.S. naval attaché to the Soviet Union and an experienced student of Soviet navy development. The subject, the Soviet navy's growth from a small coastal force into a balanced force capable of contesting the United States for command of the seas, is similarly the capstone achievement of Admiral Gorshkov, who played a key role in its development. Appointed chief of the Soviet navy in 1956, he took the job surrounded by an army-oriented general staff and the political leadership of Nikita Khrushchev, who was obsessed with missiles and nuclear weaponry. Over his thirty-year tenure Gorshkov brought the Soviet navy "into the world ocean" and seriously challenged American-led Western supremacy at sea. From the official Soviet perspective, this work dissects the smaller debates that attended this growth: coastal versus oceangoing; offensive versus defensive; submarines versus balanced fleet; navy nuclear first strike versus strategic reserve.

If one follows the maxim that "budgets are strategy," Gorshkov comes out the clear winner in his competition within the Soviet bureaucracy, ultimately building not only a bigger navy, but also a "balanced" blue-water force. In fact, the book would offer additional insights if it managed to relate official pronouncements with actual building programs. This would lay to rest the speculation made throughout the book that some of these official pronouncements were unvarnished reality while others were exaggerations or Aesopian fables in which the Navy lobbied for forces as projections of Western successes.

The most useful contributions this study offers are found as Gorshkov evaluates and assesses the effect of the growing U.S. Navy during the Reagan administration. Most notably, Herrick shows that Western practices were the foundation upon which Gorshkov built his navy. The Lehman "Oceanic Strategy" of the early 1980s gave a second wind to Moscow's shipbuilding program. Herrick also reveals the complete disutility of using "dissuasion" as part of a deterrence strategy with the Soviets. Could a nation ever build a navy so large that the nearest competitor simply was dissuaded from trying to keep up? Reflecting classical balance of power

theory, Herrick's evidence persuasively suggests that there was no single factor that induced Soviet shipbuilding more than the fear that America might surge too far ahead in the naval arms race of the 1980s. The Reagan "600-ship Navy" was all the ammunition Gorshkov needed to lay the keel of his first real aircraft carrier. Ironically, however, Gorshkov's winning campaigns against the Soviet defense bureaucracy helped bankrupt the Soviet Union.

This study is designed for the specialist. It is not easy to read. It is overly long (1,415 pages)—it quotes, paraphrases, and synthesizes too many articles and editorials found in Soviet newspapers and journals from over the thirty-year period. Herrick is comfortable in this terrain and appreciates the way Soviet leaders conducted their strategic debate, helping the reader to understand the hidden (and sometimes contradictory) messages they made. He is particularly good at helping readers "split the hairs" of the debate, noting the shifting doctrinal priorities from year to year, which few laymen could discern. However, he repeatedly revisits such central topics of strategic debate as command of the sea, homeland defense, and sea-lane attack. Few readers will have the patience to follow.

TOM FEDYSZYN
Naval War College

Hornfischer, James D. *The Last Stand of the Tin Can Sailors*. New York: Bantam, 2004. 499pp. $14

James D. Hornfischer writes a gripping novel of the U.S. Navy's last major surface engagement of the twentieth century. The battle described here is the engagement between Task Unit 77.4.3 "Taffy 3" under the command of Rear Adm. Clifton "Ziggy" Sprague and the Japanese Center Force under Vice Adm. Takeo Kurta, charged with ultimately halting Gen. Douglas MacArthur's Leyte invasion force. By October 1944 the war in the Pacific seemed well in hand, yet the Japanese navy still posed a threat.

From the first line in the book, "A giant stalked through the darkness," the reader is caught up in life onboard a World War II ship. Hornfischer begins his story with a desperate Japanese fleet. The Japanese carrier force is virtually ineffective because of the severe loss of planes and, to a greater extent, the loss of pilots to fly them. The remaining Japanese strength resides in its battleships—two of the largest ever built, assigned to the Japanese Center Force—*Yamato* and its sister ship *Musashi*. Hornfischer describes the battle that took place in the morning hours of 25 October 1944 between the overwhelming firepower of the Japanese Center Force and the relatively slow and poorly armed Taffy 3.

The tone is set with carefully provided background on the ships of Taffy 3 and their crew while the combat information centers and radio shacks try to work out the puzzle of random reports flowing in. At the same time, a significant portion of American firepower, the U.S. Third Fleet, under Adm. William F. Halsey, is rapidly steaming north in hot pursuit of the remaining Japanese carrier fleet. This deception move, which was part of the Japanese strategy, worked as it was designed—it essentially took Halsey out of the fight.

Around sunrise the Japanese Center Fleet, twenty-three ships in all, transited through the San Bernardino Strait, passing between the southern end of Luzon and the northern part of Samar Island. They met with the thirteen ships of Taffy 3, comprising six small escort carriers, three destroyers, and four destroyer escorts. By rights, Taffy 3 should have been annihilated; however, the fog of war loomed large. The Japanese tactical picture was so confused and blurred by misinformation, inadequate reconnaissance, and poor communication that the Japanese broke off the attack late in the morning and left the battle to the north.

Hornfischer uses the majority of the book to describe, in amazing detail, events as the battle unfolded. Hornfischer's detail is eerily precise. He thoroughly provides a play-by-play action including the formations and actual intentions of each commanding officer. However, Hornfischer carefully did his homework, interviewing countless survivors and reviewed hundreds of documents in order to piece together details of that morning off Samar.

The Last Stand of the Tin Can Sailors is a must read for anyone interested in naval history.

DAN DUSEK
Commander, U.S. Navy

Smith, Starr. *Jimmy Stewart: Bomber Pilot*. St. Paul, Minn.: Zenith, 2005. 287pp. $21.95

The defining era of actor Jimmy Stewart's life was his service in the air force, according to his biographer, Starr Smith, who served with him in the Eighth Air Force during World War II. This biography deals mainly with that period of Stewart's life. The theme of the story is how a man approaching middle age joined the armed forces at the lowest grade possible and in only four years rose to the rank of "bird colonel." This accomplishment was carried out not through favoritism but through hard work, technical competence, and leadership.

A famous actor at the beginning of 1941, Jimmy Stewart was about to take on the biggest challenge of his life: flying bombers in the U.S. Army Air Corps. He was born James Maitland Stewart in Indiana, Pennsylvania, in 1908. At an early age he developed an interest in aviation that stuck with him all his life. He was a student of Princeton University, where he found his other interest—acting.

When France fell to the Nazis in 1940 and Britain was battling for its life, Stewart concluded that the United States could no longer avoid the war. Not soon after, his draft notice arrived and he was sworn in as a private. He was already an accomplished pilot and so he was accepted for flight training.

Jimmy Stewart was assigned to a B-24 squadron slated for transfer to the Eighth Air Force to train in Iowa, where he excelled to become squadron commander and then was promoted to major. He flew twenty missions, many of them in hotly contested air space. When the war in Europe ended, he was a wing commander whose job became one of deactivating the wing and bringing the men home.

There are a few minor quibbles that an editor would have caught. The early chapter on Eisenhower seems unnecessary, and much of the end material that deals with the careers of some of Stewart's

fellow Air Force officers detracts from the story. Nevertheless, this is an important book that would be of interest to many.

ROBERT WHITTEN
Cupertino, California

Fick, Nathaniel. *One Bullet Away: The Making of a Marine Officer.* Boston: Houghton Mifflin, 2005. 384pp. $25

Perhaps not since Robert Graves and Siegfried Sassoon served together in the 2nd Battalion, Royal Welch Fusiliers during World War I has so much literary talent been employed to recount the operations of a single unit as we find now in the case of the 1st Reconnaissance Battalion during Operation IRAQI FREEDOM I. In *Generation Kill* (reviewed by me in the Winter 2005 *Naval War College Review*), Evan Wright wrote about his experiences with 1st Recon as an embedded journalist. His perspective is that of an intelligent outsider who related most to the junior enlisted Marines of a single platoon. The commander of that platoon, Nathaniel Fick, has now written his own story. The military memoir written by a junior officer was a mainstay of war literature in the twentieth century, which saw such distinguished examples as Robert Graves's *Good-bye to All That,* Ernst Junger's *Storm of Steel,* John Masters's *Bugles and a Tiger*, and Phillip Caputo's *A Rumor of War*. The authors of such works are in general well educated and intelligent, dedicated to their jobs, but also sensitive to the unaccustomed demands and horrific scenes of war. Fick's book belongs to this tradition while eloquently speaking to our own time.

The best of the junior officer memoirs are both compelling as narrative and instructive in the broad sense. A lieutenant with a gift for writing brings an informed but open mind to his tale, and the reader is able to learn about war, about this war, along with the writer. In *One Bullet Away*, Fick moves from the Dartmouth College campus, to the training areas of Quantico, Virginia, to active service in Afghanistan and in Iraq. He develops from undergraduate to Marine infantry and reconnaissance officer in combat. The book contains some excellent battle pieces, but some of the best parts occur early and late, as Fick tries to adapt to his new circumstances and later to begin succinctly to sort out what he feels and thinks about his experiences. A classics major, he often sees events through a lens of ancient history. Like many other junior officers, his military service often appears as an effort to recapture a lost nobility and simplicity that he has found lacking in his previous surroundings. Hearing journalist Tom Ricks speak about the Marine Corps at Dartmouth before enlisting, Fick observes that, "Ricks used words like 'duty' and 'honor' without cynicism, something I'd not often heard at Dartmouth."

Of course, he also acquires the skills and outlook of an infantryman. An early scene in the book has him conducting a night attack while in training. By now, Fick has learned the rules, but he is also beginning to understand how to apply them imaginatively and effectively to changing and uncertain circumstances. Fick's first taste of war is in Afghanistan. He observes senior

leadership at its most inspiring and effective in the person of Lt. Gen. James Mattis, the division commander, who is seen visiting front-line positions in the middle of a freezing night.

After the campaign in Afghanistan, Fick transfers to the 1st Reconnaissance Battalion, an organization whose emphasis on finesse over force appeals to the thoughtful young officer. The war in Iraq finds this unit at the point of the advance toward Baghdad. It is impossible to summarize all that Fick and his platoon see and do in the space of few lines; indeed, it may be impossible even for a Homer or a Tolstoy to render them adequately into words at all.

Fick decides to leave the Corps after his unit is withdrawn from Iraq. A "reluctant warrior," he has decided that he will not be one of those who live and define their lives by fighting on command, without much questioning, as professional soldiers are perhaps required to do. Some of his comrades return to Iraq after he has left the service, and Fick learns of the death of his replacement, Capt. Brent Morel. The ending chapter of the book may seem rushed, as if Fick has not yet come to terms with his service by the time he has finished writing his story. He finishes on a positive note, but the full meaning of what he has seen might be years in coming. Fick appears to be too decent and honest a man to be content with simple answers. Classicist Fick often intersperses his tale with classical allusions, none more meaningful or moving than the quotation with which he opens his last chapter.

REED BONADONNA
Commander, U.S. Navy

Edgerton, Robert B. *Remember the* Maine*, To Hell with Spain: America's 1898 Adventure in Imperialism.* Lewiston, N.Y.: Edwin Mellen, 2005. 225pp. $109.95

Robert Edgerton, a noted anthropologist and member of the UCLA faculty for more than forty years, has written extensively about the small wars of empire that dot the historical landscape of the nineteenth century. Among the better known of his works is *Like Lions They Fought,* an examination of the Anglo-Zulu War of 1879, which no collection on the subject should be without. He would, therefore, seem to be eminently qualified to explore the historical and cultural aspects and ramifications of the Spanish-American War.

Like many conflicts of the era, the Spanish-American War has until recently been under-examined and largely forgotten. Yet it remains one of America's more important armed conflicts. The war marked the emergence of the United States upon the world stage as a major, externally focused power. It was, in many ways, the physical manifestation of the strategic thinking of Alfred Thayer Mahan. The war left the United States with a physical as well as commercial empire, forever altering the lives of millions of peoples, as well as the development of state power in the Caribbean, Latin America, and Asia. The war occurred when both the U.S. Navy and Army were in the process of revolutionary change. The war would eventually involve U.S. forces across a wide variety of points on the spectrum of conflict, from fleet-to-fleet actions to protracted nation-building efforts. Some scholars have gone as far as to suggest that the U.S. experience in the

occupation and pacification of the Philippines still contains lessons that may be applicable to current operations in Iraq, Afghanistan, and the global war on terror. Thus by any reasonable measure *Remember the* Maine*, To Hell with Spain* would seem to be one of those books that cover the right subject at the right time, by the right author.

Alas, Edgerton does not replicate his success in dealing with the Anglo-Zulu War when it comes to the United States in 1898. This may be due in part to the greater physical scope of the Spanish-American war, its longer duration, and the involvement of a much larger cast of characters. Perhaps the war was simply too big and too complex to do the subject justice in one volume of less than three hundred pages.

To his credit, Edgerton tries to cover all theaters of the war, as well as social and political currents that led to the fighting. Unlike most historians who have examined the subject, he devotes an entire chapter each to the conquests of Puerto Rico and Guam. Little has been written about these theaters of operations, predominately because neither saw much fighting.

Remember the Maine*, To Hell with Spain* suffers from a lack of cohesion. It is an untidy work that leaves intellectual threads to dangle almost immediately after it picks them up. For example, Edgerton touches on the work of Mahan but fails to examine similar tectonic shifts in Army thinking—shifts that changed the culture of the institution and have been well chronicled in Graham A. Cosmas's *An Army for Empire.* Edgerton also attempts to correct a historical injustice paid to the Cuban *insurrectos*, who made crucial contributions to the defeat of the Spanish. Indeed, it is highly likely that while U.S. intervention hastened the Spanish defeat, the defeat was already inevitable. Yet again, this look is cursory and the reader is left wondering about just how the *insurrectos* won the "hearts and minds" of the populace, and how the movement was funded.

These shortcomings pale in comparison, however, to those that occur when the book looks at the U.S. invasion and occupation of the Philippines. To be sure, the Philippine campaign was infinitely more complex and lengthy than that in Cuba. It is even misleading to speak of *the* war or *the* campaign. In actuality, there were numerous insurrections, and the revolt of the Moro came from very different cultural wellsprings than that found in the more northern islands. Rather than provide a detailed look at the insurgency and counterinsurgency, Edgerton reviews only a few of the better known events, such as the Balangiga massacre and the trial of Brig. Gen. Jacob H. Smith for war crimes.

Not only does Edgerton fail to paint a complete picture of the insurrection, but he is also equally sketchy when it comes to describing U.S. efforts to achieve victory. These efforts were by no means uniform and ranged from cooperation to confrontation, from nation building to tactics of scorched earth. A far better treatment of this subject can be found in the works of Brian McAllister Linn, notably *The U.S. Army and Counterinsurgency in the Philippine War 1898–1902;* another exceptional treatment that focuses on one center of the resistance is *The War against the Americans: Resistance and Collaboration in Cebu, 1899–1906*, by Resil B. Mojares.

In a nutshell, this work is a disappointment. It fails to serve as either a balanced introduction to the Spanish-American War or a useful addition to our knowledge of the imperial era or the impact of colonialism. Its shortcomings may be due more to structure than scholarship, but they are still severe enough to warrant bypassing it in favor of more comprehensive and balanced works.

RICHARD NORTON
Naval War College

Little, Benerson. *The Sea Rover's Practice: Pirate Tactics and Techniques, 1630–1730.* Washington, D.C.: Potomac, 2005. 253pp. $27.50

There is a fascination about pirates of old. Most of us as children first learned about them from Peter Pan in the figure of Captain Hook or from Robert Louis Stevenson's *Treasure Island.*

This work provides a detailed historical examination of sea rovers (an umbrella term used to cover pirates, privateers, and others with the same essential motivation of greed), how they lived, what they did, and how they did it. It will be of high interest to the maritime spectrum, from armchair sailors to admirals.

Little, a former naval officer and SEAL, details where many pirates came from and their motivation, which was primarily a desire for treasure. He notes how the Hollywood image of a pirate attack on the high seas was far different from the real thing, and he discusses attack planning and execution for both at-sea and land assaults.

Within the book's well documented twenty-three chapters, Little provides fascinating material on pirate personalities and their lives both ashore and at sea. Rovers, of course, all had different personalities, some more savage than others. It is easy to see how one would not choose to be at the mercy of L'Ollonois, who cut out one man's heart and ate it.

The ships are also described, along with the weapons of choice. Line drawings are numerous and include a wide variety of personal weapons, such as muskets, pistols, swords, and pikes, as well as cannons of various types.

Another value of this book lies in its seven appendixes, which include a sea rover's lexicon, weapons and ranges, and, for those with a desire to dine like a pirate, a description of what they ate and drank. These appendixes are excellent, with definitions provided for all reasonably relevant (and generally unknown) items, such as kilderkins and demiculverins. There are many footnotes, a complete bibliography, and a good index.

This is a really good book. Be prepared—after reading only a few pages—to feel the wind in your face and taste the salt air. The only downside for ever-optimistic adventurers is that no treasure maps are provided for some sandy beach. The pirates never buried their treasure.

JACK A. GOTTSCHALK
Livingston, New Jersey

IN THE JOURNALS

George P. Shultz, "Sustaining Our Resolve," *Policy Review,* August/September 2006. Reflections by the former secretary of state on the way ahead for the United States in the war on terror, with emphasis on the importance of better intelligence and better communication with the Arab world.

James Fallows, "Declaring Victory," *The Atlantic,* September 2006. An unconventional yet intriguing approach to managing our al-Qa'ida problem.

Tony Corn, "Clausewitz in Wonderland," Policyreview.org, September 2006. A provocative attack on the continuing influence of Clausewitz in American military education.

RECENT BOOKS

Dear, I. C. B., and Peter Kemp, eds. *The Oxford Companion to Ships and the Sea.* 2nd ed. Oxford, U.K., and New York: Oxford Univ. Press, 2005. 678pp. $65

This new edition (dated 2005 according to the copyright page, but March 2006 by the publisher's flyer) of the late Peter Kemp's 1976 work is to be a "companion" to the forthcoming four-volume *Oxford Encyclopedia of Maritime History,* of which the Naval War College's Professor John B. Hattendorf, D.Phil., is general editor. The present volume updates and cross-references many of the original entries and adds coverage in such areas as piracy, maritime and naval technology, oceanography, the law of the sea, and environmental concerns. There are now some 2,600 entries, many with line drawings, figures, and period plates. A cross-referenced index has also been added. It certainly passes the test posed by the *Daily Telegraph* blurb on the dustcover: "Open to check a point and you can be lost for hours" (encountering, among many other things, an appalling sense of the phrase "comb the cat" and some remarkable scholarship on the biblical Noah's Ark).

Rohwer, Jürgen, comp. *Chronology of the War at Sea 1939–1945: The Naval History of World War Two.* 3rd ed. London: Chatham, 2005. 532pp. £40

Dr. Rohwer points out in his preface that this third edition of the *Chronology of the War at Sea* represents fifty years of scholarship, by himself and a distinguished group of associates and colleagues. First appearing in 1956 as a column in a German periodical, then as a series of articles, then as a German-language book, it was first published in English in 1972, with a second edition in 1992. This, then, is the third edition of the title but the sixth form in which the work has existed. It is updated, revised, and expanded largely on the basis of new books appearing since 1992, especially for the Royal, U.S., and Soviet navies. The bulk of the book comprises brief entries by day and place—from 19 August 1939, North Atlantic (the German Naval Staff sends fourteen U-boats into waiting position), to 30 November 1945, Western Atlantic (HMCS *Merittonia,* a corvette, is wrecked off Nova

Scotia). Indexes of warships, merchant ships, personnel, convoys, operations, U-boat packs and patrol lines, minefields, and mine barrages.

Polmar, Norman, comp. *The Naval Institute Guide to the Ships and Aircraft of the U.S. Fleet.* 18th ed. Annapolis, Md.: Naval Institute Press, 2005. 672pp. $89.95

This series forms, with the *Jane's* family and *Combat Fleets of the World,* the standard reference in the field—anyone familiar enough with the subject to need such a book is already aware of its use and value. The eighteenth edition adds chapters on littoral combat ships and unmanned aerial vehicles, as well as updates on carrier air wing composition, prepositioning ships, submarine rescue systems, unmanned undersea vehicles, the MH-60R/S helicopter, and the Coast Guard's DEEPWATER program. The volume contains 918 photos and 114 other illustrations, general and ship-name/class indexes, and appendixes (four of them tabular, plus essays on the Arsenal Ship and transformation).

BOOKS RECEIVED

Fighting for Rights: Military Service and the Politics of Citizenship, by Ronald R. Krebs. Ithaca, N.Y.: Cornell Univ. Press, 2006. 265pp. $45

Imagined Enemies: China Prepares for Uncertain War, by John Wilson Lewis and Xue Litai. Palo Alto, Calif.: Stanford Univ. Press, 2006. 362pp. $60

Making Things Work: Solving Complex Problems in a Complex World, by Yaneer Bar-Yam. Cambridge, Mass.: Knowledge, 2005. 306pp. $28.95

Most Succinctly Bred, by Alex Vernon. Ohio: Kent State Univ. Press, 2006. 100pp. $16.95

Women of Valor: The Rochambelles on the WW II Front, by Ellen Hampton. New York: Palgrave Macmillan, 2006. 233pp. $24.95