

BOOK REVIEWS

THE EMERGING INTERNATIONAL ORDER

Paul, T. V., and John A. Hall. *International Order and the Future of World Politics*
New York: Cambridge Univ. Press, 1999. 421pp. \$64.95

This book seeks to explain the international system at the beginning of a new millennium and to suggest how it may evolve. In essence, it argues that we live in a stable world, organized around the United States as the dominant leader of a Western (including Japan) coalition. Although challenged on several fronts, this system is likely to persist for the foreseeable future.

The thoughts of eighteen scholars on different aspects of the emerging international order have been organized into three sections: (1) theory, the prospects of major contenders for global influence, and challenges to the system, such as globalization; (2) environment degradation; and (3) weapons of mass destruction (WMD). These essays, written by and primarily for academics, vary in utility for policy makers and the educated public. Each author has included extensive references to the relevant literature and usually a conclusion, but jargon is occasionally a problem. Paul and Hall introduce the issues, advance their “synthetic model,” and offer a conclusion that draws the book together.

A key question for many readers of the *Naval War College Review* is why American dominance has remained unchallenged in the wake of the Cold War. Classic balance-of-power theorists would have predicted the emergence of a countervailing coalition; others foresee overstretch followed by inevitable decline. One answer is that America’s position is grounded in leadership of an interdependent, peaceful “liberal league” based on shared values. More provocative is the argument that America’s strength is based on uniquely benign leadership. U.S. dominance is widely accepted because America, emerging from World War II, fashioned not just the “glue” of containment policy but also a more deeply rooted, open, economic, multilaterally managed, and liberal Western order beneficial to all participants. Moreover, the very openness of the American political system increases the confidence of other members of the club that they will have a voice in decisions. Finally, the Western order’s core institutions have become so embedded in

national societies as to increase the costs of significant change for all concerned.

Critics of this thesis could question the true extent of outsiders' influence on American policy decisions and why other members of the club should continue to play by American-derived rules. Perhaps Europe's and Japan's modern history and inertia, as much as American openness, explain why these allies continue to find the old bargain—American security leadership if America pays the bill—attractive in the aftermath of the Cold War. Moreover, this thesis explains little about why Americans remain prepared to spend a disproportionate amount of their own treasure (and perhaps blood) on a comparatively expensive military capability for the benefit of a “liberal alliance.” In any case, the relevant essays argue that major European states share no perceived common interest in significantly more cohesive foreign and security policies. Moreover, Japan—balancing its global and regional roles and sure to encounter resistance to any attempt to dominate Asia—is unlikely to adopt a consistently more independent policy, except perhaps in the economic sphere.

Russia, China, and India round out the major powers reviewed. For Russia, revanchism is dismissed as a realistic option. China is portrayed as a relatively satisfied power, intent on its own economic development and on resisting external interference. This view, which is at odds with much recent speculation, carries implications for the political debate within the United States and for U.S. force structure. India now has neither an interest in challenging the system nor the means to do so, except marginally on nuclear issues, but it remains determined not to permit others to foreclose the

possibility that it too may some day aspire to great-power status.

Where, then, are the future challenges, particularly if swaths of the developing world are scarcely relevant to international order as a whole? Globalization and environment degradation may eventually diminish the relevance of the state itself, though the impact of these phenomena on the system's interdependent core remains to be proved. The proliferation of weapons of mass destruction may threaten not only catastrophe in Asia and the Middle East but also, as military officers are well aware, U.S. ability to intervene effectively abroad. On the other hand, the revolution in conventional military affairs could lead to greater Western pressure for universal WMD disarmament. A chapter on political religion properly points out problems with Samuel P. Huntington's well known and overblown prediction of conflict between civilizations. However, it provides little guidance about what we might expect, particularly with regard to tensions within the Islamic community over that civilization's relationship with the West.

Finally, many readers will appreciate references to Carl von Clausewitz in the editors' introduction to their model.

Drawing on history, they argue that irrespective of the nature of international order, better calculation of national interests and prudent behavior are important to the peaceful accommodation of new challengers. Whether democracies are more likely to exhibit such behavior is another issue.

In short, this ambitious volume provides an extensive, well organized sample of current thinking on international relations.

PERCIVAL BRONSON
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Schneider, Barry R., and William L. Dowdy, eds. *Pulling Back from the Nuclear Brink: Reducing and Countering Nuclear Threats*. London: Frank Cass, 1998. 309pp. \$52.50

It is conventional wisdom in some circles that with the demise of the Soviet Union, nuclear weapons may no longer be a major factor in the calculus of international relations. This survey of varying perspectives on nuclear proliferation, compiled by Barry R. Schneider and William L. Dowdy, credibly challenges that arguably premature assumption. The editors are, respectively, associate professor of international relations in the Department of Future Conflict Studies, and associate professor of Middle Eastern studies in the Department of International Security Studies, at the Air War College, Maxwell Air Force Base, Alabama. Both have devoted a considerable portion of their professional lives to international security issues.

This book grew out of a conference on nuclear proliferation issues jointly sponsored by the U.S. Department of Energy and the Air War College, held on 26–27 April 1996 at Maxwell. The conference involved numerous nuclear-proliferation experts, many of whom served as principal speakers and presenters. The group was composed of diplomats, regional specialists, policy makers, academics, scientists, senior military officers, and defense professionals from several nations. Many of their papers are contained in this analytical compilation, and all contributors to the book were conference participants. The subject matter includes lessons from previous nonproliferation experience, recent successful nonproliferation efforts, continuing proliferation challenges and risks, progress achieved to date in nonproliferation

programs, discussion of possible nonproliferation roles for nongovernmental organizations, and potential counteractions against emerging nuclear states.

As outlined in this work, two seminal events in the late twentieth century had major impacts on global nuclear proliferation: the collapse of the Soviet Union, and the continuing spread of fairly easily attainable nuclear weapons, components, and technology. The two events are, of course, not unrelated. In that regard, leakage of weapons technology and expertise to foreign buyers clearly remains the most worrisome aspect of the current serious Russian internal problems. However, that said, and contrary to the expectations of many analysts, nuclear technology has not spread as rapidly as anticipated. Contributors to this book speculate that this reality is, not surprisingly, the result of multiple, complex, and interacting factors. These include the considerable cost of fielding nuclear weapons, concerns regarding possible preemption by adversaries, fear of isolation by the international community, and growing doubts as to the actual utility of nuclear weapons as deterrents much less as war-fighting tools—particularly when weighed against inherent risks.

The preceding cautiously optimistic observations aside, there is a clear recognition by the contributors to this book that there has already emerged a group of nation states that may well prove to be catalysts for nuclear confrontation in the not-too-distant future: the Democratic People's Republic of Korea, Iran, Iraq, and possibly Libya and Syria. Moreover, despite the perhaps understandable balance-of-power motives, there is also the unresolved question of the potentially dangerous and destabilizing nuclear weapons stockpiles possessed by Israel,

India, and Pakistan. There also remains what could be the central international policy issue, regarding what to do if a state is discovered in violation of a previous agreement not to develop nuclear weapons.

Several short case studies are given of states that have, variously, developed and stockpiled nuclear weapons, or initiated nuclear weapons development programs and subsequently canceled them, or elected to negotiate regional nuclear-free zones. The book offers valuable insights into factors that seem to motivate these diverse policy choices. The lesson herein may be that no two states react similarly when faced with the nuclear weapons procurement dilemma. Some essays present overviews of evolving national policies on proliferation and nonproliferation as declared by the United States, the United Kingdom, and France, and of the nuclear arms-reduction program in Russia.

In addition, an American specialist provocatively analyzes the seemingly obdurate refusal by the People's Republic of China to respond to international pressure and previous agreements not to transfer ballistic missile and nuclear weapons technologies abroad. The author's conclusion is that the Chinese government is steadily losing control of its provinces, its military-industrial complex, and the People's Liberation Army. Thus there are emerging in China increasingly independent actors implementing contradictory foreign policies regarding weapons-technology transfers and the considerable profits to be made therefrom.

Another contributor argues that high-technology precision guided conventional munitions (PGMs) may well obviate the need to acquire or employ nuclear weapons, as the destructive effects of PGMs are essentially the same

and thus have made the former both irrelevant and too dangerous.

The technical data presented here regarding nuclear weapons and weapons production are probably sufficient to inform but not overwhelm the nonspecialist. However, there is also a virtual blizzard of acronyms throughout the book, describing weaponry, research and development programs, and weapons-related agencies of various stripes. Initially, this may prove somewhat daunting to the layperson, but patience will be rewarded, as most entries are explained.

The not inconsiderable utility of the book would have been further enhanced by an article that summarized the underlying themes of the work and categorized the diverse viewpoints expressed by the contributing authors. Such an article would have been of considerable value to a non-expert student of nuclear proliferation issues.

The major strength of this work is that it provides a diversity of viewpoints regarding nuclear proliferation issues, ranging from enthusiastic optimism about the future to cautious pessimism. Moreover, it also quite realistically, in this writer's view, leaves many important issues explained but unresolved. In this regard, and possibly closest to the mark, one author contrasts two cultures that are currently grappling with nuclear proliferation issues, and with each other— diplomatic activism and nonproliferation versus military preparedness and counterproliferation. Other contributors observe that nuclear proliferation will probably never be completely resolved. One hopes that within these parameters a process will evolve that at least minimizes the real risks inherent in nuclear weapons.

DAVID M. GOODRICH
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Hays, Peter L., Vincent J. Jodoin, and Alan R. van Tassel, eds. *Countering the Proliferation and Use of Weapons of Mass Destruction*. New York: McGraw-Hill, 1998. 365pp. \$27.49

This book examines the general problem of the proliferation of weapons of mass destruction (WMD), focusing specifically on using military means to counter the spread of nuclear, biological, and chemical weapons.

The central theme that animates this work is the desire to “contribute to the counter proliferation dialogue,” addressing what the editors argue is the “most important threat facing the Department of Defense.” The term “counterproliferation” emerged in the beginning of the first Clinton administration, when Secretary of Defense Les Aspin organized the counterproliferation initiative (CPI) to create new military capabilities for dealing with WMD. Undoubtedly, the failure of coalition forces during the Persian Gulf War to find Iraqi Scud missiles (in the infamous “Scud hunts”)—not to mention the extraordinary failure of international nonproliferation regimes to discern the existence of Iraq’s extensive WMD facilities—signaled that the United States must be prepared to deal militarily with WMD in regional conflicts. The consensus is that the failure to produce credible and effective military options for finding and destroying such weapons will have devastating consequences for the U.S. military.

To complicate matters, there is a growing realization that the United States and the international community cannot depend on nonproliferation regimes to prevent states (notably Iran, Iraq, North Korea, and Libya) from acquiring weapons of mass destruction. The most dangerous

scenario is that those regimes might use such weapons against U.S. troops or American cities. Facing this possibility, the Defense Department has organized a program to deal with WMD.

The editors of this volume have collected the ideas of some of the important thinkers on the subject of proliferation. With a foreword by former secretary of defense William Perry, it begins with an examination of the origins of the CPI and proceeds to consider a number of programs and policies that together constitute what is meant by counterproliferation. These descriptive chapters are useful to the extent that the reader can understand the political and bureaucratic forces that have changed how the U.S. defense establishment thinks about the proliferation of WMD, and more importantly, why the United States is developing technical means for finding and destroying such weapons.

The more analytical chapters focus on the implications of proliferation for states and military organizations. For example, the chapter by Brad Roberts examines the policies and mechanisms for preventing states from developing WMD. An important observation from this chapter, at least to this reviewer, is that various international regimes have failed to prevent the proliferation of WMD. The chapter by David Kay on “involuntary reversal” considers the value of measures that are available to the international community for forcing states to relinquish WMD. As one of the architects of the UN Special Commission on Iraq (UNSCOM), Kay has leavened his thoughts on this matter with his firsthand experience in finding and dismantling Iraq’s WMD facilities. The chapter by David Bernstein and Lewis Dunn on deterring WMD threats is a useful

discussion of the value of using such weapons to deter their use by rogue states. Finally, the chapter by retired general Charles Horner and Barry Schneider examines the feasibility of using counterforce attacks to destroy WMD facilities.

I mention these chapters in particular because they contribute new and useful insights. Unfortunately, while many other chapters are also useful, their value is weakened by their failure to advance our thinking about this problem—surprisingly, since the overall quality of the chapters, which are unusually tightly organized for edited works, suggests that the editors went to considerable lengths to harmonize all the parts into a coherent whole.

As a general observation, this is a useful work that contributes to what we could call the proliferation, nonproliferation, or counterproliferation debates. But the variety of views highlights the underlying weakness of the current debate about WMD. In essence, counterproliferation is a logical extension of nonproliferation, because, as these words suggest, the success of nonproliferation has been less than stellar. The concept of counterproliferation not only implies but trumpets that we must be prepared to counter proliferation because nonproliferation has failed to contain the number of states that possess WMD. This change in the strategic landscape has profound implications for U.S. national security and foreign policy. Yet author after author feels obliged to pay homage to the critical and enduring value of nonproliferation, despite the fact that, as the title of this work suggests, we have moved from preventing proliferation to managing nonproliferation's failures.

As the editors note in the conclusion, "much remains to be done." Their book

is an important first step toward analyzing how counterproliferation represents the next step in the search for new ways to deal with the weapons that dominated strategic thinking during much of the twentieth century.

WILLIAM C. MARTEL
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Bateman, Robert L., ed. *Digital War: A View from the Front Lines*. Novato, Calif.: Presidio, 1999. 299pp. \$29.95

In *Digital War*, Captain Robert L. Bateman III, U.S. Army, a history instructor at West Point, has assembled an interesting collection of essays discussing the future of the Army in the digital age. The articles are "from the front lines" in that most of the authors are active-duty Army officers, which makes the book a useful review of what some of the service's most thoughtful writers have to say about such future Army visions as Force XXI and the "Army after Next."

For the most part, the essays take a careful, critical view of the Army's official visions of the future battlefield. Many of the potential problems discussed will be familiar to readers of *Parameters* and other military journals; they include such issues as: Can the United States afford the systems that will truly digitize (or network) the entire military? If we do achieve a completely "networked" force, how will that affect command and control?

One article, by Lieutenant Colonel John A. Antal, veers off into the sort of *Blade Runner* future that Phillip K. Dick describes in his novel of that name. However, for the United States, Antal believes the real bad guys are not the enemies

shooting at us but the craven politicians and other leaders who began making wrong decisions back in the 1990s. In this analysis, the United States has abandoned its conventional military might in favor of an arsenal of long-range precision guided munitions backed up by perfect situational awareness. An Army colonel calls the president on his holographic eyepiece to ask for guidance; before she can answer him, the connection to the global Hypernet goes down, leaving him and his squad alone and very much afraid.

Fortunately, most of the essays are more grounded in reality. The first chapter, by Bateman, discusses how digitization (which is used as shorthand for the current revolution in military affairs) is affecting the tactical battlefield. Bateman uses as a case study the story of the Army's reluctant development of radio between the world wars. This may sound familiar to military personnel today who are trying to adapt to computerization under such rubrics as IT-21.

Radios were issued in the 1920s with little or no technical support—the policy was that infantrymen would install, maintain, and operate their own equipment. During maneuvers, commanders would routinely decline to use their radios and also hide any problems that arose with them, because to acknowledge communications problems might interfere with “real” training. Eventually, the Army was saved from its own failure to embrace technology by simply adopting a commercial, off-the-shelf system: the FM radio used by the Connecticut State Police.

Bateman also discusses the impact that shock and fear may have on the battlefield of the future. He proposes that a “digitized” soldier, equipped with far

more information and able to learn about every loss and setback throughout the entire battlespace, may become more, not less, susceptible to shock and fear. This raises questions for proponents of network-centric warfare who argue that the ability to create shock and fear in the enemy will be a great asset to the netted force of the future.

Bateman offers one solution to the problem of equipping and training a military in the age of expensive, quickly changing technology: instead of trying to bring everyone up to the same level, accept the fact that technology changes too quickly. The solution would be a modular army, with one echelon equipped with the latest and greatest technology while the second echelon retains today's equipment. In another five years or so, their positions are reversed; the second echelon receives the latest equipment while the other half retains its now older gear.

A common theme of several of these essays, including a second chapter by Lieutenant Colonel Antal and another by Lieutenant Colonel Robert R. Leonhard, is the question of whether or not the use of indirect “fires,” enabled by improved targeting data, is replacing maneuver and direct combat on the battlefield. Simply stated, are precision guided munitions the dominant method of future warfare? As far as several of these authors are concerned, the answer is a firm no. “Precision strikes that are not backed up with a continuous battle of decisive maneuver are merely artillery raids set out to punish, not defeat, an opponent,” writes Antal.

The final chapter differs from the rest in that it is not written by a serving Army officer; Ed Offley is a military reporter for the *Seattle Post-Intelligencer*. He describes “The Military-Media Relationship

in the Digital Age” in an insightful review of current issues in the military–press relationship. One lesson of the Gulf War, he writes, is that “the news media is not the enemy, but rather the battleground on which the struggle for public support, congressional funding, and political decision making will be fought.” Despite the generally improved relations between the military and the press in recent years, Offley believes this relationship will face several challenges in the future. Advances in satellite communications and portable computing will continue to make reporters more independent of military control. At the same time, military units will face even closer media scrutiny in the future, as investigative reporters use “data mining” techniques to search through quantities of information on the Internet and elsewhere, and as commercial satellite imagery becomes more widely available. In addition, Offley predicts there will be increasing pressure to allow recording and actual broadcast of live combat.

Several chapters, such as those discussing the future of the Army National Guard and Army education and officer personnel policies, may hold little interest for a joint audience. But there is a great deal in this book that will interest anyone following the debate over the shape of the U.S. military in the information age.

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Holbrooke, Richard. *To End a War*. New York: Random House, 1998. 410pp. \$15.95

To End a War is an interesting visit to the inner workings of the art of international negotiations. The reader accompanies Ambassador Holbrooke on his journey in search of an end to the war in

Bosnia-Herzegovina. The path he takes is winding and laced with harrowing twists, switchbacks, and a few dead ends. He writes in a clear and forthright manner that keeps the reader’s attention throughout the book even though the outcome is known.

Holbrooke opens with a review of his trip over Mount Igman in August 1995, in which three of his colleagues were killed in a tragic military vehicle accident. This loss is still deeply felt by the author; however, he often points out how little it meant to others outside his circle when placed in perspective of the tens of thousands who had already died.

The remainder of the book is divided into four sections. The first, “Bosnia at War,” covers Holbrooke’s introduction to the conflict and introduces the key players. He gives a candid and bleak description of the situation at the time that the United States was still considering its options and the UN was already deep in the morass of the Balkans. The Clinton administration, still smarting after the Somalia debacle, had little appetite for another adventure into a seemingly endless civil war. Europe and the UN were simply not achieving their aims, and conditions were only getting worse.

“The Shuttle,” the second section, is perhaps the most interesting. Holbrooke details how he and his team patched together a shaky consensus among a diverse group of international leaders and power brokers in the Balkans, Europe, and America. The negotiations leading up to the Dayton accord were filled with intrigue, plots, and subplots. Since many of the parties involved were the same ones we later see in the Kosovo crisis, the insights provided are absorbing. The description of Slobodan Milosevic leaves one with a deep appreciation for his

considerable abilities but with the impression that Holbrooke feels that given the tools, he (Holbrooke) could outmaneuver him. General Wesley Clark serves as Holbrooke's military right hand, and he undoubtedly gets his own impression of how to deal later with their shrewd adversary.

Holbrooke is harsh in his assessment of the military, and in particular of Admiral Leighton Smith, who at the time was the commander of Allied Forces South (AFSOUTH). Admiral Smith was the joint force commander for the Nato air operation DELIBERATE FORCE, which began on 30 August 1995. Holbrooke viewed the bombing of the Bosnian Serbs as his greatest leverage toward an agreement. He casts Smith as an obstruction to this design, for his refusing to support a more ambitious and consistent bombing campaign. The author seems to ignore the fact that Smith was not an independent commander but a subordinate to General George Joulwan, Supreme Allied Commander, Europe for Nato, and of the SACEUR bureaucracy. Holbrooke argues that a lack of Nato-approved targets threatened to interrupt the bombing at a time when he needed to maintain pressure on the Serbs. He recognizes that Nato nations would never approve additional targets and that the only option remaining for the military was to restrike previous targets, at increased risk to the Nato pilots. He is quite clear that in his view the military operations were not synchronized with the political objectives, thus diluting their benefit.

The next section details the historic gathering at Dayton, Ohio, in search of an agreement. The day-to-day give-and-take of negotiations is exposed to the reader, along with a further examination of the

human dimension of the process. Holbrooke's experience as a participant in the Vietnam War settlement negotiations in Paris alerted him to the potential pitfalls at Dayton. During the deliberations, other elements of Holbrooke's negotiating advantage come into evidence; the success of the Croatian offensive, the economic embargo on the Federal Republic of Yugoslavia, and the war-weariness of the parties all contributed to his bargaining power. The real-life drama of the near failure of the talks and the last-moment changes in positions reads like a contrived Hollywood movie script.

The final segment briefly addresses the implementation of the agreement, which is probably why the book was named *To End a War* instead of *To Find a Peace*. Once again, Holbrooke brands the military as an unwilling supporter of the greater good. He outlines the failures of Nato's Implementation Force (IFOR), labeling it a flawed operation. Its inability to accept policing responsibilities (or allow a strong international police force), an aversion to "mission creep," and a stated position that it would not arrest war criminals relegated Nato to a weak position that was soon exploited.

Much of the blame is again passed to Admiral Smith, who now wore a second hat as the commander of IFOR. Holbrooke spends little time addressing the failures of the civil mission in Bosnia-Herzegovina. He appears unaware of the significant contribution of IFOR to salvaging the first election, in which Holbrooke was head of the Presidential Observer Mission.

One may not agree with all of Holbrooke's assertions, and subsequent memoirs by other figures mentioned in this book are apt to take him to task. Holbrooke clearly subscribes to the

Clausewitzian view of the role of war as an extension of politics. This fact alone, coupled with the continued prominence of Holbrooke in the U.S. diplomatic scene, both today and likely in the future, makes this a must-read book for military professionals.

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Pokrant, Marvin. *Desert Storm at Sea: What the Navy Really Did*. Westport, Conn.: Greenwood, 1999. 303pp. \$60

This is the second of a set of two works that provides a concise, detailed history of the actions of U.S. Naval Forces, Central Command (USNavCent) during operations DESERT SHIELD and DESERT STORM. (The first volume, *Desert Shield at Sea: What the Navy Really Did*, also published in 1999, contains three parts: “Erecting the Shield, 2 August–17 September 1990”; “Preparations for Defensive War, 18 September–8 November”; and “Preparations for Offensive, 9 November–16 January.”)

Desert Storm at Sea contains two parts. The first, “Storm at Sea,” begins on the evening of 16 January 1991 and concludes with a chapter on postwar operations into 1999. The second part contains analytical observations on key aspects of U.S. naval force activities during both operations, as well as a conclusion that takes up the question, “What Could the Navy Do to Be More Joint?” Thus, although this review concerns specifically *Desert Storm at Sea*, it is most useful to think of the two volumes as a single work, addressing four distinct historical phases, with an analysis thereafter.

Marvin Pokrant’s first purpose is to provide an objective and comprehensive history of USNavCent actions during DESERT STORM from the operational-level perspective (commander and staff), but with necessary recourse to the tactical level. This is accomplished in twelve chapters that address strike; air control; sea control; amphibious warfare; mine countermeasures, including planning and preparation for the ultimately unexecuted amphibious assault (DESERT SABER); naval actions during the ground war; prisoners of war; and postwar activity. The author’s second purpose is to stir debate by offering reasoned opinions on command and control, amphibious, mine countermeasures, strike, air defense, maritime intercept, the joint force air component commander (JFACC), and “jointness” aspects of U.S. naval force participation in both operations. Both purposes have been achieved with significant success, in this reviewer’s opinion, and they contribute to Pokrant’s overarching objectives: to promote a better understanding of U.S. naval contributions in DESERT SHIELD/DESERT STORM, and to suggest how such contributions might be increased in future operations.

With these volumes Pokrant has made a superior contribution to the professional literature of the Gulf War. As a military-operations research analyst, he was the Center for Naval Analyses (CNA) field representative on the flagship of USNavCent from August 1990 to April 1991. In that capacity he had direct access to internal briefings, meetings, memoranda, key personnel, official messages, correspondence, and logs, as well as the CNA library. His personal notes of each day’s activities, buttressed by many documents and interviews, serve as the core of both books. After DESERT STORM,

Pokrant coordinated the CNA reconstruction of both operations with the Seventh Fleet staff. From 1992 to 1994 he served as CNA's director of the Fleet Tactics and Capabilities Program, wherein he managed a variety of analyses concerning issues raised during the conflict. He is now retired.

Desert Storm at Sea is written in an easily understandable narrative style. Pokrant minimizes the use of acronyms, providing at the beginning of the book a list of the abbreviations he does use. Maps, drawings, diagrams, tables, and photographs measurably assist the reader, particularly with regard to organizational details and positioning of forces. The index is robust and also helpful. Of interest, one of the author's original goals was to "cite a source for every statement that was not summary or clearly the author's opinion." This was determined ultimately to be impractical for publication purposes. Thus the end of each chapter contains a short summary of sources and limited endnotes. The bibliography is extensive and includes books, multisource reports, articles, CNA reconstruction reports and other publications, and interviews. A manuscript copy of the book with complete sources is at the Center for Naval Analyses.

The Army/Air Force-centric nature of both operations has ensured that the vast majority of books and articles concern the contributions of these two services, as well as of the Marine Corps units ashore, to the overall effort. In that context, *Desert Storm at Sea* and its companion volume are very welcome additions to the literature. They provide a comprehensive, detailed Gulf War history of U.S. naval activities where none before existed. Further, and in contrast to topically related writings that rely heavily on secondary and tertiary sources, the

foundation for this history is the primary source— Pokrant himself, aboard the NavCent flagship. These factors bestow a solid foundation of authority and accuracy upon his work.

Two limitations are worth mentioning. First, as the author points out, certain "interesting and important activities, such as intelligence," could not be discussed because of security. Second, in U.S. Navy culture, logistics and sustainment "ain't sexy." This is again borne out by the limited treatment (a few pages in the first volume) afforded these critical operational functions; that is unfortunate, given the truly remarkable magic woven by the naval and Military Sealift Command elements of the combat logistics force that sustained U.S. and coalition naval forces.

In the foreword to *Desert Storm at Sea*, Admiral Stanley Arthur, Commander USNavCent from 1 December 1990 through the end of the Gulf War, credits Pokrant and CNA with "seizing the relevant data and wringing the truth from it." This reviewer agrees.

PAUL ROMANSKI
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Mott, William H., IV. *Military Assistance: An Operational Perspective*. Westport, Conn.: Greenwood, 1999. 360pp. \$65

William Mott draws some useful conclusions from eight disparate cases of military assistance: French support for the American colonies (from 1776); British support for the anti-French coalition (from 1793); British support to the Iberian campaign (from 1808); U.S. support for wartime China (from 1941); U.S. support for postwar China (from 1945); U.S. support for the French in Indochina

(from 1949); U.S. support for the Republic of Vietnam during the “interwar period” (from 1955); and U.S. support during the Second Indochina War (1965). Mott superimposes a profile of four “uniformities” as a means to assess donor nation success: convergence of national aims and interests; donor control of the relationship; committing donor defense forces; and cohesion of donor policies and strategies.

There are, however, several issues regarding the study’s approach and the universality of the conclusions. Mott’s study uses the term “wartime,” which has a broad array of meanings. For example, Americans think of war as an anomaly in international relations. Despite the fact that there have been only five formally declared wars, Americans have seen nearly 225 years of unbroken warfare. Nevertheless, they still insist on making a distinction between war, peace, and all that unpleasantness in between. Assessing the success of U.S. support for China during World War II and U.S. support in Indochina requires, therefore, different approaches. Military assistance in the former was an economy-of-force operation that presented the Japanese with an additional front in a multifront theater, analogous to U.S. support to the Soviets (1941–1945) against the Germans. The cost-benefit ratio for these cases worked. However, equating the three post–World War II Indochina cases with keeping China in the war (and tying up dozens of Japanese divisions) is a stretch. Unlike 1917 and 1941, undeclared low-intensity conflicts, or small wars—or the *nom de jour*, military operations other than war—have a decidedly different résumé of cohesion, convergence, and success.

Mott raises a number of issues that caused this reader some difficulty. In the first French case, he posits several war aims and then selects the most ambitious one by which to measure success. There is no doubt that revenge for the loss of North American colonies (1763) and the total destruction of Great Britain loomed large on Versailles’s wish list. There is also little doubt that the French did not reject a lesser but included goal of embarrassing and weakening their adversary, which they achieved with money and a minor commitment of forces to the Americans.

Problems with war-termination goals resurface in the book’s appendix, with respect to the Reagan Doctrine; Mott compares French support to the Americans to American support for the Contras in Nicaragua. After noting the similarities, he calls both attempts failures and dismisses the Reagan attempt to “roll back” the Soviets. While certainly not solely as the result of military assistance, the Soviets were in fact rolled back. This was the product of a combination of initiatives including military assistance to anticommunist insurgencies in Asia, Africa, and Central America, as well as the main show—the big-power arms race. We will probably have to wait for the declassification of sources to determine what discrete and cumulative weights should be given to the five insurgencies the United States supported.

The issues of convergence of interests and commitment of the donor are particularly interesting aspects of this study. In the majority of the cases, Mott’s analysis is valid. While he is solid in describing the confusion and ad-hocism of U.S. foreign policy formulation in Vietnam, however, his definition here does not quite fit. He refers to all eight cases as

“military assistance in wartime.” The three Indochina cases do not match the U.S. definition of “wartime,” at least not until 1965, and even then it was not the kind of “war” the United States thought it was fighting. Additionally, the commitment of U.S. prestige, blood, and treasure to the Republic of Vietnam made the donor a hostage to the recipient. This aspect of Mott’s analysis of the Second Indochina War needs work. Also, coupling the commitment of donor forces to the success of the war aim is flawed, at least in the Vietnam case. The problem, never really understood then and still not completely understood now, is that in post-World War II counterinsurgency warfare the larger the U.S. forces committed, the less were the chances of success. Put another way, if U.S. combat forces are needed, there is already a high probability of failure—salvaging someone else’s war is nearly impossible. If U.S. forces are committed, the warring nation has even less incentive to make the kinds of reforms necessary to win. Mott refers to his companion work, *Military Assistance: An Empirical Perspective*, in which he deals with military assistance during the Cold War. One can hope that it will provide a more comprehensive look at the success/failure rate in counterinsurgency wars.

From a historical perspective, *Military Assistance* has much to offer. Taken separately, the cases and their uniformities provide a useful look at military assistance as an instrument of national policy. Mott’s research is thorough, and by examining a little-understood facet of policy he does us a valuable service. For today’s “dabbler in the occult” of military assistance, foreign military sales, foreign internal defense, etc., the study provides some trenchant questions and sobering

lessons. The flaws are few, the scholarship is of high quality, and the measures of effectiveness it suggests are useful. This book deserves attention as a valuable contribution to the sparse offerings that deal with military assistance.

JOHN WAGHELSTEIN
Naval War College



Hirschfeld, Thomas J., and Peter Hore, eds. *Maritime Aviation: Light and Medium Aircraft Carriers into the Twenty-first Century*. Hull, U.K.: Univ. of Hull Press, 1999. 263pp. (no price given)

Hirschfeld and Hore have artfully edited the proceedings of an international conference on small and medium-sized aircraft carriers held in Southampton, England, in December 1997. Over ninety academic, industry, military, and media delegates from fourteen nations that have, or have had, or might procure small or medium carriers met to hear and discuss the presentations addressing carrier acquisition. Four main issues emerged: (1) the geo-strategic environment in which carriers might operate, (2) the infrastructure needed to support carriers, (3) choices of embarked aircraft and alternatives, and (4) regional effects of carrier acquisition.

There was a general agreement that the Cold War’s strategic symmetry has been replaced by a lesser threat of general war but a greater one of regional or limited war, sparked by minor crises that had previously been held in check by the superpowers. Forces optimized for “blue water” are now turning their attention to littoral operations. Meanwhile, the limits of littoral warfare are expanding, by virtue of the capability and range of new-technology weapons. This new technology has made the majority of

the world's cities, industry, populations, and political leaders susceptible to influence by littoral warfare. In this sense, Sir Julian Corbett may be eclipsing Alfred T. Mahan.

The world's maritime focus has shifted from the Atlantic to the Pacific and Indian Oceans, with a parallel shift from Cold War dynamics to the hyperspeed free trade and global economic interdependence of today's marketplace—activities that are dependent on maritime assets. The nurturing of a low-threat, stable environment at sea to facilitate a steady supply of energy and unobstructed movement of foreign trade is the context in which nations examine the relevance and credibility of carrier capabilities.

For a nation without a large shipbuilding industrial base, a carrier program carries considerable infrastructure baggage that affects decisions whether to build or buy abroad. Nations that do have the industrial base engage in debates regarding size, capability, and the national economic benefits of continuing a robust carrier program or of "ramping up" a dormant program. In both cases, the burden of development, design, procurement, and life-cycle costs, not only for the air-capable platform itself but also for the embarked aircraft, is balanced against a carrier's perceived utility in today's strategic environment. Building at home means jobs, expanding markets, and technology benefits that would necessarily accrue to others if the carriers were built abroad.

Interestingly, issues of alternative aircraft mixes on air-capable decks greatly complicate the rational calculus but must be integral to decision making. Will there be conventional-takeoff-and-landing aircraft requiring steam catapults and arresting gear? What are the implications

for required deck size and steam generation capability? Will there be short take-offs and landings that need only a ramp deck, or a mix, with a ramp but arresting gear for conventional landing? Or strictly helicopters? In some cases, reliance on the anticipated availability of the U.S. joint strike fighter, if successful as a program, is a wild card. The cost-benefit evaluation of aircraft and ship mix options is worthy of a close read. Not surprisingly, affordability is an issue that ranks high on every agenda.

The varied perceptions of the regional impacts of carrier acquisition are a most insightful feature of this book. Regional balances of power are thought to be zero sum, perhaps rightly so. If one nation acquires carrier capability, others in the region may feel compelled to acquire a counter-capability—but regional carrier effects focus on littoral operations to safeguard national interests, not on aggression. Overriding concerns were for flexible, mobile forces for use in both war and peace, joint and coalition interoperability, and the ability to operate wherever interests dictate without relying on help or support from nearby states. Qualities of carrier mobility, versatility, sustained reach, autonomy, lift capacity, and "poise" (the ability to exert diplomatic and military leverage) are attributes seen as particularly suited to the unpredictable operations of the present and future littoral.

In summary, as a collection of disparate regional views of the relevance of aircraft carriers to today's geostrategic world, this book is a wise choice for anyone interested in carriers, and an even better choice for those interested in the littoral.

WILLIAM H. ROBERSON
Captain, U.S. Navy



Westrum, Ron. *Sidewinder: Creative Missile Development at China Lake*. Annapolis, Md.: Naval Institute Press, 1999. 331pp. \$32.95

A few weeks before this review was written, I received via e-mail an unclassified image that was making the usual military rounds. The only words in the accompanying e-mail were, “This is a successful solution.” The image was an infrared photograph from a missile seeker video taken one frame prior to impact with a QF-4 remotely piloted target drone. The image was as clear as an Ansel Adams photograph of moonrise over Halfdome. Though the heat of the intake and particularly the exhaust could be noted, all parts of the aircraft were easily identifiable—and it was a head-on shot. The missile was the AIM-9X, the latest evolution of the Sidewinder, conceived and developed a full half-century ago. Indeed, the Sidewinder has been the successful solution to a question that the U.S. Navy never posed about a heat-seeking guided missile it never asked for, from engineers at a naval laboratory whose stated mission prohibited them from developing guided ordnance. Westrum’s book is a fascinating story of the people who developed what has been called the world’s best air-to-air missile, and of the laboratory that in its own curious way allowed these engineers and scientists to exercise their creative genius.

Westrum writes in the area of science, technology, and society, with special emphasis on aviation and systems safety. He is a professor of sociology and interdisciplinary technology at Eastern Michigan University and is the author of two previous books and numerous articles. This work is the result of twelve years of

research on the Sidewinder experience at China Lake.

Sidewinder tells the story of a man and his missile. Bill McLean was a Caltech physicist by education and an engineer by nature. He began his career in 1941 at the National Bureau of Standards, in the Ordnance Accessories Division of the Office of Scientific Research and Development (OSRD) in Washington, D.C. He worked on proximity fuses for rockets and bombs. In OSRD McLean found an environment with minimal organization and maximum interaction between creative people, whose roles fluctuated with the current needs of programs. This intimacy of small teams had been known to work in industry at places like the Lockheed “Skunk Works,” so those who formed the Naval Ordnance Test Station (NOTS), China Lake, California, made sure to instill OSRD’s principles in the new desert test range and laboratory for rockets. Bill McLean thrived at China Lake, as he had at OSRD.

McLean did not set out to design a guided missile. It was the result of his frustration with aiming devices for unguided air-to-air rockets. The miss rate of early guided missiles was 90 percent; a better solution was necessary. He felt that the fire control had to be put in the missile instead of the aircraft, an idea contrary to the then-current approach to radar—combat aircraft had to continue to illuminate their targets with their onboard radar while the missile homed in. McLean believed that an infrared (IR) seeker, which was much smaller than a radar seeker, was called for, and his concept of the “heat-homing rocket” was born.

Westrum bases his history on countless interviews with members of the Sidewinder project, as well as on records

obtained from these members and official sources. His anecdotes bring a sense of the familiar to a laboratory working intensely to provide the military with a successful solution to air-to-air combat. Many military personnel then believed an IR seeker could not work. An IR detector was developed and mounted on an old, surplus radar pedestal. It used feedback to follow the target. Westrum notes, "It tracked lighted candles, birds, and even bugs. Crowds came to committee meetings just to watch the tracking films." McLean's philosophy was always to keep it simple, maintain an open mind about various approaches to the problem, involve the end user at every step of the development process, and test to improve the product early on. Often, in the evenings, a cluster of automobiles could be seen in the parking lot outside Michelson Laboratory, as the Sidewinder team returned after dinner to resume their work. Weekend work was common, and always actively involved was Bill McLean, as head of the aviation ordnance department and later as technical director of NOTS. One can envision the man "out on the Baker 4 test track at two in the morning, in shirtsleeves, waving a cigarette to see how the tracker was working." Westrum has documented a triumph of technological weapons innovation by a small, devoted team of Navy engineers and scientists who provided a "successful solution" in spite of bureaucratic roadblocks and lack of funding. He has captured the essence of the man who led the team, and of the environment in which their efforts flourished. The book is highly recommended as a record of what can be accomplished with creative technical expertise and great perseverance.

RICHARD M. HOWARD
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Brown, Charles H. *Dark Sky, Black Sea*. Annapolis, Md.: Naval Institute Press, 1999. 252pp. \$34.95

This work is a detailed history of the evolution of naval aviation's quest to conduct night and all-weather flight operations. With this book Charles Brown, a former carrier pilot and squadron commander, makes a significant contribution to understanding naval aviation on carriers. He details the many trials and advances of aircraft and their equipment between 1925 and 1999 in the attempt to conquer the difficulties of flying at night. The author's use of primary sources as well as of his own experiences only adds to his outstanding research. He conveys a full understanding of the technological and tactical advances through successive phases of carrier aviation.

While the first attempts at night carrier landings on USS *Langley* (CV 1) occurred in April 1925, interest in the concept of night combat operations had its real beginning in 1929, when the Navy first experimented with a predawn launch for a mass bombing exercise.

Innovation during World War II was driven by the increasing ability of the enemy in Europe to fight at night and by Japan's interest in night naval operations. In April 1942, the U.S. Navy established the first development, test, and training unit for night-fighter equipment and operators, at Quonset Point, Rhode Island. In 1944 the first detachments of trained night fighters deployed with Admiral Marc Mitscher in Task Force 58. Mitscher's carrier-based fighters flew the first night combat air patrols against harassing Japanese Betty bombers and conducted the first night carrier offensive operations of the war.

Postwar transition reduced the naval fighter-bomber inventories to minimum levels. However, the Navy retained its interest in night combat capability and formed two fleet all-weather training units to conduct the specialized training required for carrier night combat operations. By the late 1940s, the Soviet bomber and submarine threats had become evident. Brown describes in detail the evolution of aircraft, missions, systems, and training in response to the increasing threat.

At the beginning of the Korean War, the Navy was again ready to conduct night operations. The Navy night flyers helped the Marines retire from the Chosin reservoir, and they performed interdiction missions at night north of the thirty-eighth parallel. Brown discusses the innovative tactics developed by the aviators, as well as the introduction of jet-powered aircraft into the Navy's order of battle.

Mature operations and a new era began in 1953, when the Navy introduced the angled-deck carrier to the fleet. New electronic systems rounded out significant improvements in the effectiveness of carrier aircraft. That same year, the first radar-guided air-to-air missile, the Sparrow, was tested; it would prove to be the turning point in U.S. night fighter capabilities.

After the Korean War, the Navy's primary mission was focused on its nuclear strike capability. The introduction of aerial refueling with the newest fighters further improved their potential. By 1954 each of the fifteen carriers had a night-fighter squadron. An optical landing aid, the mirror, was introduced in 1955 aboard USS *Forrestal* (CV 59) and greatly reduced the number of carrier landing accidents. By 1960 a new era was evident in carrier aviation. Every carrier had completed the major modifications, installing angled decks and steam catapults,

and the frequency of night sorties had increased sixfold. The new era of the 1960s saw the introduction of the F-8, F-4, A-5, A-6, and A-7.

Brown skillfully describes carrier operations during the Vietnam War, including the tempo, Alpha strikes, barrier combat and patrol (BARCAP), and the strike missions performed by the Navy. He then proceeds with the resumption of the Cold War missions and the introduction of the F-14 in 1973 and the F/A-18 in 1980.

The final chapter highlights the Navy's performance in the Persian Gulf War, with its sustained twenty-four-hour operations; over half the missions were flown at night. As a final note, the author declares, "Clearly, carrier night air combat operations had proven their value to the U.S. Navy."

Dark Sky, Black Sea should appeal to many interests. Aviation buffs will enjoy it for its vignettes: those in weapon system procurement will not be surprised to see rapid periods of development with emerging threats, and vice versa; and old, bold carrier pilots will particularly enjoy the personal accounts, which may revive memories of similar experiences. All naval aviators should have this book in their professional collections. It will be the best read on "Steel Beach," and it will surely impress the air group commander.

ED CAFFREY
Captain, U.S. Navy



Merrill, John, and Lionel D. Wyld. *Meeting the Submarine Challenge: A Short History of the Naval Underwater Systems Center*. U.S. Gov't. Print. Office, 1997. 329pp. (no price given)

The Naval Underwater Systems Center (NUSC) was formed in 1970 by merging the Navy Underwater Sound Laboratory

at New London, Connecticut, with the Navy Underwater Weapons Research and Engineering Station at Newport, Rhode Island. In 1992, NUSC ceased to exist as an entity, absorbed by the newly created Naval Undersea Warfare Center. The twenty-two years of its life included the most intense period of competition between the Soviet Union and the United States in the undersea cold war. *Meeting the Submarine Challenge* documents the role of NUSC in that competition. NUSC was the Navy organization primarily responsible for the research and development of submarine sonar, combat (fire) control, weapons, and electromagnetic systems, as well as for surface-ship sonar and torpedo systems. To support these efforts NUSC also developed computerized warfare and systems analysis, test and experimentation ranges, and an organization to keep the laboratory's technology base current. The book devotes a chapter to each major area; it provides some pre-NUSC history for context.

The documentation of the evolution of submarine combat and sensor systems starts with the earliest units, around the beginning of the twentieth century, through the advances of both world wars, into the Cold War. Particular attention is given to the development of the AN/BQQ-2, AN/BQS-6/13, AN/BQQ-5/6, towed array, and wide-aperture-array sonar systems. A similar treatment is presented for fire control systems, with primary emphasis on the Mark 113 series and the Mark 117/118 systems. With the advent of the Combat Control System Mark 1 (CCS Mk 1), sonar, fire control, and weapons control all began to merge into integrated systems, culminating with the development of the AN/BSY-1 and 2 systems. The history of surface ship antisubmarine system development includes the SQS-26 sonar,

variable-depth sonar, the Light Airborne Multipurpose System (LAMPS), towed arrays, and the SQQ-89 sonar and fire control integrated combat system.

The chapter on submarine electromagnetic systems covers the entire field: communications antennae (buoyant cable, towed buoy, and mast mounted); periscopes and their capabilities; and electronic support measures. The chapter on weapons systems details the evolution of torpedoes and launchers, including submarine-launched weapons through the Mark 48 Advanced Capability torpedo, and surface-launched and air-launched torpedoes through the Mark 50 Advanced Lightweight Torpedo. Antisubmarine missiles (Asroc and Subroc), submarine-launched antisurface missiles (Harpoon and Tomahawk), and Tomahawk land-attack missiles also are chronicled.

Of course, the development of technologically advanced undersea warfighting systems requires a parallel and substantial support infrastructure, and this book provides full coverage of NUSC's capabilities. The test ranges and facilities at the Tongue of the Ocean in the Bahamas, Newport, Fishers Island (Long Island), Dodge Pond (near Niantic, Connecticut), Seneca Lake (New York), Bermuda, and others are discussed, along with their specific capabilities and functions. Additional chapters detail NUSC's efforts to acquire capabilities in computer analysis and simulation.

Just as important as the technology were the individuals responsible for it. This book names those people, some of whom are little known outside their respective fields, while others are immediately recognized as giants in the submarine technology world. It is entirely appropriate that they are all given credit for their accomplishments. The world in general will

never know of their contributions to the national security of the United States during one of its most trying periods, but those of us who went to sea at least will know who it was that kept us ahead of the competition.

Meeting the Submarine Challenge is not a primer; it will not be easily accessible to the novice. While each chapter could easily be expanded into a book of its own, the authors have done an admirable job of including only that information necessary for the task at hand—a chronicle of NUSC's achievements. Every page is packed with important details; very little fundamental theory or explanation is offered.

John Merrill is a former head of the NUSC Submarine Electromagnetics Systems Department, and Lionel D. Wyld is a former head of the NUSC Technical Writing Division. Their credentials are impeccable, and their technical bent is reflected in a no-nonsense, "just the facts, ma'am," writing style. *Meeting the Submarine Challenge* is highly recommended for those who have sufficient background in the subject matter.

CHESTER E. HELMS
Captain, U.S. Navy



Michno, Gregory F. *USS Pampanito: Killer-Angel*. Norman: Univ. of Oklahoma Press, 1999. 445pp. \$37.95

USS *Pampanito* (SS 383) made six war patrols in 1944 and 1945, sinking five ships and rescuing a record number of Allied prisoners of war. Decommissioned in 1945, *Pampanito* survived the postwar years to earn designation as a national historic landmark in 1986. Today the carefully restored submarine is open to the public at the San Francisco Maritime National Historic Park.

USS Pampanito: Killer-Angel represents a remarkable accomplishment of interviewing and research. Michno, the son of a *Pampanito* crew member, Motor Machinist's Mate Frank B. Michno, conducted more than twenty-five interviews of his father's shipmates to draw together *Pampanito*'s story from the perspective of its crew. Michno used additional oral-history interviews by Clay Blair. The book's bibliography of published sources is one of the most extensive of recent books about the submarine service in World War II. The result of all Michno's work is a comprehensive account that succeeds nicely in giving the reader a view of life on a World War II submarine as experienced by the men whose often unnoticed contributions were essential to success: torpedomen, machinist's mates, sonar and radar operators, electricians, yeomen, and sailors of a dozen other ratings.

It has been said that no man is a hero to his butler, and this quip applies to the relationship between *Pampanito*'s crew and many of its officers. *Pampanito*'s enlisted men (and a few officers) here speak plainly and directly about the war. Their recollections range from the torpedoman who judged his captain to be too conservative to the disgruntled steward who spat routinely in the commanding officer's coffee.

The book begins with the crew and the submarine at the building ways at Portsmouth Naval Shipyard and continues through its training, fitting out, and transit to Pearl Harbor to enter the war. The book covers all six war patrols, some of which were evaluated as unsuccessful. Readers will find the crew's first-person accounts of liberty in ports in Hawaii, Australia, and on Midway Island rollicking and amusing. Michno also notes the hard work and personnel changes that accompanied every refit period.

Pampanito's greatest achievement was its rescue of seventy-three Australian and British prisoners of war from enemy waters, the single greatest such recovery of the war. Michno makes this event the centerpiece of the book. On 12 September 1944, *Pampanito* and USS *Sealion* (SS 315) attacked a convoy carrying war materials to Japan. Unknown to the American submarines, two of the ships they sank had on board more than 1,360 Allied prisoners of war. Michno carefully builds the narrative leading to the sinking, with a well written and heartrending description of the soldiers' original capture, imprisonment, and forced labor on the Burma-Siam railway.

Not realizing that its attack had simultaneously freed and doomed hundreds of Allied soldiers, *Pampanito* continued chasing the convoy. For some seventy-two hours the oil-soaked men floated on rafts and debris as the number of their dead steadily increased. *Pampanito* discovered the prisoners only when it passed through the area a second time. As the sub approached the bedraggled survivors, its officers assumed they were Japanese. Michno writes compellingly of their uncertainty about what to do.

The wretches in the water were not the enemy, and Michno's account of their rescue and the care given them by *Pampanito's* crew offers a clear understanding of the prisoners' condition, the crew's feelings toward them, and the instant bond of friendship and caring that developed between survivors and rescuers. Michno makes good use of first person accounts from the crew and the survivors as he describes many emotional encounters.

USS Pampanito: Killer-Angel contains much to recommend it. Michno does a good job of explaining details unfamiliar to nonsubmariners and of providing

historical and technical background on everything from diesel engines to ULTRA. In addition, the book includes twenty-seven black-and-white photographs, many taken by the crew. Fourteen maps help the reader locate the sub's patrol areas and visualize its torpedo attacks. The footnotes are excellent.

USS Pampanito: Killer-Angel offers a deckplate view of the life of a submarine's crew in an account that is well worth reading and owning.

WILLIAM GALVANI
Director, Naval Undersea Museum
Keyport, Washington



Syrett, David, ed. *The Battle of the Atlantic and Signals Intelligence: U-Boat Situations and Trends, 1941–1945*. Burlington, Vt.: Ashgate, 1998. 628pp. \$130

With this volume, the Navy Records Society (the book's U.K. publisher) adds some of the key intelligence documents of the Battle of the Atlantic to its series of published Royal Navy historical records. The defeat of the German U-boat threat during the Second World War was made possible by a massive combined intelligence effort by the American and British navies. Both sides cooperated to exploit decrypted German naval message traffic—the intelligence source known as ULTRA. The overwhelming intelligence “take” from this source—almost fifty thousand decrypted messages on the U.S. side alone—had to be digested into usable form for the senior naval leadership.

On the British side, all available intelligence on the U-boat threat was conveyed to decision makers through the Admiralty reports known as *U-boat Situations* and *U-boat Trends*. *Situations* was a weekly update on worldwide U-boat dispositions; each was usually several pages

long, consisting of a table of known U-boat locations followed by textual commentary on their operations. *Trends* was a shorter, irregularly issued report covering changes in German U-boat employment and technology. Both were written by Rear Admiral J. W. Clayton and Commander Rodger Winn, heads of the Admiralty Operational Intelligence Centre and Submarine Tracking Room, respectively. They represent collectively one of the best sources of insight into what the Allies knew about the German U-boat campaign at any given moment.

Editor David Syrett, also the author of *The Defeat of the German U-Boats: The Battle of the Atlantic*, has compiled these reports, dating from late 1941 through the end of the war, into a useful and convenient volume. His introduction provides a clear, succinct overview of the kinds of intelligence that were incorporated into the reports, the American and British collection process, and a short selected bibliography. Unlike many document collections, this work includes a comprehensive and convenient subject index.

The reader familiar with naval intelligence reports will be impressed with the clear, candid style employed by Admiralty intelligence. For example, the 12 June 1944 *U-boat Situation* states that “the U-boat reaction to OVERLORD was prompt, energetic but remarkably confused.” The reports also provide insight into the ten months of 1942 when a change in the German code left the Allies unable to read U-boat message traffic. The Admiralty continued to estimate U-boat movements using other intelligence sources, but a comparison of intelligence reports from each period underscores the importance of ULTRA to Allied operations. In the words of one

report, without ULTRA “an accurate estimate of the number and disposition of U-boats operating in the Atlantic is not possible” (*Situation*, 23 February 1942).

What is lacking in this work, however, is a sense of how specific intelligence documents were used. It is clear that these reports circulated at the highest levels of the Admiralty, which included the First Sea Lord and certain other flag officers. Syrett comments on the difficulty of reconstructing exactly what intelligence was passed to senior naval leaders, but his decision not to reproduce even the limited routing information available for each document deprives the reader of useful insight. It is also not clear what reports, or parts of them, were shared with the American naval leadership.

According to his introduction, Syrett presumes that “his readers will be naval historians with a fairly high level of expert knowledge.” While not for casual reading, then, this well edited volume provides naval history students, as well as nonspecialist historians, convenient access to some of the key documents of World War II naval history.

DALE RIELAGE
Norfolk, Virginia



Still, William N., Jr., John M. Taylor, and Norman C. Delaney. *Raiders & Blockaders: The American Civil War Afloat*. New York: Brassey's, 1998. 263pp. \$16.95

Roberts, William H. *USS New Ironsides in the Civil War*. Annapolis, Md.: Naval Institute Press, 1999. 209pp. \$49.95

Mention of the American Civil War invokes images preserved for us by Matthew Brady—the encampments, the battlefields, and the aftereffects of the battle—in short, images of conflict on

land. Somewhere in our education we viewed the portraits of famous generals like Robert E. Lee and Ulysses S. Grant, who led Confederate and Union armies. We studied the major battles of Gettysburg and Antietam, and the surrender at Appomattox. We were made to understand the moral struggles confronted by President Abraham Lincoln and the reasons for his Emancipation Proclamation. The works of many fine authors have chronicled all these events. Yet rare is the mention of naval action. An avid reader of the war may be able to identify the four most famous naval battles (Mobile Bay, New Orleans, the battle between the ironclads USS *Monitor* and CSS *Virginia*, and the engagement between the USS *Kearsarge* and CSS *Alabama*), but little thereafter. Until recently there has been a lack of research on this topic, but within the last two years, new attention has been given to the U.S. Navy and the Civil War.

Raiders & Blockaders: The American Civil War Afloat is an excellent primer of Civil War naval history. While its depth of material is good, it is its breadth that makes it stand out.

Three dedicated Civil War naval historians have written nineteen essays for this collection. Thoroughly researched and well documented, these accounts take the reader from the lively action of major battles to the details of small engagements; from the vivid accounts of famous admirals to tales of the average sailor. Each is written and illustrated in a style that is easy and enjoyable to read. Fifteen essays have appeared elsewhere, in the *Naval War College Review*, *Civil War Times Illustrated*, and *America's Civil War*. While all the famous men and their engagements have been included, it is the mention of little-known facts, perhaps about the Confederate ironclad CSS

S Louisiana or the feisty Union admiral Louis Goldsborough, that sets this book apart from others.

Bernard Brodie, eminent scholar on world politics and military policy, and thought by many to be the founder of modern strategic theory, wrote this about the Civil War: "For the first time the achievements of the industrial and scientific revolution were used on a large scale in war." "Technology Afloat," by William N. Still, Jr., the fourth essay in *Raiders & Blockaders*, examines how new inventions and key technologies were incorporated into naval warfare in the 1860s. Among these were the adoption of steam propulsion on warships and the developments in naval ordnance, such as shell guns, improvements in interior ballistics, rifling, and the transition to breech loading. In addition, while mine warfare, undersea warfare, and ironclad warships were not new in the 1860s, the Civil War became a proving ground for these new ships and weapons. The origins of many of today's weapons, ship designs, and strategies can be directly traced back to the Civil War.

In 1861, the U.S. Navy had a three-point strategy to help win the Civil War. The first was to blockade the Confederate coastline, the second was to support the army in river operations, and the third was to counter Southern advances in technology, especially ironclad warships. The Union navy approached the new threat of ironclad warships by building vessels of three experimental classes. The first ship was the USS *Galena*. While representing an attempt at innovation, it was still a conservative design and proved to be not very successful. The second effort was the class that began with the USS *Monitor*. These ships were small, inexpensive, and quick to build. However, their

high-risk design was viewed with some reservation by the Navy Department leadership. Therefore, for security, the U.S. Navy contracted for a third design, which became the USS *New Ironsides*.

An armored frigate, it was the first American seagoing ironclad. Many innovations in the areas of gunnery, protection (armor), and seaworthiness made this ship far ahead of any ship of its time. Although USS *New Ironsides* was unique and capable, it was the only one of its class; in contrast, “monitor mania” resulted in fifty ships. The author does a nice job explaining the reasons and choices in the shipbuilding process.

New Ironsides's operational exploits were as unique as the ship itself. It took more hits from enemy guns than any other Federal ship but did not lose a single man to them. Its endurance was unmatched; it maintained uninterrupted blockade duty for sixteen months during the siege of Charleston, South Carolina. The account by William Roberts, a retired U.S. Navy surface warfare officer, of the first torpedo attack delivered by a semi-submersible, the CSS *David*, against the *New Ironsides* is excellent in its detail. The section on the contribution of *New Ironsides* during the capture of Fort Fisher is an early vision into the “looking glass” of future warfare and joint operations.

Even knowledgeable Civil War enthusiasts will be surprised to discover that the naval action in the Civil War was so broad, varied, and intriguing. These two books bring these adventures to life. Both books are enjoyable and informative, and they offer an enhanced appreciation of the growth of naval technology that has shaped the Navy of today.

WAYNE J. ROWE
Naval War College



Sweetman, Jack, ed. *Great American Naval Battles*. Annapolis, Md.: Naval Institute Press, 1999. 456pp. \$39.95

Jack Sweetman's *Great American Naval Battles* is an enjoyable series of essays from a distinguished team of naval historians that includes such well known authors as Edward L. Beach and E. B. Potter. Sweetman, himself a renowned naval historian, writes a comprehensive introduction that lays out the framework for the essays and provides the rationale for his selection of what he argues are the nineteen most significant naval battles in American history. Almost half (eight) come from the Second World War, seven of these from the Pacific theater. The selection is largely predictable but allows detailed looks into America's great naval leaders and the birthplaces of modern naval tradition. Included are John Paul Jones at the battle off Flamborough Head, Oliver Hazard Perry at Lake Erie, David Farragut at Mobile Bay, George Dewey at Manila Bay, and Raymond Spruance at Midway. These essays are well crafted and offer fresh insights into the events of these otherwise well known battles.

Even more interesting are descriptions and arguments for naval battles that are less well known and yet, according to the authors, have had significant strategic impact in American history. These are essays like James Martin's "Battle of Valcour Island," which argues that Benedict Arnold's naval defense of Lake Champlain in the fall of 1776 was crucial to the defeat of Burgoyne a year later at Saratoga. Equally interesting, although by no means new, is Edward L. Beach's detailed description of the failure of senior leadership in Washington during the critical days and hours before the

Japanese attack on Pearl Harbor. It does not completely exonerate Admiral Husband E. Kimmel, but it does bring out critical failures in the timely distribution of intelligence. Moreover, it makes the case that the poor material readiness of the Pacific Fleet on 7 December 1941 had more to do with inadequate congressional funding than with negligent naval leadership.

While all of the essays do admirable jobs of conveying the critical details of engagement, some provide greater insight into strategic settings and effects than others. John Hattendorf's essay on the battle of Manila Bay does a particularly good job of setting the strategic stage and drawing out the strategic consequences. On the other hand, a few essays go so deep into tactical maneuver that readers sometimes struggle to keep their focus on the big picture. I am thinking here of Mark L. Hayes and his account of the Civil War battle of New Orleans. While this piece is clear, I found myself getting lost in the overabundance of detail. This brings to mind my only serious reservation with this book: essays of such detail and depth warrant greater support by illustrations and maps. While some excellent choices have been made in this area, I think the reader could have been better served with even greater use of charts and pictures, especially in essays like Hayes's, where so much "fine grain" is provided.

Other naval battle essays included in this anthology are Hampton Roads, Santiago, the Coral Sea, Guadalcanal, the Philippine Sea, Leyte Gulf, and Okinawa. The book concludes with the only essay that deals with a naval battle after the Second World War; it is about Operation PRAYING MANTIS, which took place in 1988, during the tanker war in the Persian Gulf. That essay looks to the future

of naval battles, noting both the increased capabilities of naval forces and the persistent influence of political authority on the waging of limited conflict.

Like any good anthology, this book provides a solid collection of sophisticated, well researched, and well written essays that encourage the reader to wander through its contents to focus on new thoughts and insights in areas of greatest interest. After reading each essay, I had a strong inclination to read just one more before putting the book down. It would be perfect for the new student of naval history, after core texts by the likes of E. B. Potter, S. E. Morison, or Sweetman himself. For the more widely read naval historian, it is like a bottle of fine brandy that can be sipped and enjoyed in small doses but provides lasting pleasure.

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Gutmann, Stephanie. *The Kinder, Gentler Military: Can America's Gender-Neutral Fighting Force Still Win Wars?* New York: Scribner, 2000. 300pp. \$25

This new book, which could aptly be called the latest salvo in the culture war to shape the future of the U.S. military, holds no surprises. As might be inferred from the title, the author believes that the armed forces have made far too many concessions to political correctness in order to attract and retain women in uniform. In her view, the concessions have resulted in lowered standards that have inevitably reduced the combat effectiveness of the military.

Readers who agree will find the book well written, easy to read, and full of numerous examples illustrating the degree to which political correctness has been

carried within the armed forces. The only complaints that such readers might have are that it really covers no new ground and that the lack of footnotes makes it difficult to follow up on the material. The book advances the cause of those resisting what they call the “feminization” of the military in one way only: because it is written by a woman, critics cannot simply dismiss her ideas—as they would if the author were a man—by saying she doesn’t “get it” with respect to the problems women face in society.

Readers who believe that the armed forces should not allow discrimination against women can expect to be upset by Gutmann’s analysis. I suspect that her critics will use several lines of attack. One is that much of her evidence is anecdotal. That criticism may be valid, but the author obtained the “anecdotes” through a large number of interviews and personal visits to military units. Next, she will undoubtedly be accused of blaming the victim. In my view, however, the author’s beef is not with women in the service but with the high-level politicians—both in and out of uniform—who would rather compromise the combat readiness of the armed forces than deal with the inconvenient truth that men and women are not equally suited to all roles in the military.

In the absence of incontrovertible evidence to support limiting the role of women to some degree—evidence that may be impossible to obtain in peacetime—most individuals on both sides will remain locked in their positions. As a result, *The Kinder, Gentler Military* is not likely to change many minds. Before such change becomes possible, both sides will have to reach some type of consensus regarding the role of the military and what types of missions it will be called upon to carry out in the future. That could allow

more reasoned discussion about whether or not men and women are equally qualified to execute those missions.

Proponents of reducing or eliminating restrictions on women in the military emphasize the military’s role as a vehicle for driving social change. Advocates of this point of view also tend to view future war as a high-tech affair in which such qualities as aggressiveness, bravery, physical strength and endurance, and readiness to take risks will no longer have the importance they had in the past.

As Gutmann discovered in the course of her research, this shift in values is already being reflected in much of the initial training for members of today’s military. *The Kinder, Gentler Military* points out numerous examples of how such training is being made less stressful, how competition is downplayed, and how effort is valued as much as results. How far these changes reflect the integration of women into formerly all-male training, as opposed to overall changes in our society that affect both sexes, is difficult to tell. Do not look to the military for an unequivocal answer. The author illustrates how sensitive the military is to these issues; two examples suffice.

Gutmann quotes an Army training regulation declaring, “All soldiers, regardless of gender, train to a single standard.” In spite of that assertion, all the services, including the Army, have lower physical performance standards for women. The result is aircraft mechanics who cannot carry their toolboxes to the flight line, truck drivers who cannot change a tire, and sailors who cannot carry an end of a litter with a wounded person on it. The services have found ways to work around those difficulties, but they all require additional people to do jobs that were formerly done by one man.

Another controversial issue that Gutmann deals with is pregnancy. The services have adopted the position that pregnancy presents no greater problem than do other temporary disabilities, even though it makes women four times less deployable than men. To counter the deployability problem, feminists point out that women become *more* deployable than men if losses from pregnancy are not counted. That may be true, but it is meaningless to the units who have to deploy shorthanded.

That argument also assumes that both pregnancy and the injuries that cause most young men to become temporarily

disabled are neutral with respect to soldierly virtues. If pregnancy has no adverse impact on being a soldier, neither does it have any advantage. People who occasionally injure themselves by getting into fights, driving motorcycles too fast, or playing sports with excessive aggressiveness are a different story. Those are exactly the kinds of individuals who win battles.

If you agree with that point of view, you will almost certainly find this book to your liking. If not, reading it will probably just elevate your blood pressure.

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