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Naval War College: Autumn 1996 Full Issue

NAVAL WAR COLLEGE REVIEW

AUTUMN 1996



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NAVAL WAR COLLEGE REVIEW

Volume XLIX, Number 4, Sequence 356

Autumn 1996

President's Notes	4
Synchronization	7
Lieutenant Colonel Stephen J. Kirin, U.S. Army	
The United States and the Law of the Sea: Changing Interests and New Imperatives	23
Captain George Galdorisi, U.S. Navy	
Nuclear-Weapon-Free Zones	44
Commander Mark E. Rosen, JAGC, U.S. Navy	
Eagles and Dragons at Sea: The Inevitable Strategic Collision between the United States and China	62
Lieutenant Commander Ulysses O. Zalamea, U.S. Navy	
China: An Opponent or an Opportunity?	75
Rear Admiral Eric A. McVadon, U.S. Navy, Retired	
The Emergence of a Command Network	93
Captain John W. Bodnar, U.S. Naval Reserve, Retired, and Second Lieutenant Rebecca Dengler, U.S. Marine Corps	
<i>In My View</i>	108
<i>Set and Drift</i>	
Warfare Theory	112
Commander Joseph A. Gattuso, Jr., U.S. Navy	
Casualty Incidence during Naval Combat Operations: A Matter of Medical Readiness	124
Christopher G. Blood, Richard T. Jolly, M.D., and Michael S. Odowick	

Our Cover: The *Virginia*-class guided missile cruiser *Mississippi* (CGN 40), in a pen-and-ink drawing by the distinguished maritime artist R.G. Smith donated in 1984 by Rear Admiral James E. Service, USN, then President of the College, to the Naval War College Foundation. *Mississippi*, now operating in the Atlantic Fleet, is currently scheduled to commence defueling and deactivation in October 1996 and to be decommissioned in July 1997.

The Secretary of the Navy has determined that this publication is necessary in the transaction of business required by law of the Department of the Navy. Funds for printing this publication have been approved by the Navy Publications and Printing Policy Committee.

2 Contents

Book Reviews	135
<i>Losing Mogadishu: Testing U.S. Policy in Somalia,</i> by Jonathan Stevenson, reviewed by Katherine A.W. McGrady	135
<i>The United States and the Use of Force in the Post-Cold War Era,</i> by the Aspen Institute, reviewed by Roger W. Barnett	137
<i>Ballistic Missile Defense in the Post-Cold War Era,</i> by David B.H. Denoon, reviewed by Dale K. Pace	138
<i>The Spread of Nuclear Weapons: A Debate,</i> by Scott D. Sagan and Kenneth N. Waltz, reviewed by Helen E. Purkitt	139
<i>U.S. Intelligence at the Crossroads,</i> edited by Roy Godson, Ernest R. May, and Gary Schmitt, reviewed by Ronald D. Garst	141
<i>Making Intelligence Smarter: The Future of U.S. Intelligence,</i> by Maurice R. Greenberg and Richard N. Haass, reviewed by Richard L. Russell	142
<i>The Role of the Oceans in the 21st Century,</i> edited by Seoung-Yong Hong, Edward L. Miles, and Choon-ho Park, reviewed by Peter Mitchell	144
<i>Women and the Use of Military Force,</i> edited by Ruth H. Howes and Michael R. Stevenson, reviewed by Jan van Tol	144
<i>Ethics and National Defense: The Timeless Issues,</i> edited by James C. Gaston and Janis Bren Hietala, reviewed by Bradley C. Hosmer	146
<i>We All Lost the Cold War,</i> by Janice Gross Stein and Richard Ned Lebow, reviewed by Michael C. Potter	147
<i>Pay Any Price: Lyndon Johnson and the Wars for Vietnam,</i> by Lloyd Gardner, reviewed by Cole C. Kingseed	148
<i>Korea Remembered: Enough of a War,</i> by Charles F. Cole, reviewed by Robert C. Whitten	150

<i>Israel's Best Defense: The First Full Story of the Israeli Air Force,</i> by Eliezer Cohen, reviewed by Youssef H. Aboul-Enein	151
<i>The Pacific War: Japan versus the Allies,</i> by Alan J. Levine, reviewed by Harry A. Gailey	152
<i>The Battle of Tassafaronga,</i> by Russell Crenshaw, reviewed by Charles O. Cook, Jr.	153
<i>The Ship That Held the Line: The USS Hornet and the First Year of the Pacific War,</i> by Lisle A. Rose, reviewed by Barrett Tillman	154
<i>Inside the War Cabinet: Directing Australia's War Effort, 1939–45,</i> by David Horner, reviewed by Peter Charles Unsinger	155
<i>Peace and Disarmament: Naval Rivalry and Arms Control, 1922–1933,</i> by Richard W. Fanning, reviewed by Emily O. Goldman	156
<i>Shark of the Confederacy,</i> by Charles M. Robinson III, reviewed by John M. Taylor	158
<i>Navies and Nations: Warships, Navies and State Building in Europe and America, 1500–1860, Vols. I and II,</i> by Jan Glete, reviewed by Paul E. Fontenoy,	159
<i>Longitude,</i> by Dava Sobel, reviewed by Frank C. Mahncke	160
Recent Books	163

A true learned journal can be an important source of information for those who have heavy demands on their time. From my experience, such a journal is no better than its reviews; and institutions are no better than their journals.

Hyman G. Rickover

*



“I have seen him at his best both at sea and ashore. Admiral Boorda has been eulogized—correctly—as a ‘sailor’s sailor.’ He understood the Navy, its strengths, and how to use them. He was a total professional”

President’s Notes

IN MAY, AT A TIME WHEN THE NAVY was under continuing criticism for a variety of issues, we lost our Chief of Naval Operations, Admiral Mike Boorda. Any death is a tragedy. The fact that he died by his own hand made it doubly so.

Rear Admiral Stark was commissioned in 1965 at the U.S. Naval Academy, studied at the University of Vienna as a Fulbright Scholar, and earned a doctorate in political science at The Fletcher School of Law and Diplomacy, Tufts University. He has served on the Navy Staff, the National Security Council Staff, and as Executive Director of the Chief of Naval Operations Executive Panel. His sea service has included command of USS *Julius A. Furer* (FFG 6), USS *Leahy* (CG 16), and, from 1994 to 1995, the Nato Standing Naval Force Atlantic, deployed in the Adriatic Sea. He assumed the duties of President of the Naval War College in June 1995.

Since then the Navy has received even closer scrutiny as the press and the public have sought to understand why he died and what the Navy's problems are.

I knew and admired Admiral Boorda for more than twenty-five years. He was my weapons instructor at what was then Destroyer School (now the Department Head course at the Surface Warfare Officers School Command), where he stood out for his ability to get across a difficult subject with humor and some useful lessons from the fleet. I worked with him or for him again many times over the years. He was my detailer, my squadron commander on a Mediterranean deployment when I was in my first command, a familiar face during my Washington tours, and my Nato commander when I reported for duty in the Adriatic in 1994. In my present position, I work directly for the Chief of Naval Operations, and I saw Admiral Boorda often. He always had a unique ability to make everyone feel he was personally committed to solving their individual problems . . . and he was. The first CNO to rise from the ranks, he understood our enlisted personnel and worked tirelessly to improve life for them and their families.


I have seen him at his best both at sea and ashore. Admiral Boorda has been eulogized—correctly—as a “sailor’s sailor.” He understood the Navy, its strengths, and how to use them. He was a total professional—a man who could do it all at sea and loved to practice his craft. Ashore, he was known as both a personnel specialist and a man who knew the ins and outs of the Washington scene. A convincingly articulate speaker, especially effective in dealing with Congress and the media, he was viewed throughout the government as a trusted advisor and an effective service chief. And he was CNO at a time when those abilities were in high demand.

There has been a great deal of speculation about the cause of Admiral Boorda’s death. Certainly, the issue of combat devices for his medals seems so inconsequential that it makes no sense—especially in light of subsequent information highlighting the legitimate confusion surrounding the awards. But then, suicide seldom makes sense to those of us left behind. It is enough to know that Admiral Boorda loved the Navy; and however irrational his death, he was trying to help the Navy and the sailors he cared for so much. His loss is a tragedy for his family, for the Navy, and for our country. We shall miss him.

But even as we mourn the loss of Admiral Boorda, even as critics—both informed and uninformed—speculate about a troubled service and a Navy with leadership problems, our sailors go about their business protecting America’s interests around the world. They deploy on short notice in response to fast-moving events far from home; they leave their families for months at a time; and they sail into harm’s way day in and day out. And they do so in ships, submarines, and aircraft that are the envy of the rest of the world. Our sailors and officers are highly motivated and superbly trained. This is without question the best Navy I have seen in my entire career.

We in the Navy have made a critical strategic and doctrinal shift in the past few years—away from the blue-water operations of the Cold War and into the arena of regional conflict and littoral operations, projecting power and influence from the sea. And we have done so while dramatically cutting our budgets and force structure, eliminating infrastructure, and recapitalizing the fleet. A task of that magnitude was not done without leadership.

When one steps back and looks at the Navy objectively, we are in very good shape. We have a clear mission and the forces to carry it out. Certainly, the Navy has its share of problems that need to be addressed and solved. When we make errors, we must stand up and admit it. And when we are right, we need to stand our ground. But we must never forget that the Navy exists to protect our country in a dangerous world, and it is doing an absolutely superb job of it.


J.R. STARK
Rear Admiral, U.S. Navy
President, Naval War College



Synchronization

Colonel Stephen J. Kirin, U.S. Army

Synchronization—the arrangement of military actions in time, space, and purpose to produce maximum relative combat power at a decisive place and time.

Joint Publication 1-02¹

IN 1980, GENERAL DONN STARRY, then Commander, U.S. Army Training and Doctrine Command (TRADOC), directed that “synchronization” be included as a fundamental tenet of AirLand Battle doctrine, in lieu of “integration.”² Starry was convinced that synchronization not only better described the combat power that could be added by effective command and control but also suggested the potential for a “second order of sophistication in the proper application of combat power.”³ This observation was no doubt influenced by General William DePuy, a former TRADOC commander, who had suggested that a balanced doctrine should seek both “the concentration of forces in space via maneuver” and “the concentration of actions in time via synchronization.”⁴ Since Starry’s decision, synchronization has not only established itself as a fundamental tenet of Army operations but has also become an essential part of joint doctrine.

Despite ever-increasing references to synchronization in current doctrine, however, it remains somewhat ambiguous and contentious. The root of this controversy lies in this concept’s characterization as both a *process*—the arrangement of military actions as to time, space, and purpose—and an *effect*—maximum relative combat power at a decisive place and time. There are those who, for example, seeing the tenet as only a process, dismiss synchronization as just another label for “coordination.” Competent staffs have been coordinating and arranging military actions for a long time, they argue; there is no need for another doctrinal term. Then there are those who, emphasizing the *linkage* between process and effect, suggest that synchronization is a disguise for centralized control. They hold that synchronization and decentralized execution are mutually exclusive imperatives. To achieve the desired products of synchronization,

Colonel Kirin, a 1996 graduate of the Naval War College, is currently the director for Studies and Analysis at the U.S. Army Training and Doctrine Command Analysis Center (TRAC). His recent operational assignments include duty as the Chief of Operations for I Corps and as Commander, 3rd Battalion, 11th Field Artillery.

Naval War College Review, Autumn 1996, Vol. XLIX, No. 4

they contend, the commander must limit his subordinates' initiative and provide a rigid script for their activities.

Yet synchronization is in fact the "overarching operational concept" of joint doctrine.⁵ Let us, therefore, explore this concept and examine the criticisms that have been made of it; we will find that they can be dismissed. To assist us in this exploration, we will review certain key decisions made during two illuminating campaigns of World War II. The first is Operation HUSKY, the Allied invasion of Sicily, in which the basic operational objective was achieved (through coordination), but a crucial opportunity was lost because synchronization was never realized. We will also examine, in greater detail, the actions of Field Marshal Sir William Slim in the decisive defeat of the Japanese in Operation EXTENDED CAPITAL, an offensive that can be considered a master-stroke of synchronization (with, it should be noted, decentralized execution).

The Art of Synchronization

Synchronization's inherent duality, as both a process and an effect, is certainly not a unique phenomenon. If one analyzes, for instance, the art of symphonic orchestration, one reaches conclusions that are remarkably applicable to the musical composer and the joint force commander. In fact, if we allow ourselves to look through the lens of the composer, certain critical implications of synchronization quickly come into focus.

For both the commander and the composer, the essence, the whole point, of their effort lies in the intended effect. The objective of all good music is to move the listener's soul, to excite an aesthetic response. This reaction, manifested perhaps by a listener's rhythmic hand-movements, a tapping foot, or more demonstrative "affective accompaniments," indicates an emotional involvement on the part of the listener.⁶ Similarly, the litmus test of military synchronization is the impact on the enemy, and the desired response is the disorientation of the opposing commander. This shared concern for effect clearly reflects a focus on demonstrable results: the composer hopes to sway the audience, the commander intends to dominate the enemy, and both will learn whether they have succeeded from the behavior of their "targets."

Process, for its part, is again quite similar for the commander and composer, in two fundamental ways. The composer defines the musical theme, that germinating element that orders the continuity and dynamism of the symphonic movement. Having established this theme, the composer can distinguish principal ideas from subordinate thoughts, blend and contrast tones produced by various instruments, and unify the different movements of the overall composition.⁷ Students of the operational art should quickly recognize here an analog of the commander's intent, that governing principle that sets the operation's course

and prescribes the level of means and effort required, making its influence felt down to the smallest operational detail. Second, the composer creates his work in terms of the entire orchestra, not the potential contribution of any particular instrument. He imagines the desired sound and then envisions how he will exploit the capabilities of the various instruments to achieve that sound. In a similar way, the joint force commander visualizes the new “end-state” to be achieved and deduces how subordinate activities must be sequenced and arranged in order to produce it.

Synchronization as a process, then, transcends the common notion of matrices, detailed rehearsals, written orders, or other integrating mechanisms. It is an exercise in analytical creativity for the commander, and it draws upon his ability to think in depth, comprehend time-space relationships, and appreciate the interaction between opposing forces. It demands a sense of unity and a power of judgment, raised to a marvelous pitch of vision.⁸

Operation HUSKY: Opportunity Lost

Having formed this somewhat abstract understanding of synchronization, it is appropriate that we explore how the concept has been applied in practice. We start with a counterexample—Operation HUSKY, the Allied invasion of Sicily in 1943, an operation in which synchronization was never achieved.

If the test for synchronization is the effect on the enemy, then Operation HUSKY was, at best, flawed. The Axis forces were indeed forced to evacuate Sicily, but the vast majority of their losses “were willing Italian prisoners,” while the Germans executed the evacuation in a very methodical and successful fashion.⁹ Almost the whole surviving German force (some forty thousand soldiers out of an original sixty thousand), with vehicles and tanks, reached the Italian peninsula, where it was to defend stubbornly against a later Allied invasion. German after-action reports indicate that the Axis forces took advantage of the deliberate movements of Allied units, the daily tea-breaks of the advancing Allied ground forces, and a naval bombardment routine that permitted Axis forces to move unharmed during certain predictable intervals.¹⁰ Other sources suggest that the Allied concept of operations granted the Axis leadership time to organize its defenses and reinforce threatened areas.¹¹ Perhaps the most damning observation is that the German commander was able to conduct so effective a delaying action and evacuation because he was free to exercise “initiative without restraint.”¹² Clearly, this is not the enemy response that synchronization intends.

In fact, it seems that in preinvasion Allied planning the requirement for synchronization was simply ignored. First, it was never clear who was in charge at the planning stage, what the commander’s intent was, or even if one had been defined. An early scheme that called for staggered amphibious operations on

opposite sides of the island was scrapped in favor of a proposal to concentrate Allied strength at adjacent assault beaches in the southern half of the island. There were three command staffs involved: that of General Harold Alexander's 15th Army Group and also those of its two components, Field Marshal Bernard Montgomery's Eighth Army, and George S. Patton's U.S. Seventh Army. Throughout the planning process, all influenced the plan and, as one historian suggests, "eventually too many cooks spoiled the broth."¹³ Such a process yielded no unifying operational intent; General Alexander's operational concept, by his own account, was based on the reactions of Montgomery and Patton.¹⁴

Second, it is clear that the operation was never conceived in terms of "the entire orchestra." Even though planners recognized that the obvious Axis option was a delaying action in the vicinity of Mount Etna, no definitive provisions were made for that contingency. Air assets operated in isolation and despite prodigious preinvasion bombing, the beach defenses and the more mobile enemy divisions defending the interior of the island were left untouched. As the Axis forces executed their escape across the Strait of Messina, Allied naval forces "lay skulking outside in clear waters doing absolutely nothing."¹⁵ They never attempted to reduce enemy air defenses in order to permit Allied air attacks on the escaping Axis forces, nor did they interdict the sea lines of communication by which the Germans were providing supplies to Messina on a daily basis.

Finally, none of the proposals for HUSKY aimed at the application of overwhelming combat power at the decisive place and time. The main artery of Sicily flowed through Messina, yet every version of the Allied plan called for ground operations at a pedestrian pace along the entire length of the island. Instead of strangling the enemy, the Allies stamped on "the enemy's toes and allowed him to scuttle away to fight another battle."¹⁶ Despite a substantial numerical advantage, the Allies were more or less stymied by the defending Axis forces. Obviously, the Allies' arrangements had minimized, rather than maximized, their relative combat power. This was the time for analytical creativity, "the moment that cried out for the touch of genius," but, although the minimum—the seizure of Sicily—was achieved, the true opportunity was lost, because synchronization was never achieved.¹⁷

Operation EXTENDED CAPITAL

The preceding is in sharp contrast, with respect to the concept of synchronization, to the decisions and actions of Field Marshal Slim in the India-Burma theater in late 1944 and early 1945. His campaign, the first step in the liberation from the Japanese of Burma and ultimately Indochina, vividly demonstrates how

one commander successfully translated this theoretical concept into practice and thereby achieved overwhelming operational effect.

The Operation in Perspective. Operation CAPITAL (as it was first called) was the third phase of a four-phase campaign. During the first, conducted in India, Slim focused on building the newly formed British Fourteenth Army and correcting problems that had been apparent during the evacuation of Burma in 1943. He implemented extensive training programs, improved health and morale, rebuilt the troops' confidence, and, most importantly, inculcated in them his intent to destroy the Japanese army threatening India.¹⁸ The second phase was a major operation on the Imphal Plain, in the easternmost part of India, near the Burmese border. Slim understood that the Japanese intended to attack in the central Burma-India border region in order to open a potential supply route to India, eliminate the British as a threat, and encourage the Chinese to sue for peace. He recognized that the key to success was to regain the initiative and force battle on terrain that would exploit the mobility of his own forces and extend the Japanese lines of communication. Consequently, he deployed to the Chin Hills (on the border) a covering force that, as the Japanese began their expected offensive, withdrew to join the remainder of Slim's command on the Imphal Plain.

In vicious battles at Kohima, to the north, and Imphal, the Japanese suffered overwhelming defeats, creating the opportunity for the third phase of the overall campaign: reentry into Burma. Slim intended, once he had achieved victory in this British offensive phase, to give the enemy no rest but immediately to initiate phase four, the advance to Rangoon and the elimination of the Japanese from Burma.¹⁹

Phase 3—Crossing the Irrawaddy. Slim's initial mission for the third phase, in the framework of the overall Allied strategic plan, was to occupy the Kalewa-Kalemyo area, secure the Shwebo Plain, and liberate Burma as far south as the Pakokku-Mandalay line. He felt, however, that these objectives were too limited and did not acknowledge the Japanese army as the operational center of gravity. His concerns were relieved in September 1944, when the Combined Chiefs of Staff directed that Burma as a whole be recaptured as soon as possible. Slim responded by planning to force another major battle at the earliest opportunity.²⁰

His principal goal was straightforward—the destruction of the Japanese force. He took pains to ensure that this primary objective was clearly understood within his command. He personally developed the alternative courses of action, to be certain that they supported his purpose. For Operation CAPITAL, as for all his other campaigns, Slim drafted his own statement of intent. As Slim himself has written, the commander's intent section of the operations order "is usually the shortest of all the paragraphs, but it is always the most important, because it

states—or it should—just what the commander wants to achieve. It is the one overriding expression of will by which everything in the order and every action by every commander and soldier in any army must be dominated.”²¹

Slim’s intent was focused and direct, and it made his desired end-state very clear: “In conjunction with NCAC to destroy the enemy forces in Burma, to advance to the line Henzada-Nyaunglebin [to the south, near Rangoon] and to seize any opportunity to advance from that line and capture a South Burma port.”²²

Slim’s Fourteenth Army consisted of two corps, containing in all seven divisions and two tank brigades. This organization, having recently tasted victory on the Imphal Plain, was aware that the Japanese, with the equivalent of eight divisions, had reached their culminating point and were in full retreat, in the midst of the monsoon season.²³ Slim’s initial plan for CAPITAL was, like his overall intent, remarkably simple. It called for a coordinated attack down the Shwebo Plain: as depicted in Map 1, IV Corps on the left, representing the main effort, would cross the Chindwin River at Sittaung, seize Pinlebu, and then turn south to capture Shwebo. On the right flank, XXXIII Corps would cross the Chindwin River at Kalewa, drive southeast to seize Ye-U, and support IV Corps as necessary. Shwebo and Ye-U were considered decisive points because their airfields would allow Slim to extend his lines of communications, but his main focus remained force-oriented. His intent was to destroy the Japanese army north of Mandalay.²⁴

The major operational restraints in this phase were logistical support and mobility. The Burma campaign itself was a secondary effort in a secondary theater, and Slim had to conduct it, under the harshest of conditions, with minimal resources.²⁵ The resupply routes stretched some five hundred miles from the railhead in India to Shwebo, across terrain that was disease-infested, plagued half the year with monsoon rains, and had few roads, which required a considerable engineering effort to maintain and improve.²⁶ Slim’s analysis indicated that resupply would be difficult, if not impossible, without a substantial airlift. Unfortunately, even as the operation was getting underway and units were advancing towards their objectives, the bulk of his air transport assets were reassigned elsewhere in the theater. This forced the use of some ingenious expedients, such as the construction of over five hundred teak log barges to float supplies down the Chindwin and Irrawaddy rivers.

As for mobility, however, the Shwebo Plain did offer certain advantages, not least that it was out of the jungle. The Fourteenth Army could exploit the mobility and firepower of its armor and employ artillery at long ranges. Air support could be optimized; the transport aviation that remained to Slim was eventually to

* Northern Combat Area Command, two Chinese divisions operating in northern Burma under (until October 1944) Gen. Joseph W. Stilwell, U.S. Army, and thereafter Lt. Gen. Dan I. Sultan.

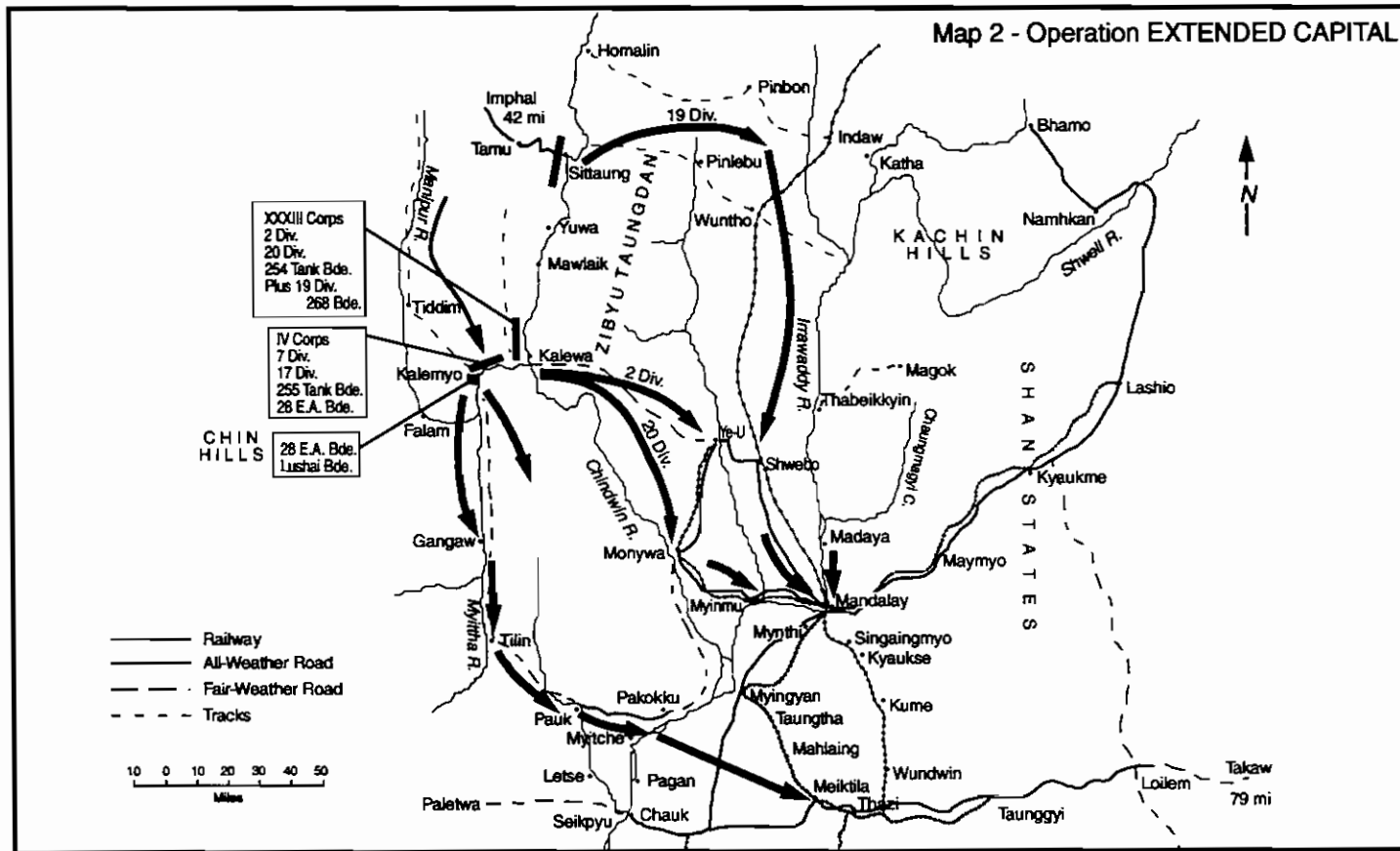
deliver over a thousand tons of supplies a day, fly a very high number of daily sorties, and conduct critical aerial reconnaissance. Finally, a battle on the Shwebo Plain would put the Irrawaddy River at the back of the enemy.

Slim was convinced that the Japanese would not relinquish Mandalay without a vicious battle, and this view became the primary assumption upon which he based his operational scheme.²⁷ Almost immediately, however, it proved invalid: the lead division of IV Corps passed through the Zibyu Taungdan Mountains with little resistance. Air reconnaissance revealed troop movement eastward across the Irrawaddy, and espionage sources indicated that the Japanese were occupying positions south and east of the river—all clear indications that the Japanese did not intend to fight on the Shwebo Plain.²⁸

Slim recognized accordingly that his plan had run its course and that a quick change was needed; his response was to be considered the strategic master-stroke of the Burma campaign.²⁹ Under the new Operation EXTENDED CAPITAL, depicted in Map 2, Slim directed IV Corps to leave its lead division and one independent brigade in place, swing behind XXXIII Corps, and work south through the Gangaw Valley; emerging from that valley near Pauk, it was to seize a crossing over the Irrawaddy River in the Pagan-Pakokku area and drive southeast eighty miles to Meiktila. Meiktila, the main logistical center for the Japanese forces, was clearly a decisive point. "Crush that wrist, no blood would flow through the fingers, the whole hand would be paralyzed, and the Japanese armies on the arc from the Salween [River, in eastern Burma] to the Irrawaddy would begin to wither."³⁰ XXXIII Corps, reinforced with the units that IV Corps had left behind, would continue its originally planned drive on Mandalay from the north, still in a supporting role, but now seizing on the way a series of bridgeheads across the Irrawaddy.

The success of this revised plan depended on logistical flexibility, deception, and timing. As IV Corps moved through the Gangaw Valley, a distance of over two hundred and fifty miles, it had to build its own road and create airfields every fifty miles to allow effective resupply. IV Corps's advance was conducted under radio silence and with tight air cover to preclude Japanese observation. A false "IV Corps headquarters" was established in the XXXIII sector near Tamu; by its dummy radio traffic it was to convince the Japanese that IV Corps, still intact, was moving into the Shwebo Plain. XXXIII Corps, in turn, by its multiple crossings in the Thabeikkyin area, was to convince the Japanese that it was the main effort. Once these demonstrations had drawn the Japanese reserves to the north, east of the Irrawaddy, IV Corps, reinforced by one of the reserve divisions, would start its own crossings in the south.³¹

This operational design employed an indirect approach to attack the enemy center of gravity. Slim understood that he possessed neither the necessary supporting nor combat assets for a major river crossing. However, by making a series



Joseph R. Nunes, Jr.

of smaller ones along a two-hundred-mile front, he could exploit two Japanese vulnerabilities. First, their lack of air support and reconnaissance would prevent the Japanese from identifying the primary crossing sites and therefore allow Slim to maintain the initiative. Second, the Japanese leadership had consistently forfeited its strength advantage by committing forces in piecemeal attacks.³² Knowing that he was fighting outnumbered, Slim intended to defeat the Japanese through a synchronized offensive operation that did not directly challenge their massed strength.

On 10 February 1945, elements of XXXIII Corps crossed the Irrawaddy in several places, as planned, and within two days, as hoped, the Japanese had committed all available forces against that effort. On 14 February lead units of IV Corps crossed the Irrawaddy River and moved toward Meiktila. This was the decisive point; it was time for Slim to combine the effects of his combat power so as to shatter the coherence of the Japanese defense.

Every element of operational art—deception and surprise, flexibility, intelligence, air support, engineering, the use of reserves, risk, imagination, leadership, and focus on the objective—were now orchestrated, simultaneously and harmoniously. In the event, the combined effects of his movements and insights exceeded the potential of mere coordination; they created what proved to be “kaleidoscopic changes in the situation” for the defenders.³³

The Japanese commanders, not knowing clearly where their enemies actually were, threw their forces hurriedly wherever the British seemed to reveal themselves. The Japanese elements defending Meiktila from a British force they had had no reason to believe was approaching, could not hope for reinforcements, because the reserves were racing north to meet what seemed to be a British thrust across the Irrawaddy. Thus when the defenders of Mandalay were attacked from the north, there was no help for them, either; the reserves were on the wrong side of the river, where there was no enemy to fight. XXXIII Corps then thrust through Mandalay, acting as the hammer that drove the Japanese straight into IV Corps, the anvil. By the conclusion of these battles, the eight Japanese divisions had been reduced to three infantry battalions; they had been eliminated as an effective fighting force. The Japanese had been trapped, not only by the movements of Slim’s forces but also by his manipulation of their vulnerabilities and expectations; for them there was no good move “on the board,” no coherent response to the Fourteenth Army’s advance. The key to victory was instigation of ill coordinated actions among the larger Japanese formation by well coordinated and properly timed offensive thrusts by the smaller (and divided) British forces.

The Criticisms of Synchronization

We are now in a position to address the criticisms of synchronization mentioned earlier. First, there is the argument that “synchronization” and

“coordination” are one and the same; the record provides ample evidence to contradict this. The second contention, concerning the relationship between “initiative” and “synchronization,” is much subtler and broader, and it requires more extensive refutation. Let us consider both objections.

Synchronization versus Coordination. We can readily resolve the apparent confusion between these two concepts. The events on the shores of the Irrawaddy River show clearly that synchronization is more than coordination. Synchronization has both internal and external aspects; it is both a process and an effect; and the measure of its effectiveness is the impact upon the enemy force. Coordination, on the other hand, is a purely internal matter; it is simply a process, one that seeks to orchestrate all available resources. Coordination, then, is a necessary, but not sufficient, condition for synchronization. Operation HUSKY, with its combined amphibious landings and airborne assaults, was highly coordinated (notwithstanding a very serious “friendly fire” incident), but the results make it obvious that the campaign was not synchronized. It never achieved that “second order of sophistication” in the application of combat power that synchronization implies.

Synchronization versus Centralized Control. The second criticism has been usefully expressed in a 1993 study of the 1991 Persian Gulf War, asserting that the failure of the coalition forces to prevent the Iraqi Republican Guard’s escape can be traced to a disproportionate application of the tenet of synchronization. The study contrasts General H. Norman Schwarzkopf’s modern, synchronized force, whose tempo was governed by self-imposed limits of advance and whose units were expected to halt at planned phase-lines, to General Patton’s Third Army of World War II—whose advance was limited only by the actions of the enemy (and its own fuel supply). Army doctrine, as the author of the study points out, directs today that “commanders will adjust tempo to maintain synchronization”; and therein, the criticism goes, lies the major danger of synchronization—that it forces commanders to focus on their own units rather than on the actions of the enemy. In short, synchronization is an excuse for micromanagement by senior commanders;³⁴ it opens the door to “scripting, which is an attempt to choreograph action with a rigid timeline.”³⁵ For example, the U.S. II Corps commander in the Kuwait theater is described as having been so task-saturated by his seniors that he had no time to apply himself to the pursuit of the enemy.³⁶

However, we can use the lens of the musical analogy to gain insight into this debate and, perhaps, see our way to resolution. As the composer creates his composition, he can define the degree of improvisation allowed each performer. At one extreme, he might impose total control, scoring the precise contribution of each instrument. At

the other, he might create a flexible structure whose final shape reflects the digressions of the musicians; in this open style, the composition takes a different form at each performance. Somewhere between these extremes lies a technique, known for centuries as the “figured bass,” that requires performers to “think with their fingers” and improvise and embellish the composition at points specified by the composer.³⁷ With this approach, similar to improvisational jazz, the composer can score his music in an abbreviated fashion, a sort of musical shorthand, knowing that performers will draw on their own artistic skills to fill in the details.

For the joint force commander, the implications are obvious. Operating at the extremes implies either an intention to impose strict control (as, according to the observer cited above, was true of General Schwarzkopf) or a willingness to risk total chaos. Adopting the “figured bass” approach allows the commander to strike a balance, to reconcile the tension between the control required for synchronization and the initiative and improvisation demanded by the uncertainty of battle. U.S. Army doctrine warns that “initiative requires decentralization of decision authority to the lowest practical level. At the same time, decentralization risks some loss of synchronization. Commanders constantly balance these competing risks, recognizing that loss of immediate control is preferable to inaction.”³⁸ Even Marine doctrine, which proclaims maneuver warfare, based on decentralized command, as the Corps’s combat philosophy, explicitly recognizes the danger of inordinate decentralization; it prefers “harmonious initiative.”³⁹

Recognizing this, we return to Operation EXTENDED CAPITAL, in which Field Marshal Slim clearly achieved the needed balance. Slim’s approach to operational leadership allowed him to maintain the command’s focus on the objective while encouraging his subordinates to “think with their fingers,” to improvise as necessary to achieve that objective. First, he made every effort to involve them in the planning process. Slim, realizing that the success of the operation would hinge upon the inputs of and agreements between the corps commanders, routinely briefed them, personally and at their own headquarters, and also solicited their reactions.⁴⁰ Second, he recognized the distinction between his role as army commander and theirs as corps commanders. Once they understood his intent, Slim did not hesitate to give them freedom to employ whatever tactical methods they felt were necessary.⁴¹ That latitude is evident in Slim’s later recollections of the Fourteenth Army’s preparation for EXTENDED CAPITAL: “I left it to Corps Commanders to select the exact locations for their crossings, to choose which divisions should make them, and to prepare the best tactical plans and arrangements that the meagre resources I had allotted them would permit.”⁴² Slim himself, meanwhile, focused on his logistical system, ensuring that it was providing the supplies and ammunition needed for the planned movements, river crossings, and battles.

Once the offensive had begun, while he frequently went forward to observe an action, he did so primarily in the realization that battles seldom go according to plan and that it was his function to take advantage of opportunities that might arise. It was during a visit to IV Corps while it was preparing to cross the Irrawaddy River, for example, that he recognized that the moment had arrived upon which the whole battle plan rested; even then, however, rather than interfere he devoted himself to supporting the local commander.⁴³

Finally, Slim believed that it was his responsibility to develop in his juniors a flexibility that would allow them to act without guidance from their superiors. Because of his confidence in his subordinates, Slim amended his intent for EXTENDED CAPITAL to authorize them "to take certain risks, which in other cases would not be justified."⁴⁴ He applauded one commander who acted swiftly and "seized a chance to slip across the Irrawaddy and at the same time make a dart at Shwebo, to 'shoot a goal when the referee wasn't looking.'"⁴⁵ He was a firm advocate of controlled yet decentralized execution: "This acting without orders, in anticipation of orders, or without waiting for approval, yet always within the overall intention, must become second nature in any form of warfare. . . . It requires in the higher command a corresponding flexibility of mind, confidence in its subordinates, and the power to make its intentions clear through the force."⁴⁶

The essential question, then, is not whether synchronization implies a loss of initiative but, rather, how the joint force commander can achieve the balance between the control necessary for synchronization and the initiative demanded by the uncertainties of battle. Several senior leaders have recently addressed this issue and offered certain proposals. For example, General Gordon Sullivan, former Chief of Staff of the U.S. Army, has described a need to share expectations, establish priorities, and enhance mental agility, while empowering subordinates to take independent action.⁴⁷ Each of these proposals, however, reflects Slim's approach; all are based on the view that operational commanders must generate a common view of the battlefield and a clear understanding of their intent while minimizing interference with subordinates.⁴⁸

But these senior officers also clearly recognize that there can be no formulaic answer, no recipe that defines how the commander should achieve this balance between control and initiative that produces synchronization. There is, necessarily, a challenge in arranging mutual support in a large force engaging an enemy while at the same time granting subordinates the authority to exercise initiative to seize opportunities that arise in battle. To suggest an all-embracing theory would deny the importance of the commander's intuition, his *coup d'oeil*—that mix of experience, training, and situational awareness that allows him to deal with the uncertainty of combat. Some suggest that it may be the judicious

reconciliation of these competing imperatives, synchronization and decentralization—order and understanding on one hand, and initiative on the other—that defines the essence of the operational art.⁴⁹

“The Quintessential Contribution of the Commander”

Some final thoughts on this concept of synchronization are in order. First, synchronization’s claim to be the overarching operational concept is based on the expectation that the commander will define a cohesive operational theme, an intent and supporting concept, that will drive the design, organization, and execution of the entire campaign. This creative act is the quintessential contribution of the commander, the impact of which is conspicuous either by its presence or absence in our historical analyses. If present, it energizes the command, dominates its every action, magnifies the potential contribution of each subordinate element, and underwrites the command’s ability to react to uncertainty—in all, underlies the dynamic synchronization observed in Operation EXTENDED CAPITAL; it creates a critical relative imbalance of combat power that allows the force to dominate the enemy. If absent, the command’s combat power may go unused, the operation may lack focus; and consequently the enemy will remain a threat. To borrow an analogy suggested by a former field commander, synchronization puts a magnifying glass in the hands of the commander: if he positions the glass correctly—that is, if he applies the process of synchronization and duly arranges the assets available to him—he can achieve the effect he intends and burn whatever he is aiming his glass at.⁵⁰

Second, significant intellectual energy has been expended in attempts to come to grips with the anticipated “Revolution in Military Affairs,” to identify that lurking, cataclysmic change in how we will fight on future battlefields. There is evidence of what one author calls “a hell-bent rush to embrace the future,” not to hang our hats on antiquated notions about how to fight the big wars of the past.⁵¹ There are also those who argue that change may be less dramatic, that we are in fact already in the throes of a military *evolution*, that it is just a matter of time before the cumulative effects of several innovations make it obvious that the very character of warfare has changed.⁵² Both camps, however, suggest that these changes will require fundamental changes in conceptual frameworks and doctrines.

One group of analysts, in order to visualize better the pending revolution, has proposed three “new warfare areas”: “precision strike,” “information warfare,” and “dominating maneuver.”⁵³ The first two concepts have received a good deal of coverage in the literature, but the concept of dominating maneuver, “the least well developed of the newly identified warfare areas,” is quite interesting in terms of our analysis.⁵⁴ Under this concept, the commander, recognizing that he will

be unable to generate overwhelming force at every point of an increasingly complex and nonlinear battlefield, will search for the *punctus decisio*, where his force can deliver a decisive thrust at the decisive time. "Dominating maneuver" is defined as the "ability to place the right kinds and numbers of forces at the right place, in time and space, decisively defeating the enemy by attacking his operational concept or strategic plan."⁵⁵ This should sound familiar; Slim's victory in Burma, these authors assert, resulted from the Fourteenth Army's ability to execute dominating maneuver!

There is no need to debate the appropriate name, "synchronization" or "dominating maneuver"; the choice of labels is important only to avoid misunderstandings. What is critical is that this recent proposal confirms that the general concept is indeed an enduring one, a tenet whose applicability transcends particular technologies or the specific nature of a battlefield. It is as important today as it was for Field Marshal Slim, and it will be for the joint force commander in the next century.

Notes

1. U.S. Dept. of Defense, *Department of Defense Dictionary of Military and Associated Terms*, JCS Publication 1-02 (Washington, D.C.: U.S. Govt. Print. Off. [hereafter GPO], 23 March 1994), p. 371.

2. "A concept called AirLand Battle [which] emerged [in the 1970s] . . . is the underlying strategy, operational concept, and tactical schema for the U.S. Army and the U.S. Air Force. Its precepts are that deep attack and the close-in battle are inseparable; seizing and holding the initiative through maneuver of forces is essential to success; [and that] the objective of battle is to win, not just to avert defeat." (Donn Starry, "The Profession of Arms in America," in *The Encyclopedia of the American Military*, eds. John E. Jessup and Louise B. Ketz [New York: Scribner, 1994], p. 479.) Its specific tenets are "agility," "initiative," "depth," and "synchronization" (U.S. Army Dept., *Operations*, FM [Field Manual] 100-5 [Washington, D.C.: GPO, 20 August 1982], p. 2-1).

3. John Romjue, *From Active Defense to Airland Battle: The Development of Army Doctrine, 1973-1982* (Fort Monroe, Va.: U.S. Army Training and Doctrine Command, Historical Office, June 1984), p. 57; and Crosbie E. Saint, "A CINC's View of the Operational Art," *Military Review*, September 1990, p. 71.

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5. U.S. Joint Chiefs of Staff, *Doctrine for Joint Operations*, Joint Publication 3-0 (Washington, D.C.: GPO, September 1993), p. II-6.

6. William H. Miller, *Everybody's Guide to Music* (Philadelphia: Chilton, 1961), p. 33.

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11. *Ibid.*

12. Baldwin, p. 235.

13. *Ibid.*, p. 194.

14. Carlo d'Este, *Bitter Victory* (New York: E.P. Dutton, 1988), p. 321.

15. Pond, p. 212.

16. *Ibid.*, p. 213.

17. *Ibid.*

18. Field Marshal Sir William Slim, *Defeat into Victory* (London: Cassell, 1956), p. 184.

19. Geoffrey Evans, *Slim as Military Commander* (London: B.T. Batsford, 1969), p. 203.

20. Slim, p. 378.

21. *Ibid.*, p. 211.

22. *Ibid.*, p. 394.

23. Ibid., p. 377.
24. Ibid., p. 380.
25. Evans, p. 213.
26. Duncan Anderson, "Slim," in *Churchill's Generals*, ed. John Keegan (London: George Weidenfeld & Nicholson, 1991), p. 318.
27. Slim, p. 380.
28. Ibid., p. 390.
29. Evans, p. 187.
30. Slim, p. 393.
31. Ibid., p. 411.
32. Ibid., p. 415.
33. Ronald Lewin, *Slim: The Standardbearer* (London: Archon Books, 1976), p. 210.
34. J. G. Burton, "Pushing Them Out the Back Door," U.S. Naval Institute *Proceedings*, June 1993, p. 37, quoting FM 100-5.
35. Kenneth F. McKenzie, Jr. (Maj., USMC), "Fighting in the Real World," *Marine Corps Gazette*, March 1994.
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37. Michlis, p. 356.
38. FM 100-5, p. 2-6.
39. Headquarters, U.S. Marine Corps, *Warfighting*, FMFM (Fleet Marine Force Manual) 1 (Washington, D.C.: GPO, March 1989), p. 71.
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41. Ibid., p. 312.
42. Ibid., p. 412.
43. Ibid., p. 426.
44. Lewin, p. 208.
45. Slim, p. 542.
46. Ibid.
47. Gordon R. Sullivan (Gen., USA), "Delivering Decisive Victory: Improving Synchronization," *Military Review*, September 1992, p. 7.
48. Saint, p. 71.
49. McKenzie, p. 66. See also Wayne P. Hughes, *Fleet Tactics: Theory and Practice* (Annapolis, Md.: Naval Institute Press, 1986), p. 29.
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52. Andrew Krepinevich, "Cavalry to Computers: The Pattern of Military Revolutions," *The National Interest*, Fall 1994, p. 31.
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54. Ibid., p. 14.
55. Ibid., p. 17.



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The United States and the Law of the Sea Changing Interests and New Imperatives

Captain George Galdorisi, U.S. Navy

THE LONG-AWAITED ADOPTION OF THE 1982 United Nations Convention on the Law of the Sea represents a watershed for the maritime interests of the international community. The Convention, the final result of the largest single international negotiating process ever undertaken, has enormous implications for the conduct of maritime affairs among nations. As the world's leading maritime state, the United States has a huge stake in the Convention.

In the pre-Convention environment, much of the interaction between nations on the oceans was governed by customary international law. While not inherently bad, customary international law does not represent the desired end-state for the United States. There are significant dangers in relying heavily on customary international law to support U.S. uses of the oceans, and especially to guarantee the unhampered movement of its naval forces. Customary law is inherently "fuzzy around the edges" and vague on details. It is constantly evolving, through a process of claim and counter-claim, and accordingly it represents a very unstable

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landscape. Some states, especially newly independent ones, do not even recognize customary international law; they view it as having been formed, frequently, without their participation or consent and as promoting the interests of developed nations—often former colonial powers—without considering and reflecting those of the developing world.¹ Finally, as legal scholars have noted, governments are more inclined to respect obligations to which formal consent has been given by the highest political authorities.²

In an effort to rectify the weaknesses of customary international law, as well as the weaknesses of the few already existing maritime treaties, the community of nations began four decades ago a series of conferences on the law of the sea. The first was held in 1958 and resulted in four conventions. A second conference was held in 1960 but produced no new conventions. A third conference—the Third United Nations Conference on the Law of the Sea, or UNCLOS III—was convened in 1972, and frequent negotiations continued over the course of a decade. Throughout all these years of detailed law of the sea discussions, the United States was deeply involved, one of the prime movers.

The final Law of the Sea Convention, presented for signature in 1982, codified existing practice and established new norms of international law in many areas of oceans policy. Dozens of issues were addressed in the 320 articles and nine annexes of the final document; they included coastal jurisdiction and management in territorial seas, contiguous zones, and a two-hundred-mile exclusive economic zone; marine passage and overflight through straits and archipelagoes used for international navigation; a special status for archipelagic states; management of fisheries under the high seas and under exclusive economic zones; coastal and flag-state jurisdiction over vessels for the purpose of preventing environmental disasters; the general ocean environmental obligations of states, and their right to conduct ocean science research; the creation of a system for managing the exploitation of deep-seabed minerals; and dozens of others.³ The table at the end of this article lists the key features of the Convention, as reflected in United Nations publications.⁴

The 1982 treaty is, in many ways, a model for international accords in the post-Cold War world. It contains several fundamental compromises between the major powers and the developing world, notably the “transit passage” regime through international straits, negotiated to offset extension of the maximum territorial sea to twelve nautical miles.⁵ It also applies the principles of the “common heritage of mankind” as a guiding philosophy in regard to the exploitation of the deep seabed’s mineral resources.⁶ At the end of the negotiating process the Convention had become much more than a piece of paper—it was an international state of mind. It created new international law, codified much of what had been merely customary in the law of the sea, and established new norms for the negotiation of multistate agreements.⁷

The United States Position on the Convention

When the Convention was finally voted on and subsequently opened for signature in 1982, the United States opted to vote against it and then not to sign it because of dissatisfaction with the deep-seabed mining provisions in Part XI, especially the provisions for the sharing of profits and of technology, as well as the lack of guarantees that the United States and other mining nations would have a sufficient voice in decisions. This decision was a great disappointment to large segments of the international community; to much of the world it appeared that the United States wanted to select among the benefits of the treaty without accepting its negotiated compromise positions. However, Great Britain, France, Japan, Canada, and the USSR also did not sign the Convention.

The American position was rearticulated in a 1984 article by Ambassador James Malone, who had been President Ronald Reagan's chief negotiator at the final sessions of the Law of the Sea Conference. Ambassador Malone made a particularly pointed attack on the Convention: "Let me state very emphatically that the United States cannot and will not sign the United Nations Convention on the Law of the Sea. The treaty is fatally flawed and cannot be cured. In its present form it presents a serious threat to U.S. vital national interests and, in fact, to global security. Once more, it is inimical to the fundamental principles of political liberty, private property, and free enterprise. The administration firmly believes that those very principles are the key to economic well-being for all countries—developing as well as developed."⁸

Nevertheless, a decade later, in October 1994, President William Clinton submitted the United Nations Convention on the Law of the Sea, and with it a 1994 Agreement Relating to the Implementation of Part XI of the Convention, to the Senate for its advice and consent. The president said, in part, that "the United States has basic and enduring national interests in the oceans and has consistently taken the view that the full range of those interests is best protected through a widely accepted international framework governing the uses of the seas. Since the 1960s, the basic U.S. strategy has been to conclude a comprehensive treaty on the law of the sea which will be respected by all countries. Each succeeding Administration has recognized this as the cornerstone of U.S. oceans policy. Following adoption of the Convention in 1982, it has been the policy of the United States to act in a manner consistent with the provisions relating to traditional uses of the oceans and to encourage other countries to do likewise. . . . Early adherence by the United States to the Convention and the Agreement is important to maintain a stable legal regime for all uses of the sea, which covers more than 70 percent of the surface of the globe. Maintenance of such stability is vital to U.S. national security and economic strength."⁹

Why the Administration Accepted the Convention

The 1984 statement by Ambassador Malone and the 1994 statement by President Clinton represent radically different viewpoints on the Law of the Sea Convention. Substantial political, economic, security, and ideological changes all coalesced to impel the executive branch to come "on board" with the Convention. The recent Agreement rectified the objectionable deep-seabed mining provisions of the Convention, and it was a necessary condition for the change; however, it was not in itself sufficient. Ten other primary factors account for why the Clinton administration became a strong advocate of the Convention, submitting to the Senate the Convention and the Agreement for accession and ratification, respectively. These reasons illuminate the new security imperatives that the United States faces at the end of the century.

A New, More Reasoned Environment. The first reason for the change in the administration's position on the Convention was simply the passage of time. The early 1980s debate on the Convention within the United States was impassioned and strident. Many individuals both inside and outside government staked their careers on their opposition to, or advocacy of, the treaty. The principled decision by the Reagan administration to not sign the Convention further polarized the treaty's supporters and detractors. Subsequently, most of the individuals involved moved on to other pursuits, and emotions on the subject became less sharp; in time, as a result, personalities had less effect than a decade ago on decisions regarding the Convention.¹⁰ In this more reasoned environment, agencies within the executive branch, principally the departments of State and Defense, had an opportunity to revisit the instrument. This objective review led Secretary of State Warren Christopher and Secretary of Defense William Perry in July 1994 to send a joint letter to the chairman of the Senate Foreign Relations Committee, Claiborne Pell: "Becoming a Party to the Law of the Sea Convention," they urged, "is in our national interest in all respects."¹¹

An Outsider Looking In. The second reason was the sense of urgency engendered by the sixtieth ratification (by Guyana) of the Convention, on 16 November 1993; by the terms of the treaty, it would come into force a year later. For the United States, this ratification changed the treaty from a future "might be" to a concrete international protocol that demanded a place on the agenda. The Clinton administration had to weigh the very real prospect of being an outsider looking in at a completed treaty process, a prospect that was particularly unattractive in terms of leverage as the Convention began its implementation phase.

The penalties for "jumping in late" became apparent to the United States once the treaty in fact came into force, on schedule, for states that had ratified or

acceded to it. Many Americans had recognized by this time that, comprehensive as it is, the Convention provides a framework for future negotiation in the international arena. One of the fora for these negotiations will be the International Maritime Organization, where supplemental international regulations, particularly regarding navigation and overflight, will be decided.¹² Another is the International Tribunal for the Law of the Sea, to be established in Hamburg, Germany, as the international agency adjudicating law of the sea issues; only states that are parties to the Convention can provide, or vote on, the twenty-one members of the Tribunal.¹³ Thus there was within the executive branch renewed impetus to secure the advice and consent of the Senate; the result was a series of vigorous congressional briefings by an interagency task force chaired by the National Security Advisor.

The Deep-Seabed Mining Regime. The third reason for the change in position on the Law of the Sea Convention was the changing situation in the deep-seabed mining industry and in the structure of the Convention with respect to that subject. In the course of the 1980s and early nineties it became clear that a broadly acceptable regime could be achieved only by altering the Convention to remove, or at least minimize, the fundamental objections—philosophical, commercial, and operational—of the United States and other developed nations. But it was also vital that any modifications to the Convention safeguard the primary concerns of the developing countries, in particular the basic principle that the resources of the deep seabed beyond the limits of national jurisdiction are the “common heritage of mankind.”

In an effort to gain consensus among both developing and developed states regarding deep-seabed mining, the Secretary-General of the United Nations, Javier Perez de Cuellar, initiated informal negotiations in July 1990 between representatives of some of the major participants in the UNCLOS negotiations. The Secretary-General acknowledged that certain aspects of the deep-seabed mining provisions had prevented some states from ratifying or acceding to the Convention and that therefore it was necessary to make it a more useful and workable regime for both developing and developed nations.¹⁴ Fifteen meetings were convened, from 1990 to 1994. The first phase of consultations was to identify issues, select an approach for examining them, and search for solutions; the second phase gave more precision and definition to the results of the first phase and raised additional points for consideration. There was general agreement that any modifications had to be put into place before the 1982 Convention entered into force, in order to avoid the constitutional and treaty law complexities of amending the Convention through its own procedures.¹⁵

As the Secretary-General's consultations progressed, with the United States playing an increasingly proactive role, a consensus gradually emerged, captured

in the so-called "Boat Paper," cobbled together by a caucus of developing and developed nations and first distributed in August 1993. Its successive versions offered substantive changes that were intended to make Part XI of the Convention acceptable to the nations that had reservations to it, while simultaneously satisfying the intricate procedural requirements of international treaty law and national constitutions. The consensus was finally embodied in the Agreement adopted by the General Assembly at a Special Resumed Session on 28 July 1994.¹⁶

This "Agreement Relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea of 10 December 1982" is a treaty instrument that introduces significant changes to the seabed mining regime of the Convention. Although it does not use the term "amendment," its clear intent and unmistakable effect is to amend substantially Part XI of the Convention. The Agreement (Article 2) states that it and Part XI are to be interpreted and applied as a single instrument but that in case of inconsistency the provisions of the Agreement shall prevail.¹⁷

Through this innovative treaty law device, an unbreakable link was established between the Agreement and the 1982 Convention such that there would be no possibility of competing regimes on seabed mining. In essence, it was now impossible for a state to be a party to the Agreement without also becoming a party to the Convention. As well, the states that had ratified the Convention before the adoption of the Agreement could express their consent to be bound by the Agreement through a simplified procedure avoiding possible domestic constitutional constraints.¹⁸

This well crafted solution to what had seemed an intractable impasse led to rapid and positive response on the part of developed nations in general and the United States in particular. The Agreement was opened for signature on 29 July 1994 and was quickly signed by over sixty-nine states, including all of the world's major industrial powers—the United States, Germany, Japan, France, Italy, the United Kingdom, and others—as well as the European Union. U.S. State and Commerce department law of the sea experts judged that the Agreement "more than" met the original American requirements for the deep-seabed mining regime.¹⁹ For example, the National Oceanographic and Atmosphere Administration (NOAA) argued that "the Agreement modifying Part XI addresses the specific objections to Part XI raised by the United States in 1982. It also goes further than those specific concerns. The Agreement does eliminate the most onerous and economically unworkable provisions of Part XI. It also significantly changes the basic orientation of that Part. The Agreement incorporates free market principles, including considerations of cost-effectiveness and efficiency, and provides for the functioning of institutions of the regime—and development of regime requirements—on an incremental, as-needed basis, taking into account the existing economic circumstances."²⁰

American acceptance of the Agreement Relating to the Implementation of Part XI of the Convention was a vital step, in that this instrument removed the objectionable deep-seabed mining provisions of the original Convention. In turn, the Agreement itself had been facilitated by substantial changes in market conditions over the previous decade and a half.

Deep-seabed mining had emerged as an issue during the late 1960s and the early 1970s, as speculation increased regarding the potential to mine mineral deposits on the deep ocean floor. The potential economic advantages of seabed vis-à-vis land mining were perceived to include low labor costs, the absence of drilling or excavation expenses, and relatively low transportation costs.²¹ In a 1967 address to the UN General Assembly, Ambassador Arvid Pardo of Malta estimated (based on what he later acknowledged had been “hasty calculations”) that by 1975 a new international agency responsible for seabed mining would have at least five billion dollars available, after expenses, for further development purposes.²²

By the early 1980s, many were predicting a major boom in the mining of deep-seabed nodules of cobalt, manganese, nickel, copper, and other minerals. The enthusiasm for deep-seabed extraction was not restricted to mining companies and consortia. Mathematical models constructed by scientists and engineers at the Massachusetts Institute of Technology, for example, predicted a basic return on investment of 18 percent.²³ Two respected academics, R.R. Churchill and A.V. Lowe, opined in 1983 that “there are sufficient recoverable deposits [on the deep seabed] to offer a high level of self-sufficiency in the main minerals derived from them to States capable of exploiting them, with the consequent benefits to the balance of payments of those States, and the strategic advantage of lessening dependence upon foreign land-based deposits.”²⁴

Later research, however, indicated that such optimistic predictions were premature—by several decades. By the early nineties, the prospect for economically feasible deep-seabed mining of nodules any time soon had become remote, due primarily to the discovery of substitutes for many materials and the ample availability of land-based supplies.²⁵ Writing for the independent Panel on the Law of Ocean Uses in 1994, Professor Jonathan Charney of Vanderbilt University commented, “The likelihood of early deep sea-bed mining for minerals is bleak. Recent economic conditions and the use of substitutes have depressed minerals demand, while alternative cheaper land-based sources of some nodule minerals have been identified. There is little doubt that the market will not make deep sea-bed mining economically viable before 2025 and probably much later than that.”²⁶ In any case, it appeared that should seabed mining of nodules ever become of genuine strategic importance to the United States, or market prices improve, plentiful quantities were available in the shallow waters of national two-hundred-mile exclusive economic zones.²⁷ (Deep-seabed mining has, in fact, yet to occur.)

By 1993 and 1994 it was evident in the White House that while promising sites had been identified by various companies, which understandably wished to protect their investments, the demand for the metals (especially nickel and copper) principally responsible for interest in manganese nodules both was depressed and could be satisfied for some time to come by sources on land. These metals can be stockpiled, and concern had abated about investment in, and stable supply from, mines.²⁸ Writing in the authoritative *American Journal of International Law*, Bernard Oxman summed up the consensus view of the Panel on the Law of Ocean Uses: "Deep seabed mining did not exist when Part XI was negotiated. Many of the objectionable provisions of Part XI were negotiated on the assumption that such mining would become a commercial reality before the end of this century. Altered market conditions, exploitation of additional land-based sources, and improved efficiency of land-based mining now indicate that deep seabed mining, in the absence of artificial government subsidies, will not be economically feasible until well into the next century, if then. New sources of seabed minerals also have been discovered, some of which are located in exclusive economic zones."²⁹

The view that seabed mining was no longer a sticking-point and that the Agreement more than adequately addressed previous concerns by U.S. and other Western nations was echoed in a wide range of presentations to conferences and congressional fora; it reflected a true interagency, executive branch consensus on this issue. Thus, the sea-changes in deep-seabed mining possibilities had done much to defuse this once-contentious issue for the United States; even those skeptical that the Agreement would remedy the deep-seabed mining regime of the Convention had little to be worried about. Even though editorials arguing against U.S. accession to the Convention continued, most of them seemed locked in the paradigm of the pre-Agreement regime and old ideologies.³⁰

Leadership in Environmental Concerns. A fourth reason for the change in the American attitude toward the Convention was a new global attitude toward management of the environment. Part XII of the Convention deals extensively with the protection and preservation of the marine environment, covering a wide array of issues, from general principles to global and regional cooperation, technical assistance, monitoring and environmental assessment, and responsibility and liability.³¹ The inclusion of strong environmental protection measures in the Convention was an early and enduring goal of the United States. In the decade following its completion, the U.S., along with many other nations, became even more interested in preserving the environment, to the point that such concerns in many cases supplanted economic considerations.³² Given that Part XII creates an effective, if diffuse, international mechanism for controlling marine pollution and establishes a symbiotic relationship between the Convention and other

issue-specific agreements, the Clinton administration decided that agreeing to the Convention would ensure a stable regime for environmental protection.³³

In the early nineties, Rear Admiral William Schachte, former Judge Advocate General of the Navy and an active participant in the United States UNCLOS III delegation, argued that the Convention provided a uniquely useful framework for addressing and resolving the environmental concerns of the United States. He asserted that the Convention was far superior to any of the numerous conventions and protocols addressing marine pollution that had been attempted over the past four decades, and that it struck a delicate balance between the naturally conflicting interests of maritime and littoral states on environmental issues.³⁴ This theme was reinforced in August 1994 congressional testimony by Rear Admiral John Shkor, Chief Counsel of the U.S. Coast Guard, who called the Convention "the glue that binds diverse maritime interests in the environmental field."³⁵

As early as 1990, the Convention was being described as a framework for addressing environmental challenges. The Secretary-General of the United Nations, in a report that year on the status of the law of the sea, noted growing interest in improving the role and effectiveness of international environmental accords and in devising strategies to take better account of both resource depletion and the benefits of conservation. "Since the Convention on the Law of the Sea provides the necessary framework of rights and obligations for all ocean uses, its importance has been stressed in all discussions regarding the future development of international law and policy. . . . The time required to negotiate conventions and bring them into effect is of mounting concern for dealing with a number of environmental issues where rapid acceptance and implementation will be a distinct goal. Thus, there is a growing interest in such supplementary actions as provisional application of some or all treaty provisions; simultaneous adoption of recommendations that deal with selected convention subjects; and declarations of voluntary compliance."³⁶

Environmental concerns were, accordingly, prominent in the decision by the Clinton administration to sign the Convention. In an address at the National Forum on Ocean Conservation, UNCLOS III negotiator Ambassador Elliot Richardson recalled that the United Nations Conference on Environment and Development (UNCED) in Rio de Janeiro (better known as the 1992 Earth Summit, attended by 170 states) had taken up the protection of the oceanic environment as one of its principal concerns. It had set forth, in "Agenda 21," a forty-chapter plan with several hundred action items for the protection of the oceans, seas, and coastal areas, as well as for the protection, development, and rational use of their living resources. The 1982 Law of the Sea Convention, Ambassador Richardson remarked, embodies principles that would support consensus on such issues.³⁷ Clearly, he argued, the United States needed to be a

party to the Convention if the nation was to retain a leadership role in environmental concerns and deliberations.

A New Pragmatism—and UN Sensitivity. A fifth reason was the changing U.S. relationship with the developing world. With the end of the Cold War, the United States and most of the Third World came to view their mutual interests as important and durable. American interactions with the developing world now tended to be not the polarized standoffs of the 1950s through the late 1970s but, quite commonly, humanitarian and relief undertakings. The strident anti-American rhetoric that had marked the years when the original treaty was being negotiated, and that had caused a substantial portion of the developing world to align itself against American desires, had been replaced by a more pragmatic approach. By the early 1990s, this rapprochement with the developing world had opened a window of opportunity for the United States.

Closely tied to the fifth cause for the change in the United States position was a sixth: strong signals by the United Nations of a willingness to be sensitive to the concerns of the developed nations, and of a specific desire that the United States be a full party to the Convention. This new attitude was a substantial change from that of previous decades, when the United Nations had often seemed a forum for “U.S.-bashing.” The behind-the-scenes efforts, both extensive and intensive, between 1990 and 1994 that ultimately led to the Agreement were but one indicator of the willingness of the United Nations to address long-standing concerns on the part of the United States.

Naval Mobility. A seventh factor that underlay the new United States position on the Convention was the global security environment, specifically the increased importance of the oceans connecting the nation, its allies, and its major interests. Diminishing access to overseas bases, the many parts of the world that require naval presence because of continuing instability, and the growing maritime power of many developing nations with apparent regional ambitions pointed to the increasing importance for the United States of naval mobility. An essential element of such mobility is assurance that sea and air lanes of communication will remain open as a matter of international legal right—not at the sufferance of coastal and island nations along the route or in the area of operations.³⁸

In the last two decades there had been a remarkable number of naval confrontations and boundary demarcation or fishing disputes: from 1974 to 1990, at least thirty-seven major demarcation disputes, fifteen noteworthy fishing disagreements, and thirty-one naval conflicts. Eighty-three percent of all U.S. military responses from 1946 to 1991 had involved naval forces, about half of them solely naval ones. Since the 1986 Goldwater-Nichols Act, with its emphasis on joint operations, fewer operations have been exclusively naval in character, but an even

higher proportion—95 percent—have involved naval units. Additionally, the focus of these efforts has overwhelmingly been in littoral waters. In all 270 instances of the employment of naval forces in crisis response from 1946 to 1991, they were used not to counter other naval forces but rather to oppose threats on land. The naval forces therefore had to operate in coastal waters, not the high seas, to project power from the sea onto the land.³⁹

The years immediately preceding the entry into force of the Convention saw an increase in these disputes, ranging from the conflict among Southeast Asian nations over the Spratly and Paracel islands to Canadian and European embroilments over fishing rights. This trend made clear the value to the United States of a compact wherein each nation honored universally agreed-to rules and procedures that would ensure maritime and naval mobility.⁴⁰ The executive branch recognized that its ability to achieve maximum flexibility and mobility within the new global security environment would be greatly enhanced by accession to the 1982 Convention—for the legal stabilizing of the world's oceans and for its strong potential for minimizing and controlling disputes that might directly or indirectly prejudice U.S. political, economic, or defense interests.⁴¹ While the lack of an established global regime had not by the early 1990s resulted in any specific, overt denial of U.S. transit rights through straits or archipelagic waters, the possibility was becoming more and more worrisome.⁴²

Without international respect, it became apparent, for the freedom of navigation and overflight set forth in the Convention, the freedom of U.S. forces to project power could be jeopardized. Protracted disputes with littoral states could delay action; the time required for U.S. and allied or coalition forces to reach distant areas of conflict could lengthen; forces might arrive on the scene too late to make a difference; and deterrence would be weakened. For example, if prevented from transiting through the Indonesian archipelago and the Strait of Malacca, a carrier battle group enroute from Yokosuka, Japan, to Bahrain would have to steam around Australia. Assuming a steady fifteen-knot pace, a six-ship, conventionally powered battle group would require an extra fifteen days and over ninety-four thousand gallons of fuel to transit the additional 5,800 nautical miles. The added fuel cost alone would amount to over \$3 million.⁴³

An Austere U.S. Navy. An eighth reason that led the president to urge United States accession to the Convention was the dramatic decrease in the size of the U.S. Navy. It was apparent that as challenges to unhampered use of the oceans continued or increased, the Navy was becoming increasingly prominent in U.S. defense and foreign policy plans. In the former administration, President George Bush and the Chairman of the Joint Chiefs of Staff, General Colin Powell, had placed a strong premium on the use of the United States Navy to support the four

pillars of the National Security Strategy and the National Military Strategy—strategic deterrence, forward presence, crisis response, and force reconstitution—across the full spectrum from peace to war. That policy was reinforced by President Clinton and the present Chairman, General John Shalikashvili, in their respective updated strategies of 1994 and 1995.⁴⁴

Further, it was argued, challenges to U.S. naval mobility would be most likely to arise from states occupying archipelagoes or straits, or from other maritime-oriented coastal nations.⁴⁵ Indeed, some analysts noted that the extension of sovereignty by coastal states over significantly larger ocean areas had led to dramatic growth in the number, size, and capabilities of navies.⁴⁶ Others predicted that over the next several decades the generic “small navy” would be defined as one designed specifically to realize the rights conveyed by the Law of the Sea Convention.⁴⁷

These challenges came as the United States Navy was going through one of the most substantial downsizings in its history. Less than a decade before, the “600-ship navy” had been an organizing impulse; then, a 25 percent draw-down had envisioned a “Base Force” of about 450 ships; thereafter the U.S. Navy decommissioned ships at an even more accelerated pace and was to have by the end of 1995 only 367 ships. The Clinton administration’s Future Years Defense Plan projected a navy of just over three hundred ships at the end of the century, with some influential analysts calling for even greater cuts.⁴⁸ Regardless of its precise final size, the U.S. Navy would clearly be a much more austere force to deal with the growing challenges. Maritime affairs, difficult enough even with the Convention, would be nearly chaotic without it; whereas, were the Convention strengthened by the adherence and formal support of the United States, disputes would probably be reduced in frequency and intensity. In practical terms, it seemed probable, the stresses upon a much-reduced U.S. Navy would be lessened by American accession to the 1982 Convention on the Law of the Sea.

“Egregious Excessive Claims.” A ninth reason that led the United States toward accession to the Convention was the growing political and military cost of the Freedom of Navigation (FON) Program. This effort, initiated by the Carter administration in 1979 and continued under presidents Reagan, Bush, and Clinton, combined diplomatic and operational (not solely naval) means to discourage claims violating the navigational freedoms asserted by the 1982 Convention—freedoms that the U.S. supported even though, for other reasons, it had not signed the treaty.⁴⁹ The FON program involved (and at this writing still does) naval exercises and consultations, bilateral and multilateral, with other governments to promote maritime stability, conformance with international law, and adherence by all nations to the customary rules and international law reflected in the Convention.

On the diplomatic front, since 1979 the Department of State had filed well over a hundred protests against maritime claims inconsistent with international law.⁵⁰ Over the same period, U.S. warships and aircraft had exercised rights and freedoms in all oceans, against objectionable claims by more than fifty countries, at the rate of some thirty or forty per year.⁵¹ These attempts, by coastal and island states, included, but were not limited to, unrecognized historical-waters claims, improperly drawn baselines, territorial sea claims greater than twelve miles, security zones not provided for in the Convention, contiguous zones at variance with Convention provisions, exclusive economic zones that purported to negate or restrict navigation and overflight rights, archipelagic claims not conforming to the rules of the Convention, restrictions on innocent passage through territorial seas, requirements for advance notice of innocent passage, and restrictions on transit passage.⁵²

Throughout the 1980s, with a large navy, the FON program worked reasonably well; by the early 1990s, however, the environment had changed significantly. With reduced naval and air resources, such a level of FON assertions was becoming difficult to sustain without limiting the operational flexibility of military forces. Additionally, other nations were reluctant to join in multilateral FON operations.

Even before the forces available to conduct FON missions began to dwindle, however, these excessive and illegal claims were causing the United States particular concern, because these U.S. responses to sovereignty claims were in turn eliciting strong and potentially dangerous reactions. For example, in August 1979 Soviet aircraft staged mock missile attacks against the destroyers USS *Caron* and USS *Farragut* as they conducted FON operations in the Black Sea. In August 1981, two Libyan Su-22 fighters attacked two U.S. Navy F-14s while the latter were conducting announced maneuvers sixty miles from the Libyan coast. In 1982 and again in 1987, Soviet forces interfered with the operations of U.S. naval frigates off Peter the Great Bay near Vladivostok. In February 1984, the destroyer USS *David R. Ray* was conducting FON operations in the Black Sea when Soviet aircraft fired cannon rounds into the ship's wake and a helicopter swooped within thirty feet of the ship's deck. In 1986, Ecuador interfered with a U.S. Air Force flight over the high seas 175 miles from the Ecuadorian coast. In 1986, two Cuban MiG-21 fighters intercepted a U.S. Coast Guard HU-25A Guardian flying outside Cuba's twelve-nautical-mile territorial sea, claiming it had entered the Cuban flight information region without permission. In March 1986, during FON operations in the Gulf of Sidra, Libyan missile installations fired on U.S. aircraft performing combat air patrol. In January 1988, two Soviet border guard vessels "bumped" the USS *Caron* and the cruiser USS *Yorktown*, which were demonstrating their right of innocent passage through the territorial sea off the Crimean Peninsula.⁵³ Finally, in April 1992 a Peruvian fighter aircraft intercepted and shot at a U.S. Air Force C-130 aircraft, killing one crewmember and wounding two

others. Peru attempted to justify its action by asserting that the U.S. aircraft had been within its two-hundred-nautical-mile territorial sea and air space.⁵⁴

This is just a sampling of excessive maritime claims and their sequels, but it represents the financial and diplomatic costs, as well of the risks, associated with the FON program. The case became compelling that such costs and risks would be substantially less under a specific, binding treaty.⁵⁵ Two noted experts on the law of the sea, J. Ashley Roach and Robert W. Smith, presented the position of the State Department in 1994: "Unilateral U.S. demonstrations of resolve—especially operational assertions—are sometimes viewed as antagonistic. They risk the possibility of military confrontation and of political costs that may be deemed unacceptable, with prejudice to other U.S. interests, including worldwide leadership in ocean affairs and support for use of cooperative, international solutions to mutual problems."⁵⁶

In fact, many of the nations making claims that the U.S. considered excessive were asserting that the Convention was a legal contract, the rights and benefits of which were not necessarily available to non-parties—such as the United States. The continual counter-assertion that these rights and benefits were already embodied in customary international law was appearing more and more difficult to sustain. In testimony before the Senate Foreign Relations Committee in the summer of 1994, the chairman of the Department of Defense Task Force on the Law of the Sea Convention, John McNeill, pointed to the likelihood of "increasingly egregious excessive claims" by many coastal states as a critically important reason to seek U.S. accession to the Convention.⁵⁷ The danger of continuing to rely on the FON program was summed up by Rear Admiral William Schachte: "The political costs and military risks of the Freedom of Navigation Program may well increase in the changing world order."⁵⁸ Conversely, accession to the Convention, by the United States would, it was hoped, convince states making excessive claims to retract them and, perhaps more importantly, keep in check their natural desire to extend sovereignty to offshore areas, when it would be inimical to navigation and overflight rights.⁵⁹

The "Preeminent Global Power." The tenth, and final, factor bearing upon the Clinton administration's decision to sign the Agreement and recommend accession to the Convention was its desire for the nation to retain leadership in maritime affairs generally. Rear Admiral Schachte went so far as to say that "as the preeminent global power in the 1990s and beyond, the United States is uniquely positioned to assume a more visible leadership role in achieving a widely accepted international order to regulate and safeguard the many and diverse activities and interests regarding the world's oceans."⁶⁰

The Clinton administration realized that U.S. refusal to accede to a Convention widely regarded as one of the most important international agreements ever

negotiated would raise fundamental questions regarding not only the future legal regime applicable to the world's oceans but also the overall role of the United States. By actively promoting "leadership for peace" in the politically and economically important matter of rationalizing maritime laws and regulations, the United States hoped to be able to ensure itself a major role in shaping a post-hegemonic global order.⁶¹ Conversely, the White House recognized that if the United States remained outside the Convention, it would not be in a position to influence the treaty's further development and interpretation, transition, and refinement.⁶² More broadly, continued mute opposition seemed likely not only to jeopardize important national interests in the law of the sea but also to be seen as an implicit rejection of the very goal of world order through international law. In even less charitable eyes, it might be construed as a belief that unilateralism is a viable policy when backed by military force.⁶³ It appeared that full participation in the Convention offered an opportunity to exercise world leadership in a context far broader than had been possible during the Cold War.

Clearly, the totality of these ten factors support the decision that accession to the 1982 United Nations Convention on the Law of the Sea was in the best interests of the nation politically, economically, and strategically. The nation crossed a tremendous policy chasm in the decade between Ambassador Malone's attack on the Convention and its submission by President Clinton to the Senate for advice and consent. This action was taken only after exhaustive interagency review, and it represented a true consensus of the executive branch, particularly the departments of State and Defense. Now it is up to the "world's greatest deliberative body" to weave the Convention into the national security tapestry.

Key Features of the 1982 Law of the Sea Convention

- *Coastal states exercise sovereignty over their territorial sea, of up to twelve nautical miles in breadth, but foreign vessels are allowed peaceful "innocent passage" through those waters.*
- *Ships and aircraft of all countries are allowed "transit passage" through straits used for international navigation; states alongside the straits are able to regulate navigational and other aspects of passage, but passage cannot be suspended; passage includes aircraft overflight and submerged transit of submarines.*
- *Archipelagic states (made up of a group or groups of closely related islands and interconnecting waters) have sovereignty over a sea area enclosed by straight lines drawn between the outermost points of the islands; all other states enjoy the right of archipelagic passage (similar to transit passage) through designated sea lanes.*

- *Coastal States have exclusive resource exploitation rights in a two-hundred-nautical-mile exclusive economic zone (EEZ) with respect to natural resources and certain economic activities, and they may also exercise jurisdiction over marine science research and environmental protection.*

- *All other states have high seas freedoms of navigation and overflight in the EEZ, as well as freedom to lay submarine cables and pipelines.*

- *Landlocked and geographically disadvantaged states have the opportunity to participate in exploiting part of the EEZ's fisheries on an equitable basis when the coastal nation cannot harvest them all itself; highly migratory species of fish and marine mammals are accorded special protection.*

- *Coastal states have exclusive rights over the continental shelf out to at least two hundred nautical miles from the shore (and possibly more under specified conditions) to explore and exploit its resources.*

- *Coastal states must share with the international community part of the revenue they derive from exploiting resources from any part of their continental shelf beyond two hundred miles; a Commission on the Limits of the Continental Shelf makes recommendations to states on the shelf's outer boundaries beyond two hundred miles.*

- *All nations enjoy the traditional freedoms of navigation, overflight, scientific research, and fishing on the high seas; they are obliged to adopt, or cooperate with other states in adopting, measures to manage and conserve living resources.*

- *The territorial sea, EEZ, and continental shelf of islands are determined in accordance with rules applicable to other land territory, but features that could not sustain human habitation or economic life on their own have no economic zone or continental shelf.*

- *States bordering enclosed or semi-enclosed seas are expected to cooperate in managing living resources and environmental research policies and activities.*

- *Landlocked states have the right of access to and from the sea and enjoy freedom of transit through the territory of applicable coastal states.*

- *States are bound to prevent and control marine pollution and are liable for damage caused by violation of their international obligations to combat such pollution.*

- *All marine scientific research in the EEZ and on the continental shelf is subject to the consent of the coastal states, but they are obliged in most cases to grant consent to other nations when research is to be conducted for peaceful purposes and fulfills specified criteria.*

- *States are bound to promote the development and transfer of marine technology "on fair and reasonable terms and conditions," with proper regard for all legitimate interests.*

- *States are obliged to settle by peaceful means their disputes concerning the interpretation or application of the Convention.*

- *Disputes can be submitted to an International Tribunal for the Law of the Sea (to be established under the Convention), to the International Court of Justice, or to arbitration as selected by states party to the Convention. Conciliation is also available, and, in certain circumstances, submission to it is compulsory. The Tribunal has exclusive jurisdiction over deep-seabed mining disputes.*

Notes

1. U.S. Navy Dept., Office of the Judge Advocate General, "National Security Interests in the 1982 Law of the Sea Convention: A Reappraisal," briefing (delivered on various occasions), p. 32.
2. John Stevenson and Bernard Oxman, "The Future of the United Nations Convention on the Law of the Sea," *American Journal of International Law*, July 1994, p. 492.
3. *1982 United Nations Convention on the Law of the Sea*, United Nations Publication 1261 (1982), reproduced from UN Document/CONF.62/122 of 7 October 1982. The text also incorporates the two English corrections contained in UN Documents A/CONF.62/122/CORR.3 of 23 November 1982 and A/CONF.62/122/CORR.8 of 26 November 1982. See also Robert Friedheim, *Negotiating the New Ocean Regime* (Columbia, S.C.: Univ. of South Carolina Press, 1993), pp. 1–418, *passim*.
4. Biliana Cicin-Sain, ed., *Implications of Entry into Force of the Law of the Sea Convention for U.S. Ocean Governance* (Newark, Del.: Ocean Governance Study Group, 1995). This publication contains an excerpt from a United Nations press release detailing the benefits of the Convention.
5. R.R. Churchill and A.V. Lowe, *The Law of the Sea* (Manchester, U.K.: Manchester Univ. Press, 1983), p. 14. The width of the territorial sea has always been a contentious issue. The 1982 Convention set the limit of territorial waters at twelve miles in accordance with the trend clearly dominant in practice.
6. Martin Harry, "The Deep Seabed: The Common Heritage of Mankind or Arena for Unilateral Exploitation?" *Naval Law Review*, vol. 40, 1992, p. 210.
7. Churchill and Lowe, p. 16. Between 1973 and 1980, numerous negotiating drafts evolved, which allowed UNCLOS III committee members to voice their opinions. See also United Nations, *The Law of the Sea: Annual Review of Ocean Affairs, Law and Policy, Main Documents* (New York: 1993), pp. 3–28.
8. James Malone, "Who Needs the Sea Treaty?" *Foreign Policy*, Spring 1984, p. 83. Ambassador Malone served in a number of capacities as a Reagan administration expert on the law of the sea, first as Special Representative for the Third United Nations Conference on the Law of the Sea, later as Assistant Secretary of State for Oceans, International Environmental and Scientific Affairs, and finally as Chairman of the United States Delegation to the Law of the Sea Conference.
9. *Congressional Record*, 103rd Congress, 2d. Sess., 1994, S14475, Statement of the President, 6 October 1994, p. 1. Elsewhere in his transmittal letter the president outlined six key reasons arguing for the Senate's advice and consent:

The Convention advances the interests of the United States as a global maritime power. It preserves the right of the U.S. military to use the world's oceans to meet national security requirements and of commercial vessels to carry sea-going cargoes. It achieves this, *inter alia*, by stabilizing the breadth of the territorial sea at 12 nautical miles, by setting forth navigation regimes of innocent passage in the territorial sea, transit passage in straits used for international navigation and archipelagic sea lanes passage; and by reaffirming the traditional freedoms of navigation and overflight in the exclusive economic zone and the high seas beyond. . . .

The Convention advances the interests of the United States as a coastal State. It achieves this, *inter alia*, by providing for an exclusive economic zone out to 200 nautical miles from shore and by securing our rights regarding resources and artificial islands, installations and structures for economic purposes over the full extent of the continental shelf. These revisions fully comport with U.S. oil and gas leasing practices, domestic management of coastal fishery resources, and international fisheries agreements. . . .

As a far-reaching environmental accord addressing vessel pollution, pollution from seabed activities, ocean dumping, and land-based sources of marine pollution, the Convention promotes continuing improvement in the health of the world's oceans. . . .

In light of the essential role of marine scientific research in understanding and managing the oceans, the Convention sets forth criteria and procedures to promote access to marine areas, including coastal waters for research activities. . . .

The Convention facilitates solutions to the increasingly complex problems of the uses of the ocean—solutions that respect the essential balance between our interests as both a coastal and a maritime nation. . . .

Through its dispute settlement provisions, the Convention provides for mechanisms to enhance compliance by Parties with the Convention's provisions.

10. George Galdorisi and James Stavridis, "Time to Revisit the Law of the Sea?" *Ocean Development and International Law*, Fall 1993, p. 306.
11. U.S. Congress, Senate, Committee on Foreign Relations, *Current Status of the Convention on the Law of the Sea*, Hearings (Washington: U.S. Govt. Print. Off. [hereafter GPO], 11 August 1994).
12. Jan M. Lodel, "The Law of the Sea and National Security," address at the Georgetown University Law Center Symposium, "Implementing the United Nations Convention on the Law of the Sea: An International Symposium," Washington, D.C., 27 January 1995. Mr. Lodel, the senior representative from the Department of Defense at this well attended conference, concluded that "we risk losing our ability to speak with authority in the international arena if we fail to join the Convention. . . . The bottom line from the Department of Defense is this: The Law of the Sea Convention is a good deal. It is the result of long-standing bipartisan consensus. Now is the time for action. Let's join the Convention and move, smartly and confidently, into the future."
13. *Congressional Record*, 103rd Congress, 2d Sess., 1994, "Message from the President of the United States Transmitting the United Nations Convention on the Law of the Sea, with Annexes, Done at Montego Bay, December 10, 1982 ('The Convention'), and the Agreement Relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea of 10 December 1982, with Annex, Adopted at New York, July 28, 1994 ('The Agreement'), and signed by the United States, Subject to Ratification, on July 29, 1994," Treaty Document 103-39. Annex VI of the Convention contains comprehensive provisions for the composition and operation of the International Tribunal.
14. Tadao Kuribayashi and Edward Miles, eds., *The Law of the Sea in the 1990s: A Framework for Further International Cooperation* (Honolulu: Law of the Sea Institute Press, 1992), p. 15. The authors point out that although the United States was most closely associated with a revised seabed mining regime, other industrialized nations, most notably Japan, also presented strong arguments for amending Part XI of the Convention.
15. Doug Bandow, George Galdorisi, and M. Casey Jarman, *The United Nations Convention on the Law of the Sea: The Cases Pro and Con*, Law of the Sea Institute, Occasional Paper no. 38 (Honolulu: Law of the Sea Institute Press, 1995), p. 2.
16. United Nations, *The Law of the Sea*, p. 64.
17. Bandow et al., p. 4.
18. United Nations, *The Law of the Sea*, p. 68.
19. U.S. Congress, Senate, Committee on Foreign Relations, *Current Status of the Convention on the Law of the Sea*, Hearings (Washington: GPO, 11 August 1994), p. 17.
20. Karen Davidson, "Law of the Sea and Deep Seabed Mining: The Agreement Modifying Part XI of the U.N. Law of the Sea Convention," address at the Center for Oceans Law and Policy Symposium, "Toward Senate Consideration of the 1982 Law of the Sea Convention," Charlottesville, Va., 29-30 June 1995. Ms. Davidson represented the NOAA General Counsel.
21. James Morell, *The Law of the Sea: A Historical Analysis of the 1982 Treaty and Its Rejection by the United States* (Jefferson, N.C.: McFarland, 1992), p. 10. One of the earliest optimistic appraisals of the commercial potential of deep seabed mining operations was John Mero, *The Natural Resources of the Sea*, 1965. See also John Mero, "A Legal Regime for Deep Sea Mining," *San Diego Law Review*, vol. 7, 1970, p. 499.
22. Marne Dubs, "Minerals in the Deep Sea: Myth and Reality," *The New Order of the Oceans*, ed. Giulio Pontecorvo (New York: Columbia Univ. Press, 1986), pp. 85-121.
23. J.D. Nyhart and M.S. Treintafyllou, *A Pioneer Deep Ocean Mining Venture* (Cambridge, Mass.: MIT Press, 1983), pp. 1-255, passim; and interview with Prof. J. Daniel Nybart, Sloan School of Management, Massachusetts Institute of Technology, 28 October 1994. Professor Nyhart was one of the principal designers of the "MIT Model," completed in 1978 and revised in 1983, at the time the only public model for predicting deep-seabed mining yields and therefore used extensively by both industry and government. Some mining firms had their own models, but these were more limited and in any case proprietary. Professor Nyhart believes that many of the assumptions underlying the original 1978 model were erroneous, leading to exaggerated predictions of yields. See also Kuribayashi and Miles, p. 346; and William Brewer, "Deep Seabed Mining: Can an Acceptable Regime Ever Be Found?" *Ocean Development and International Law*, vol. 11, 1982, p. 42.
24. Churchill and Lowe, p. 155.
25. Ted McDorman, "Will Canada Ratify the Law of the Sea Convention?" *San Diego Law Review*, vol. 5, 1988, p. 540.
26. Jonathan Charney, "Provisional Application of the Agreement Relating to the Implementation of Part XI of the 1982 United Nations Convention on the Law of the Sea," unpublished research paper prepared for the Panel on the Law of Ocean Uses, 14 June 1994, pp. 1-12. (The Panel on the Law of Ocean Uses is an independent group of specialists in ocean law and policy, founded in 1983 to monitor developments in the law and practice of nations as they affect the evolution of international ocean law.)
27. Panel on the Law of Ocean Uses, "U.S. Interests in the United Nations Convention on the Law of the Sea," *Ocean Development and International Law*, vol. 21, 1990, p. 373. See also David Larson, "Deep Seabed Mining: A

Definition of the Problem," *Ocean Development and International Law*, vol. 17, 1986, p. 278. The need for much-improved market conditions if deep-seabed mining is to be economically viable was documented in the late 1970s. In congressional testimony in May 1977, Marne Dubs, of Kennecott Corporation and the American Mining Congress, estimated that it would require an investment of more than \$2.5 billion between startup and commercial recovery for one site in the Clarion-Clipperton zone, between Hawaii and the U.S. West Coast (Larson, p. 278). Actually, a decade later the market price for most metal had fallen behind the production cost; it cost \$3.50 to produce a ton of nickel whose average price was only \$2.30 (James Wang, in Larson, p. 182).

28. Stevenson and Oxman, p. 488. Milton Drucker, of the U.S. State Department, makes the additional point that the strategic impact of deep-seabed mining has diminished dramatically due to such alternative sources of strategic materials as manganese and to new technologies that reduce the need for such minerals as cobalt (Kurihayashi and Miles, pp. 352-3).

29. Bernard Oxman, "United States Interests in the Law of the Sea Convention," *American Journal of International Law*, January 1994, p. 173. See, for example, testimony by David Colson and Karen Davidson, and presentations by Wes Scholz, Director of the Office of International Commodities, Bureau of Economic Affairs, Department of State, at the University of Virginia Center for Law and Policy on 23 May 1994 and at the Georgetown University Law Center International Symposium on Implementation of the United Nations Convention on the Law of the Sea on 27 January 1995.

30. See, for example, Doug Bandow, "Beware Part XI of the Sea Treaty," *San Diego Union*, 25 February 1994, p. 18, col. 3; William Safire, "LOST [Law of the Sea Treaty] Is Lost in a Foggy Bottom Fog," *San Diego Union*, 31 March 1994, p. 22, col. 1; and Woody West, "Latest U.N. Maritime Treaty Should Remain Lost at Sea," *Insight*, 30 May 1994, p. 40, col. 1. These three editorials present a one-sided argument against the treaty, referring to it by the pejorative acronym "LOST" though this abbreviation is found nowhere else in the literature.

31. Churchill and Lowe, p. 13.

32. Kurihayashi and Miles, pp. 401-6, especially commentary by Geoffrey Holland, Director General, Physical and Chemical Sciences Directorate, Department of Fisheries and Oceans, Government of Canada.

33. At the beginning of the UNCLOS III process, President Richard Nixon recognized the need for cooperation in attempts to stem marine pollution: "It is not possible for any nation, acting unilaterally, to ensure adequate protection of the marine environment. Unless there are firm minimum international standards, the search for relative economic advantage will preclude effective environmental protection" (Morell, p. 200). See also Clifton Curtis (Oceans and Biodiversity Political Advisor, Greenpeace International), "Environmental Interests," address at the Center for Oceans Law and Policy Symposium, "Toward Senate Consideration of the 1982 Law of the Sea Convention," 29-30 June 1995.

34. William Schachte, Jr. (RAdm., USN), "Special Report: The Value of the 1982 U.N. Convention on the Law of the Sea—Preserving Our Freedoms and Protecting the Environment," Council on Ocean Law, Washington, D.C., August 1991, pp. 4-8, and "National Security Interests in the 1982 U.N. Convention on the Law of the Sea," address at the Council on Ocean Law evening program, the Brookings Institution, Washington, D.C., February 1993, pp. 10-4. See also Churchill and Lowe, chap. 14, for a comprehensive listing of historical attempts to limit marine pollution.

35. John Shkor (RAdm., USCG), testimony, "Current Status of the Convention on the Law of the Sea," 11 August 1994. Admiral Shkor's testimony was quite specific regarding the benefits for the Coast Guard in its environmental-enforcement role: "The Convention is also a far reaching environmental accord addressing vessel source pollution, ocean dumping and land-based sources of marine pollution. As you know, the Coast Guard has recently embarked on a comprehensive, wide-ranging port State control program with the goal of purging our waters of substandard ships. This policy is in fact consistent with and supported by the Convention provisions that provide for port State enforcement competence. The Convention also prescribes a delicate balance between the rights of coastal States to adopt certain measures to protect the marine environment adjacent to their shores and the general right of a flag State to exercise prescriptive and enforcement jurisdiction over their vessels. It addresses State responsibility to curb all sources of marine pollution while requiring that all such regimes be consistent with navigation and other important maritime uses."

36. United Nations, *The Law of the Sea*, pp. 3-10. See also Biliana Cicin-Sain, "Reflections on UNCED: Emphasis on Oceans and Coasts," paper presented at the 29th annual conference of the Law of the Sea Institute, on "Sustainable Development and Preservation of the Oceans," 19-22 June 1995.

37. Elliot Richardson, "Beyond the Law of the Sea: Prospects for a Sustainable Ocean Environment," issued with the Council on Ocean Law, *Oceans Policy News*, January 1993, p. 4. See also Biliana Cicin-Sain and Robert Knecht, "Implications of the Earth Summit for Ocean and Coastal Governance," *Ocean Development and International Law*, vol. 24, 1993, pp. 323-51; Curtis, address; and J. Ashley Roach and R.W. Smith, *Excessive Maritime Claims*, International Law Studies, vol. 66 (Newport, R.I.: Naval War College Press, 1994), p. 263. The introduction to Chapter 17 of UNCED's "Agenda 21" begins, "International law as reflected in the Law of the Sea Convention sets

forth rights and obligations of States and provides the international basis upon which to pursue the protection and sustainable development of the marine and coastal environment and its resources."

38. *Current Status of the Convention on the Law of the Sea*, p. 79; the 1993 DOD Ocean Policy Review Paper is presented therein.

39. Ken Booth, *Law, Force, and Diplomacy at Sea* (London: George Allen and Unwin, 1985), p. 172. See also Galdorisi and Stavridis, pp. 301-15; George Galdorisi, "The United Nations Convention on the Law of the Sea: A National Security Perspective," *American Journal of International Law*, January 1995, p. 209; and Edward A. Smith, Jr. (Capt., USN), "What '... From the Sea' Didn't Say," *Naval War College Review*, Winter 1995.

40. Fred Ikle and Albert Wohlstetter, *Discriminate Deterrence: Report of the Commission on Integrated Long Range Strategy* (Washington: GPO, 1988), p. 16.

41. Panel on the Law of Ocean Uses, p. 373.

42. U.S. State Dept., Bureau of Oceans and International Environmental and Scientific Affairs, *Limits in the Seas: United States Responses to Excessive Maritime Claims*, State Department Publication 112 (Washington: 1992), p. 2.

43. U.S. Defense Dept., *National Security and the Convention on the Law of the Sea* (Washington: 1994), p. 10. This theme was reinforced at numerous symposia by high-ranking civilian and military DOD officials, who stressed the critical importance of navigation and overflight rights, especially through strategic straits. See, for example, William Center (RAdm., USN, Directorate for Strategic Plans and Policies, Joint Chiefs of Staff), "Military Mobility and the 1982 UN Law of the Sea Convention," address at the Georgetown University Law Center Symposium, "Implementing the United Nations Convention on the Law of the Sea," 27 January 1995; and the Honorable Walter B. Slocombe, Under Secretary of Defense for Policy, "Toward Senate Consideration of the 1982 Law of the Sea Convention," and J. Paul Reason (VAdm., USN, Deputy Chief of Naval Operations for Plans, Policy and Operations), "National Security Interests in the Law of the Sea," addresses to the Center for Oceans Law and Policy Symposium, "Toward Senate Consideration of the 1982 Law of the Sea Convention."

44. See *National Security Strategy of the United States* (Washington: GPO, 1992), pp. 4-6 (updated and expanded in 1994); and *National Military Strategy of the United States* (Washington: 1992), pp. 2-8 (updated and expanded in 1995).

45. John C. Meyer (Cdr., USN), "The Impact of the Exclusive Economic Zone on Naval Operations," *Naval Law Review*, vol. 40, 1992, p. 248.

46. Joseph Morgan, "Constabulary Navies in the Pacific and Indian Oceans," *Ocean Yearbook 11*, ed. Elisabeth Borgese et al. (Chicago: Univ. of Chicago Press, 1994), pp. 368-83.

47. Nien-Tsu Alfred Hu and James K. Oliver, "A Framework for Small Navy Theory: The 1982 U.N. Law of the Sea Convention," *Naval War College Review*, Spring 1988, p. 39.

48. See, for example, Douglas Johnston et al., *NATO Realignment and the Maritime Component* (Washington: Center for Strategic and International Studies Press, 1992), pp. 6-12; William Kaufmann and John Steinbruner, *Decisions for Defense: Prospects for a New Order* (Washington: Brookings Institution Press, 1991), pp. 24-37, 142-4; and Michael O'Hanlon, *The Art of War in the Age of Peace: U.S. Military Posture for the Post-Cold War World* (Westport, Conn.: Greenwood, 1992), pp. 18, 35, and 116. For a countervailing view stressing the need for a more robust naval force structure, see the U.S. Navy's white paper, "Forward . . . From the Sea" (Washington: GPO, 1995), pp. 1-12; and J. Paul Reason, address.

49. The FON program was the product of two events related to UNCLOS III: a 1977 National Intelligence Estimate on expanding maritime jurisdiction, concluding that the treaty would not effectively safeguard U.S. navigational freedoms; and the renegotiation of the Informal Composite Negotiating Text (ICNT), which was developed without consulting the developed countries and placed heavier financial and economic burdens on the developed states. See also Roach and Smith, p. 268; and John Rolph, "Freedom of Navigation and the Black Sea Bumping Incident: How 'Innocent' Must Innocent Passage Be?" *Military Law Review*, vol. 137, 1992. When the FON program was created during the final year of the Carter administration, the feeling was that even with a widely ratified Law of the Sea Convention, it still would be necessary to exercise the rights set forth in the Convention in order not to lose them.

50. Council on Ocean Law, *Oceans Policy News*, May 1992, p. 4.

51. *Limits in the Seas*, p. 2. See also John Rolph; Yehuda Blum, "The Gulf of Sidra Incident," *American Journal of International Law*, July 1986; and William Schachte, Jr. (RAdm., USN), "The Black Sea Challenge," U.S. Naval Institute Proceedings, June 1990.

52. *Limits in the Seas*; U.S. Defense Dept., Office of the Secretary of Defense for International Security Affairs, *Maritime Claims Reference Manual* (Washington: 12 July 1990, revised 14 June 1994); and Roach and Smith. These are three primary sources regarding claims, by a wide spectrum of nations, that the United States considers unlawful.

53. See William J. Aceves, "Diplomacy at Sea: U.S. Freedom of Navigation Operations in the Black Sea," *Naval War College Review*, Spring 1993, pp. 59-79.

54. See, for example, *National Security and the Convention on the Law of the Sea*, p. 20. See also Senator Claiborne Pell, "United Nations Convention on Law of the Sea Will Enhance U.S. National Security," address at the Georgetown University Law Center Symposium, "Implementing the United Nations Convention on the Law of the Sea," 27 January 1995; "U.S. Ships Report Mock Attack," *Los Angeles Times*, 11 August 1979, p. A5; "High Seas Diplomacy Continuing," *Washington Post*, 27 July 1984, p. A1; Dennis Neutze (Cdr., USN), "The Gulf of Sidra Incident: A Legal Perspective," U.S. Naval Institute *Proceedings*, January 1982, pp. 26-31; Robert Stumpf (Lt. Cdr., USN), "Air War with Libya," U.S. Naval Institute *Proceedings*, August 1986, pp. 42-8; and Roger Haerr, "The Gulf of Sidra," *San Diego Law Review*, vol. 24, 1987, p. 751. See also Panel on the Law of Ocean Uses, p. 374; Sam Bateman, "Build a WESTPAC Naval Alliance," U.S. Naval Institute *Proceedings*, January 1993, p. 82; and Roach and Smith, p. 4.

55. Morell, p. 195. Additionally, the Department of the Navy sponsors an annual interagency Freedom of Navigation conference with representatives from the National Security Council, the Department of State, the armed services, the Coast Guard, and others, in attendance.

56. Roach and Smith, p. 266.

57. John McNeill, Senior Deputy General Counsel and Chairman, Department of Defense Task Force on the Law of the Sea Convention, statement before the U.S. Senate Committee on Foreign Relations, 11 August 1994, p. 4 (reprinted as "The Strategic Significance of the Convention on the Law of the Sea," *Naval War College Review*, Winter 1995, pp. 123-9).

58. Schachte, "The Black Sea Challenge," p. 14.

59. Lodel.

60. William Schachte, Jr., (RAdm., USN), "National Security: Customary International Law and the LOS Convention," address at the Georgetown International Law Symposium, "Implementing the United Nations Convention on the Law of the Sea," 27 January 1995.

61. Joshua Goldstein, *Lang Cycles: Prosperity and War in the Modern Age* (New Haven, Conn.: Yale Univ. Press, 1988), p. 268.

62. *Congressional Record*, 103rd Cong., 2d Sess., S14475, testimony of Senator Claiborne Pell, 6 October 1994, p. 2; and interview with Professor Detlev Vaghts, editor, *American Journal of International Law*, 28 October 1994.

63. Morell, p. 206. Morell is particularly pointed regarding the failure of the United States to accede to the Convention, at one point drawing a comparison to the Soviet Union.



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Nuclear-Weapon-Free Zones

Commander Mark E. Rosen, JAGC, U.S. Navy

NUCLEAR-WEAPON-FREE ZONES DID not receive much attention in mainstream international law and security circles until the furor in the fall of 1995 over French nuclear testing in the South Pacific. Since then there has been a flurry of attempts, both public and diplomatic, to negotiate, sign, and ratify regional nuclear-free-zone treaties for the South Pacific and Africa. One proposal—the Southeast Asian Nuclear-Weapon-Free Zone, now being analyzed in Beijing, Moscow, Paris, London, and Washington—is the subject of careful and quiet diplomacy.

United States policy is to support nuclear-weapon-free zones that conform to certain established criteria. Though essentially regional, these legal arrangements will be pursued as long as there is less than universal adherence to the Non-Proliferation of Nuclear Weapons Treaty (NPT);¹ as long as there is no comprehensive test ban treaty (now under negotiation); and as long as there is incomplete adherence to marine environmental-protection instruments like the 1972 London Convention on the Prevention of Dumping of Wastes and the International Convention for the Prevention of Pollution from Ships (MARPOL).²

The general supportiveness of American policy toward nuclear-free-zone proposals is evidenced by the fact that the United States is now a full party to the treaties or protocols for regimes banning nuclear weapons in the Antarctic, in space, on the seabed of the world's oceans, in Latin America, and now in the South Pacific (as of 22 March 1996) and in Africa (11 April 1996). Notwithstanding, the U.S. government reviews each NWFZ proposal for conformance with

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The views expressed in this article are those of the author alone and are not to be construed as the policy of the Department of Defense or the Joint Staff.

Naval War College Review, Autumn 1996, Vol. XLIX, No. 4

long-standing criteria:³ all important regional states must be participating; there must be adequate provision for verification; existing security arrangements must be respected; the proposal must prohibit the development of nuclear explosive devices; the states in the region must have originated the concept; freedom of navigation and overflight must be assured; and finally, visits by ships and aircraft that are capable of carrying nuclear weapons must be permitted.

This article will examine the zone proposals that are currently in the public eye, with particular emphasis on those that are receiving the most attention in the media and in political-military circles, or may in time do so. Given the sensitive nature of the review process, no authoritative critique of the proposals can be offered here. However, because certain problems in the proposals have been made public or are apparent from the text, we can assess whether nuclear-free zones are useful arms control initiatives or are destabilizing. This paper attempts in effect to offer a preview of the critical analyses that will be undertaken when the Senate considers the recently concluded African and South Pacific treaties, and as the executive branch continues its work with foreign governments on the Southeast Asian and other emerging zone proposals.*

Historical Context

The antecedent for the efforts of the 1960s and 1970s to prevent the spread of nuclear weapons to the "global commons" (the seabed and outer space) is the Antarctic Treaty of 1959.⁴ The United States became a party to this treaty in 1960. Among other things, it prohibits the militarization of Antarctica, including bases or maneuvers, and activities that result in a nuclear explosion or the creation of nuclear waste.

In 1962, in the shadow of the Cuban missile crisis, the Organization of American States undertook the painstaking process of establishing a nuclear-weapon-free zone for South and Central America (see Map 1). The first of its kind, the Treaty of Tlatelolco (a suburb of Mexico City) was signed in 1967. The United States, which has military bases at Guantanamo Bay (Cuba), in Panama, and in Puerto Rico, signed the protocols to which it, as a nuclear-weapon state with possessions in the zone, was eligible: Protocol II in 1968 and Protocol I in 1977.⁵ As a protocol party it actively participates in the Treaty's executive body.

Two further important developments were the Treaty on Principles Concerning Exploration of Outer Space of 1967 and the Seabed Arms Control Treaty of 1971.⁶ They were intended to help limit the scope of any superpower conflict in

* For nonspecialists: Only regional states can be treaty parties; non-regional nuclear-weapon states are eligible only to be "protocol parties." As of when this article went to press, the United States is a protocol party to the Latin American NWFZ; it has signed the African and South Pacific protocols but is not yet a party to either, the Senate having not given its advice and consent (though the treaties themselves are in force); and it has not signed protocols to the Southeast Asian NWFZ (which, not having been ratified by the treaty signatories, is not yet in force).



Joseph R. Nunes, Jr.

Central Europe or Southeast and Northern Asia. The Outer Space Convention arose from Soviet efforts during the height of the “space race” to forestall the possibility of orbital nuclear weapons. Article IV, in part, prohibits the orbiting or installation of any weapon of mass destruction in outer space or on the Moon or other celestial bodies. It also limits the use of celestial bodies exclusively to peaceful purposes. Similarly, Article 1 of the Seabed Arms Control Treaty of 1971 prohibits states from “implanting or emplacing” nuclear weapons or “other weapons of mass destruction as well as structures, launching installations, or other facilities” on the “seabed and the ocean floor.” For purposes of the Seabed Arms Control Treaty, the non-nuclear zone extends seaward from the twelve-nautical-mile territorial sea of its parties.⁷ Over ninety countries are members of the Seabed Treaty.

The Usual Terms

The following (drawn from the South Pacific NFZ Treaty) are representative of the obligations that states assume when joining a nuclear-weapon-free regime.

- Parties may not acquire nuclear weapons or assist any nation to obtain them;

- Parties must apply and submit to International Atomic Energy Agency (IAEA) safeguards and export-control restrictions;
- Parties may not permit stationing of nuclear weapons on their territory;
- Parties may not permit testing of nuclear weapons on their territory; and,
- Parties may not dump radioactive wastes or matter at sea within the zone.

To be acceptable to the United States, such terms must be captured in a treaty document that does not upset other important international rights or obligations. Also, the treaty zone must be carefully bounded geographically so that it does not interfere with the high-seas freedoms and transit rights of ships and aircraft. Specifically, it must be sufficiently flexible to permit visits of nuclear-weapon-capable ships and aircraft. In addition to these absolutes, the first two points above, which also appear in the Nuclear Non-Proliferation Treaty, are particularly essential to favorable American consideration.

All nuclear-weapon-free-zone treaties to date contain one or more protocols for signature by the declared nuclear-weapon states. The South Pacific and the recently adopted African nuclear-weapon-free zone treaties have three such protocols; they commit signatories not to test nuclear weapons inside the zone, not to use or threaten to use nuclear weapons against any treaty or protocol party inside its territory or territorial sea, and not to station, develop, or manufacture nuclear weapons inside the zone. The recently concluded Southeast Asian Nuclear-Weapon-Free Zone treaty has a single protocol prohibiting nuclear-weapon states from using or threatening to use nuclear weapons against treaty or protocol parties anywhere inside the zone (see below). The Treaty of Tlatelolco, as noted, has two such protocols. In a nutshell, protocol parties cannot test, use, threaten to use, station, or manufacture nuclear weapons inside the respective zone. They are also bound in every case not to "contribute to any act which would constitute a violation of the treaty by a treaty party." This latter clause is designed to prevent the use of proxy states or other indirect means to subvert the basic object and purpose of the treaty.

The "Hot Zones"

The regimes of greatest current interest are the Southeast Asian Nuclear-Weapon-Free Zone Treaty, the Treaty of Rarotonga (which established the South Pacific Nuclear-Free Zone), the African Nuclear-Weapon-Free Zone Treaty, the special cases represented by the so-called "Zone of Peace" proposals, and possible future zones in the Middle East and Northeast Asia.

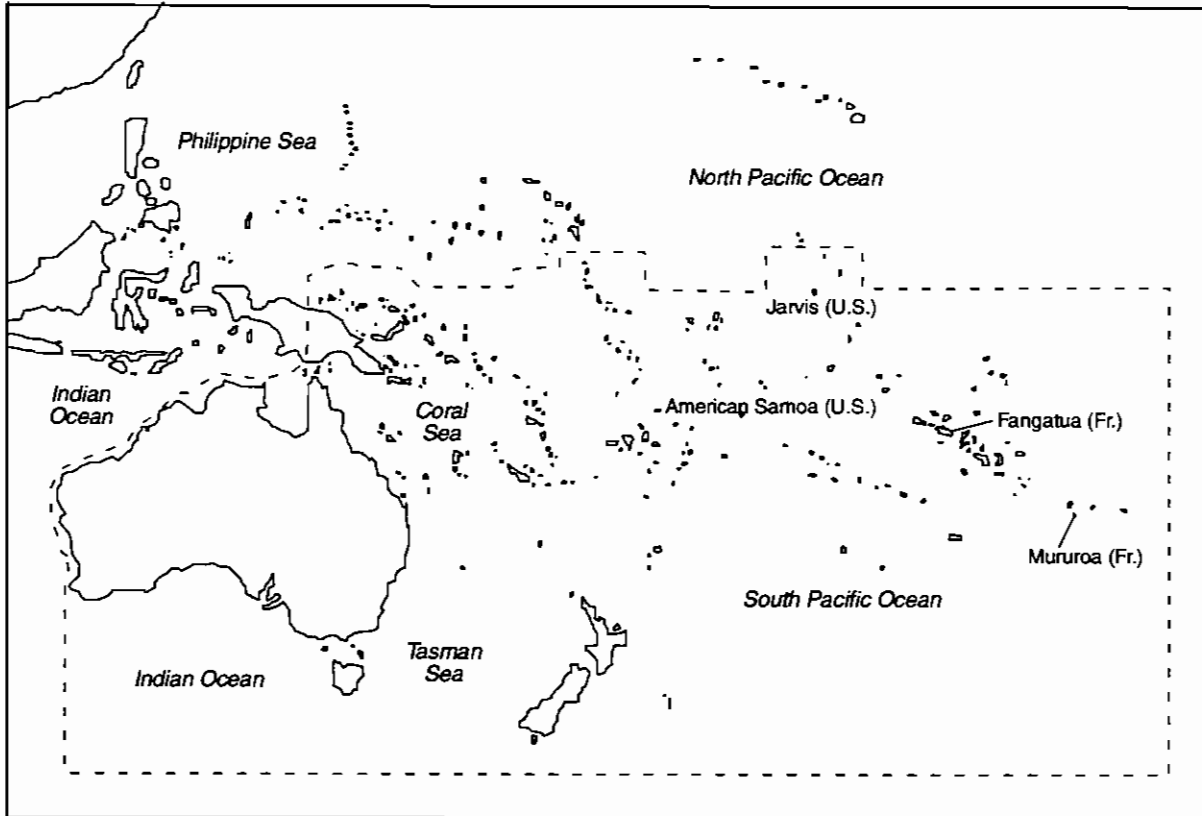
The South Pacific Nuclear-Free Zone. This treaty (whose terms were listed above) was negotiated and signed in the mid-1980s under the auspices of the

South Pacific Forum, a regional coordinating body; it entered into force for its parties in 1986.⁸ Though the Treaty area includes two U.S. possessions, Jarvis Island and American Samoa, the United States has no military facilities there. Unlike the Treaty of Tlatelolco and the Southeast Asian NWFZ, the zone largely encompasses only the land territory and internal and archipelagic waters of individual states. In 1986 the Soviet Union and China signed Protocols II (no actual or threatened use of nuclear weapons) and III (no testing of nuclear weapons).⁹ The South Pacific NFZ treaty places a heavy emphasis on environmental protection, leading to the conclusion of two additional treaties dealing with the management of natural resources within the exclusive economic zones (EEZs) of the parties and the dumping of wastes.¹⁰

The 5 September 1995 French nuclear test in the Mururoa Atoll (see Map 2) solidified public and political support for rapid accession of the nuclear-weapon states to the South Pacific NFZ protocols. Because the French testing facilities, on Mururoa Atoll and Fangatau in French Polynesia, are both inside the South Pacific zone, had the Treaty been universally in force among the nuclear-weapon states, the tests could not have been legally conducted. In fall 1995 Washington decided that it would accede to the three protocols, and on 20 October the United States, France, and the United Kingdom jointly announced their intention to sign.¹¹ This announcement, coupled with the declaration by France in August 1995 that it would accept a zero-yield comprehensive test-ban treaty once it had completed its six nuclear tests, enabled the remaining nuclear-weapon states to become members of the South Pacific NFZ, on 22 March 1996.¹²

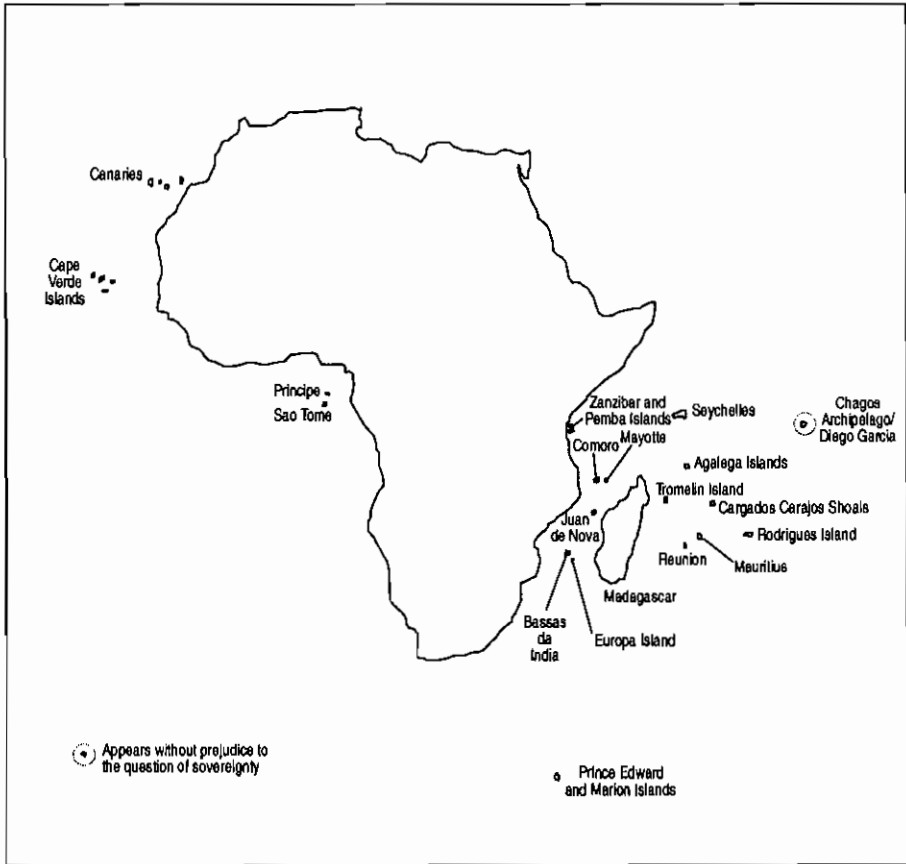
The African Nuclear-Weapon-Free Zone. African states have sought since the early 1960s to establish a nuclear-free zone for the continent. On 11 April 1996, over fifty African states and the United States, the United Kingdom, France, and China sent representatives to Cairo and signed the Treaty of Pelindaba, named for the site of South Africa's former nuclear weapons complex.¹³ The Treaty created the African Nuclear-Weapon-Free Zone, embracing not only the African continent but also all islands which have been declared by the Organization of African Unity (OAU) to be part of Africa.¹⁴ Because the OAU has declared Mauritius to be part of Africa, and the government of Mauritius has in turn asserted a claim to the Chagos Archipelago, the treaty zone includes, for some purposes, the island of Diego Garcia. Diego Garcia, upon which the United States operates an important military facility, is, of course, a British Indian Ocean Territory; accordingly, the official treaty map of the African NWFZ contains a footnote that the island is shown within the Zone "without prejudice to the question of sovereignty" (see Map 3). The Arms Control and Disarmament Agency considers that this notation "adequately protect[s] U.S. interests because

Map 2 - South Pacific Nuclear-Free Zone



Joseph R. Nunes, Jr.

Map 3 - African Nuclear-Weapon-Free Zone



Joseph R. Nunes, Jr.

any resolution of the issue will have to occur outside of the framework of the treaty.”¹⁴

The African NWFZ Treaty is quite similar to that for the South Pacific in that it repeats the core commitments for treaty parties to renounce nuclear weapons, not to seek nuclear weapons technology, not to possess or permit the stationing of nuclear weapons on their territory, not to use or permit the use of nuclear weapons on their territory, and to submit peaceful nuclear activities to comprehensive IAEA safeguards. Unlike other nuclear-weapon-free-zone treaties, however, Article 10 of the Treaty of Pelindaba commits states to maintain “effective physical protection” of nuclear materials, and Article 11 prohibits them from making, assisting in, or encouraging attack, by whatever means, on nuclear installations inside the zone. In context, “nuclear installation” is quite broad; it includes nuclear power and research reactors, conversion and fabrication plants,

and reprocessing and isotope-separation facilities. Article 11 was probably added as a “confidence-building measure” to provide against attacks like that launched by Israel in 1981 against Iraq’s Osirak reactor.¹⁶

Again as in the South Pacific case, the African treaty has three protocols open to signature by nuclear-weapon states; of these, Protocols I and II are the most important. Protocol I commits the nuclear-armed states neither to use nor threaten to use such weapons against a party or any territory within the zone for which a party is internationally responsible (having in mind French and Spanish possessions).¹⁷ Protocol II binds nuclear-weapon states not to test nuclear weapons anywhere within the zone. Protocols I and II each contain provisions against actions by a nuclear-weapon signatory that would “contribute to violation of the Treaty.” States may withdraw from one or more of the protocols, for reasons involving “supreme national interests,” but only after giving a year’s notice. In contrast, the South Pacific NFZ protocols and the Treaty of Tlatelolco permit withdrawal on three months’ notice to the depository.

The Southeast Asian Nuclear-Weapon-Free Zone. In the mid-1980s some members of the Association of Southeast Asian Nations (ASEAN) formulated the concept of a Southeast Asian nuclear-weapon-free zone. Because the United States maintained a large military presence in the Philippines, and because the Soviet Navy was perceived to be a regional threat, consensus could not then be achieved.¹⁸ In early 1995, however, seemingly without warning, press reports emerged that ASEAN had renewed efforts to conclude a nuclear-weapon-free-zone treaty and that its diplomatic chairman (and Indonesia’s foreign minister), Ali Alatas, was determined to complete work on such a regime before Indonesia relinquished the ASEAN chair in the summer of 1996. In a display of diplomatic prowess, Foreign Minister Alatas was able to establish consensus on a treaty, consult with at least some of the nuclear-weapon states, and see the instrument—known as the Southeast Asian NWFZ Treaty—formally adopted by the ASEAN heads of state on 15 December 1995, in Bangkok.¹⁹

ASEAN’s commendable effort to solidify rapidly the non-proliferation achievements of the May 1995 NPT extension was not, however, without cost. The seriousness of ASEAN’s resolve to conclude the Southeast Asian treaty was not made apparent to certain of the nuclear-weapon nations, including the United States. Indeed, no draft was provided to Washington until spring 1995. At that point the United States offered its views of the draft and, inasmuch as it would assume legal obligations were it to sign the intended protocol, requested an opportunity to review the text as it evolved. In October and November 1995, it became apparent that ASEAN was moving briskly to closure. To ensure that the nuclear-weapon states would have a chance to review the treaty while still in draft, they arranged consultations with ASEAN for 16 November 1995, in Jakarta.

While a number of important issues were rectified by those discussions, issues remain with the treaty ultimately adopted at Bangkok. Among them are: the inclusion of EEZs and continental shelves in the zone of application; “negative security assurances” (i.e., commitments by a nuclear-weapon state that it would not use nuclear weapons) to nations that might ultimately fail to join the treaty; and ambiguous language regarding visits of nuclear-capable ships and aircraft. ASEAN also took no action on a U.S. request to consider broadening the scope of the treaty to encompass other weapons of mass destruction.²⁰

It seems unfortunate that the haste to conclude a treaty allowed insufficient time to discuss and analyze fully the complex legal and policy issues involved. ASEAN is now meeting with nuclear-weapon states to find a way to address their concerns while leaving undisturbed the formally adopted text—though some issues may ultimately require its amendment. However, it would be unfair to lose sight of the fact that the Southeast Asian NWFZ treaty contains a number of standard and unobjectionable provisions, such as the usual NPT provisions prohibiting parties from acquiring, possessing, or manufacturing nuclear explosive devices or from stationing or testing them inside the zone. Like other nuclear-weapon-free-zone agreements, the treaty signed in Bangkok requires parties with peaceful nuclear programs to submit to IAEA inspections, establishes an executive board and oversight mechanisms, permits nations to decide for themselves whether to allow visits by nuclear-weapon-capable ships and aircraft, and prohibits dumping of nuclear materials anywhere in the zone.

As mentioned above, the single protocol obligates parties not to use or threaten the use of nuclear weapons inside the zone, against anyone. Its text, however, neither specifies upon whom this obligation lies nor geographically restricts its scope. As written, this legally binding negative security assurance now extends to any state (and its military forces) present in the territorial seas or EEZs, and over the continental shelves, of all the treaty parties. The assurance encompasses the much-disputed areas of the South China Sea.

“Zones of Peace” and Future Weapon-Free Zones. It would not be accurate to regard “ZOPs” as matters now on Washington’s “front burner,” but efforts to establish these special areas persist and are of interest. In general, “zones of peace” are waters (high seas, EEZs, or archipelagic zones) that regional non-aligned states have designated as “off limits” to any type of confrontation or conflict. For instance, the “Zone of Peace, Freedom, and Neutrality” declared by ASEAN in 1971 is given as the legal precedent for the Southeast Asian NWFZ treaty, although one of the most apparent reasons for the persistence of the zone—which encompasses areas of the Indian Ocean—is that it establishes a high-seas legal buffer

between Southeast Asia and Pakistan and India.²¹ Ironically, ASEAN's discussions followed almost two decades of attempts in the United Nations to create an Indian Ocean Zone of Peace. That concept, now probably dead, was born of a unanimous 1971 General Assembly resolution, sponsored by India and supported by Pakistan, to rid the Indian Ocean of superpower rivalry.²² As a third example, South Africa and Brazil have introduced non-binding resolutions for adoption by the UN General Assembly to create a South Atlantic Zone of Peace;²³ the United States has consistently voted against it.

The United States has said little for the record about "zones of peace." Indeed, resolutions to establish ZOPs typically only commend states to respect them and do not contain the strict legal obligations found in nuclear-weapon-free treaties. Furthermore, comparing these ZOP proposals with the stricter criteria that the Nuclear Non-Proliferation Treaty imposes, it seems unlikely that the United States will support them: in essence, they are attempts to convert sectors of the high seas into special security areas and in so doing to constrain the United States and other nations in the exercise of their high-seas freedoms.

As for future nuclear-weapon-free regimes, there are at least two pending proposals. In 1980, Israel introduced a resolution in the UN General Assembly calling for a Middle Eastern Nuclear-Weapon-Free Zone; since then, various groups have sponsored attempts—such as the recently concluded NPT Review Conference—to realize this goal.²⁴ So long as Israel remains outside the NPT due to its undeclared nuclear weapons program, however, it is difficult to imagine a Middle Eastern zone along traditional lines taking root. Nonetheless, former Prime Minister Shimon Peres has been quoted as saying, "Give me peace and we will give up the nuclear capability."²⁵ It is noteworthy that the idea's sponsors have been pushing for a Middle East free of weapons of mass destruction generally, not only nuclear weapons, in order to address the widest possible array of proliferation problems in that volatile region.

Secondly, a "limited nuclear-free zone" for Northeast Asia has been the subject of a series of meetings between retired South Korean diplomats and American military representatives conducted at the Georgia Institute of Technology Center for International Strategy, Technology, and Policy. The proposal, which primarily targets the Korean peninsula, seeks to create a "cooperative security organization and infrastructure" stressing cooperative versus confrontational relationships among states.²⁶ In the limited NFZ would be a multilateral verification force, with a common headquarters; nuclear weapons would be phased out over time, with the common headquarters serving as a forum for building confidence and reducing tensions. There are presently no indications, however, that this idea has moved off the drawing board and into the mainstream of international security and diplomatic activity.

American Commitment to Nuclear-Free Zones

Some have questioned the sincerity of the commitment of nuclear-armed nations to nuclear-weapon-free zones. The former prime minister of Australia, Paul Keating, for example, remarked that while the October 1995 announcement that the United States, France, and Great Britain would accede to the South Pacific NFZ was welcome, it came too late to assuage the regional concerns over French nuclear testing. Prime Minister James Bolger of New Zealand was only slightly more favorable.²⁷ Nonetheless, and with respect not only to non-proliferation but also environmental protection and the creation of a comprehensive testing ban, it is important to keep in mind that the United States is active in worldwide support of the basic norms embodied in the South Pacific NFZ and other such treaties. It should be enough to say that the United States has long been a party to the Treaty of Tlatelolco (establishing the Latin American Nuclear-Weapon-Free Zone), the Antarctic Treaty, and the Seabed and Outer Space Arms Control treaties. There is much additional evidence.

In May 1995 the United States joined the international community in realizing an important goal: indefinite extension of the Nuclear Non-Proliferation Treaty. Arguably the single most important non-proliferation agreement in existence and nearly global in its membership, the NPT not only obliges nuclear-weapon states not to transfer nuclear weapons technology but also commits non-nuclear-weapon nations to forgo the development or acquisition of such systems.²⁸ Of course, an essential external component of the overall package is the "negative security assurance," first announced on 12 June 1978 and reaffirmed in April 1995, that the United States would neither threaten nor use nuclear weapons against any state complying with the NPT.²⁹

Further, on 11 August 1995 the United States unilaterally announced that it would accede to a zero-yield comprehensive test ban treaty (CTBT).³⁰ This and similar declarations by the United Kingdom and France were made notwithstanding technical concerns that tests are required to assure the safety and reliability of existing stockpiles. The conclusion of a CTBT in the late summer of 1996 remains a high-priority foreign policy objective of the United States, and it is an effort for which the United States deserves credit. As to whether the CTBT goal will be realized, the testing policies of China remain, of course, a question mark.³¹

In the environmental realm, the United States is a party to the London Dumping Convention and the MARPOL Convention, and it is an active participant in a variety of international efforts, most sponsored by the International Maritime Organization, to increase the safety of maritime operations and the cleanliness of the world's oceans. Regarding dumping, the United States joined the London Convention's recent amendment prohibiting the deposit of low-level

liquid radioactive waste in the oceans, and it is working vigorously, both unilaterally and multilaterally, to see marine environmental norms upheld.³² Also noteworthy is the fact that the United States (with the Department of Defense taking the lead) is now working vigorously, both domestically and internationally, to obtain universal accession to the 1982 UN Law of the Sea Convention—in the opinion of many, the most comprehensive environmental protection convention in existence.

Security and Policy Concerns

Article VII of the NPT expressly permits the creation of regional measures to implement the ideal of nuclear non-proliferation. The United States supports the basic norms of the Non-Proliferation Treaty and, for this reason, supports them as they are embodied in nuclear-weapon-free zones—provided that such schemes conform to certain criteria. The United States has made quite clear that it examines each zone proposal individually. Even if a particular arrangement seems generally acceptable, to receive American endorsement it must contribute to overall principles of nuclear non-proliferation and not have adverse impacts. Given this background, we may examine certain of these criteria and the treaties which have been discussed, drawing out the specific operational and international security issues that arise.

“Ad hoc” zone arrangements may upset alliances and be destabilizing. American policy on nuclear-weapon-free zones is quite clear that, if they are to receive American endorsement, they must enjoy regional standing and include all important states in the region. For this reason, the United States has not supported attempts by individual nations or districts within nations to establish themselves as nuclear-free enclaves, or moves by states to create zones (like ASEAN's Zone of Peace, Freedom, and Neutrality) encompassing areas of the high seas that restrict American high-seas freedoms. Ad hoc zones may be represented as matters of self-determination, but from an international security perspective they may undermine the free movement of military and nonmilitary traffic and cargo; they may even—the many declared zones in northern Italy are examples—undermine a nation's compliance with major defense agreements, e.g., the North Atlantic Treaty. In any case, unless state participation is nearly universal the self-enforcing verification mechanism essential to any nuclear arms control agreement will be absent.

The ad hoc ZOP proposals for the Indian Ocean and South Atlantic present added problems. While even the remote and theoretical possibility of a nuclear exchange between Pakistan and India (neither of which is a party to the NPT) may understandably concern states in Southeast Asia, these proposals do little more than establish buffer areas of open ocean. American oceans policy opposes

any exercise of sovereignty over the high seas. The right of all nations to operate ships and aircraft—which may or may not have nuclear weapons aboard—is a high-seas freedom protected under the UN Law of the Sea Convention and must not be diluted. From the standpoint of international peace and security, the ability of U.S. warships to move freely on the high seas has had in the past a stabilizing and deterrent effect on states that were considering aggression. To cut off or sharply restrict the passage of American warships in, say, the South China Sea or the Strait of Taiwan would probably not be universally supported by regional states—least of all those with whom the United States has a mutual defense treaty.

A second American criterion is that weapon-free zones *must advance non-proliferation goals*. A case in point here is the African Nuclear-Weapon-Free Zone treaty, which the United States, France, the United Kingdom, and China signed in Cairo.³³ South Africa, having unilaterally dismantled its own nuclear weapons program and having played a pivotal role in the indefinite extension of the NPT, was a major sponsor of the treaty and played a key role in inducing the nuclear-weapon states ultimately to sign the treaty.³⁴ Some commentators are urging quick U.S. signature (and presumably ratification) of the protocols to reaffirm American support of nuclear non-proliferation.³⁵ Notwithstanding the political imperative, however, one may question whether the African NWFZ truly meets nuclear non-proliferation goals, in light of reports that no eligible Arab state (not even Egypt, the host for the signing of the Treaty of Pelindaba) will ratify until Israel—which is not eligible to join the African NWFZ—renounces its nuclear weapons program.³⁶

South Africa having been the only significant nuclear proliferation threat (at least for the short term) on that continent, it is now unclear what the leadership of nuclear-weapon states can achieve in terms of promoting African nuclear non-proliferation if the Arab states do not ratify. This situation is exacerbated by media and Defense Department reports that Libya is ignoring its NPT commitments and aggressively seeking nuclear weapons technology.³⁷ While there was considerable pressure on the United States to make good on its promise to sign the treaty, it remains to be seen whether U.S. ratification will best serve the goal of non-proliferation if African states fail to ratify the treaty (and thereby assume its legal responsibilities)—and also if indications persist of proliferation risks in the northern part of the continent, Libya in particular.³⁸

A third U.S. expectation is that zones should *not interfere with standing visitation policies*. All four regimes now in existence (African, South Pacific, Southeast Asian, and Latin American) allow states to decide for themselves whether to permit visits by nuclear-capable ships and aircraft. These provisions would seem to protect the United States Navy's port visit programs; however, internal inconsistencies in some of these treaties—for instance, their broad definition of "stationing nuclear weapons"—make it uncertain whether the instruments are

truly neutral on the question. Moreover, in three of the four treaties, the use, in the context of "stationing," of terms (like "inland waters") that have no commonly accepted meaning in international law adds to that uncertainty.³⁹

In fact, and despite the efforts of American negotiators to ensure that these treaties are completely evenhanded on the question of such visits, there is evidence of a subtle political undercurrent tending to exclude nuclear-weapon-capable units. In its 1986 accession to the South Pacific NFZ, the USSR expressed an understanding that "the permission of transit of nuclear weapons . . . in any form and the calls at the ports and airfields within the limits of the nuclear-free zone of foreign ships . . . is incompatible with the nuclear-free status of the zone."⁴⁰ There was a certain visceral appeal in the Soviet proposal; nonetheless, it is troubling that none of the South Pacific NFZ regional states denounced the Soviet assertion, nor has it been withdrawn subsequently. Furthermore, Russia's refusal to join the African Nuclear-Weapon-Free Zone in April 1995 because of the presence of bases (such as Diego Garcia) of other nuclear-weapon states reinforces the possibility that stormy waters may lie ahead.⁴¹ If history is any guide, states that continue to permit visits of nuclear-weapon-capable units are likely to come under pressure.⁴²

Article 7 of the Southeast Asian NWFZ Treaty contains the standard provision that each state party, "on being notified, may decide for itself whether to allow visits by foreign ships and aircraft." Article 3(2)(A), however, requires each party to prevent any other state from "possessing or having control over nuclear weapons" in its territory or from "stationing" nuclear weapons there. Taken as a whole, this is an awkward formulation at best, creating doubt as to whether these port and airfield visits are permissible. If the sense of the treaty is in fact that they are not, then it stands in marked contrast to American support for the international norm of free and open access to seaports, and also to the substantial relaxation by the United States of restrictions on visits by commercial ships to its ports.⁴³

Finally, treaties should *not upset important international norms*. A difficulty arises for the Southeast Asian NWFZ Treaty, which prohibits actual or threatened nuclear weapons exchanges not only in the territorial seas and archipelagic waters of the parties but also in their two-hundred-nautical-mile exclusive economic zones and over their continental shelves as well. The inclusion of EEZs and continental shelves is problematic, for reasons that will be discussed below. The desires of smaller states not to be caught in a nuclear cross fire are entirely understandable: the effects of a nuclear exchange would be felt over a very large area. But to include the continental shelf and exclusive economic zones in the Southeast Asian NWFZ regime, or any other, is likely to cause problems for the United States and the nuclear-weapon states generally.⁴⁴ A number of ramifications come to mind.⁴⁵ First, the United States, Russia, the United Kingdom, and

most potential nuclear-weapon states are already parties to the Seabed Arms Control Treaty, which prohibits nuclear weapons on the seabed seaward of the twelve-nautical-mile limit. In fact, in view of how long that treaty has remained in force and unchallenged, a good argument can be made that fixed emplacement or stationing of nuclear weapons on the seabed beyond twelve nautical miles from a coastline is now banned by customary international law.

Even if not, and more fundamentally, should it ever become established that EEZs and continental shelves can be used in defining security arrangements (as in fact “zones of peace” also tend to do), the 1982 Law of the Sea Convention will be seriously undermined. It was one of the main purposes of the Convention to make EEZs and shelves (as well as territorial seas, straits, etc.) no longer points of international contention—which is a particular reason why the United States and other maritime states (such as Indonesia and the Philippines) have worked to ensure that it is universally accepted and followed. Under the Convention, EEZs and continental shelves are essentially *resource zones*; indeed, the negotiating history of the Convention makes clear that the idea of extending security rights two hundred nautical miles to seaward was expressly rejected. To accept the premise underlying the Southeast Asian NWFZ formula could at least invite increased excessive maritime claims.

It could have other destabilizing effects as well—specifically, unilateral action to expand coastal rights outside the Law of the Sea Convention. The dangers of such attempts are amply evidenced by the flare-ups in January-February 1996 between Greece and Turkey over the Imia Islet (Kardak Rock) in the Aegean; between Japan and Korea in February over Tok Po (Takashima Island) in the Sea of Japan; by the continuing confrontations between Canada and Spain over the former’s “aggressive” new fishing jurisdiction on the North Atlantic’s Grand Bank; and by the conflicting claims of several nations to the Paracel and Spratly island groups.

Finally, inclusion of EEZ and continental shelf areas would extend security sensitivities so far to seaward as potentially to restrict the right of U.S. nuclear-weapon-capable vessels to conduct patrols, as opposed to transits, in areas of the open ocean. Nuclear-weapon-free treaties typically recognize rights of passage *through* an area within their zone of applicability, but they are much less clear on naval operations at a single location. The effect would be to shift strategic and political advantage away from U.S. deterrent forces in favor of states having large conventional forces, or perhaps land-based nuclear forces outside the zone but within striking distance of it.

Nuclear-weapon-free zones are here to stay. The real question is whether the treaties implementing them will firmly establish themselves as serious

non-proliferation endeavors rather than “designer” initiatives, going in and out of style depending on the trend of the day. The United States and the rest of the Free World took more than four decades to win the Cold War. The world community has taken some slow, hesitant steps toward containing nuclear-weapon proliferation and inhibiting the use of such weapons. To be impatient with, or dismissive of, such steps would play into the hands of the critics who assert that these zone proposals are without value—that they merely restrict the military operations of superpowers, solidify opposition to the presence of nuclear-capable forces in a region, weaken deterrence, stimulate conventional arms buildups, and undercut the stability that permits the economic prosperity we enjoy today. To the contrary, nuclear-weapon-free zones are not only inevitable but can contribute substantially to the control of nuclear proliferation, a goal to which the United States is firmly committed. Nonetheless, it would be unwise and perhaps destabilizing to endorse such proposals until the text and the timing are both right. The American policy of carefully examining each one on a case-by-case basis and not signing treaties “before their time” will serve the nation well as it completes its ratification of the African Nuclear-Weapon-Free Zone Treaty, works out its differences with ASEAN concerning the Southeast Asian Nuclear-Weapon-Free Zone, and prepares itself for the new proposals sure to come.

Notes

1. *United States Treaties and Other International Agreements* [hereafter *UST*], vol. 21, p. 483; and *Treaties and Other International Acts Series* [hereafter *TIAS*] p. 6839. The NPT originally entered into force for the United States on 5 March 1970 for a period of twenty-five years. In May 1995, in New York, the NPT's Conference of Parties decided to extend the NPT indefinitely.

2. 26 *UST* 2403; and *TIAS* 8165. The convention on dumping of wastes was signed in December 1972 and entered into force for the United States on 30 August 1975. MARPOL was signed in London on 2 November 1973 but did not enter into force until incorporated into and modified by a 1978 protocol (signed on 17 February 1978 and entered into force on 2 October 1983).

3. U.S. Arms Control and Disarmament Agency, *Arms Control and Disarmament Agreements*, 6th ed. (Washington, D.C.: 1990), p. 64.

4. 12 *UST* 7984; and *TIAS* 4780. The Antarctic Treaty was signed on 1 December 1959 and entered into force on 23 June 1961.

5. Protocol II prohibits the use or threatened use of nuclear weapons against a Treaty party. A lengthy ratification process followed in which the United States asserted supplemental understandings regarding the treaty's area of application and also the nature of its security assurances, i.e., that an attack on the United States by a party assisted by a nuclear-weapon state was inconsistent with basic Treaty obligations. The United States deposited its instruments of ratification in 1971 (22 *UST* 754; and *TIAS* 7137). Protocol I requires that states with territories in the zone neither possess, test, manufacture, produce, nor station nuclear weapons therein. Since the United States has possessions in the area, among them the Virgin Islands, Puerto Rico, and the Canal Zone, it was eligible to sign Protocol I, ratifying in 1981.

6. The Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies was signed, ratified, and entered into force in October 1967 (18 *UST* 2410; and *TIAS* 6347). The Treaty on the Prohibition of the Emplacement of Nuclear Weapons and Other Weapons of Mass Destruction on the Seabed and the Ocean Floor and in the Subsoil Thereof was signed by the United States in February 1971 and was ratified the following year (23 *UST* 701; and *TIAS* 7337).

7. It is ironic that the 1971 Seabed Arms Control Treaty recognized a twelve-nautical-mile territorial-sea limit, well before its ultimate adoption (with considerable controversy) in the 1982 Convention on the Law of the Sea.

8. For the South Pacific NFZ, *International Legal Materials* [hereafter *ILM*], vol. 42, 1985, p. 1442. Rarotonga is the main island, and seat of government, of the Cook Islands group, in the South Pacific. The South Pacific Forum comprises a total of sixteen states, with Australia, New Zealand, and Fiji being the major actors. It serves as a regional coordinating body for common security, fisheries, and environmental matters (Michael Field, "Treaty Turns the Page on Pacific's Horrific Nuclear Chapter," *Agence France Presse*, 25 March 1996 [LEXIS/NEXIS]).

9. The Soviet Union, in a written understanding issued at the treaty's signing, noted that in its view states would not be complying with the prohibition against stationing nuclear weapons in the zone if they permitted visits of nuclear-weapon-capable ships or aircraft. However, Article V expressly provides that states may "decide for themselves whether to permit. . . ." The USSR made no mention of this understanding at ratification.

10. Convention for the Protection of the Natural Resources and Environment of the South Pacific Region, Noumea, 1986, entered into force 22 August 1990 (Senate Treaty Document 101-21, 101st Cong., 2nd Sess. [Washington, D.C.: U.S. Govt. Print. Off., 1990]).

11. Reuters North American Wire, 20 October 1995 (LEXIS/NEXIS).

12. David S. Yost, "France's Nuclear Dilemma," *Foreign Affairs*, January/February 1996, pp. 108-9; and briefing by Michael McCurry, White House Press Secretary, Federal Document Clearing House (hereafter FDCH) Political Transcripts, 11 April 1996 (LEXIS/NEXIS).

13. Briefing by Michael McCurry, White House Press Secretary, and Robert Bell, Senior Director, Defense Policy and Arms Control (National Security Council), FDCH Political Transcript, 11 April 1996 (LEXIS/NEXIS).

14. For a discussion of South Africa's nuclear weapons program and the Treaty's negotiation history, see D. Fisher, "The Pelindaba Treaty: Africa Joins the Nuclear-Free World," *Arms Control Today*, December 1995, p. 10.

15. Fisher, p. 10.

16. *Ibid.*, p. 12. The Osirak raid is discussed in John Norton Moore et al., *National Security Law* (Durham, N.C.: Carolina Academic Press, 1990), pp. 154-5.

17. Because France and Spain possess islands in the African NWFZ, Protocol III is open to their signatures. Protocol III obligates them, as protecting powers, to adhere to the basic Treaty provisions prohibiting the stationing, acquisition, manufacture, or testing of nuclear weapons and the dumping of radioactive waste, and it requires them to protect nuclear materials and submit to IAEA inspection of all nuclear programs.

18. *Agence France Presse*, 16 December 1995 (LEXIS/NEXIS); and *International Herald Tribune* (Hong Kong), 1 August 1995, p. 1.

19. Evan S. Medeiros, "Southeast Asian Countries Agree to Create Nuclear-Weapons-Free Zone," *Arms Control Today*, December 1995/January 1996, p. 23; *The Straits Times* (Singapore), 31 July 1995, p. 12.

20. *The Straits Times* (Singapore), quoting Assistant Secretary of State Winston Lord; Daily Department of State Briefing, quoting spokesman Nicholas Burns, FDCH, 8 December 1995 (LEXIS/NEXIS); and *The Straits Times* (Singapore), 12 December 1995.

21. For the Zone of Peace, Freedom, and Neutrality, see Lee G. Cordner, "Regional Resilience: The Imperative for Maritime Security Cooperation in Southeast Asia," *Naval War College Review*, Spring 1994, esp. p. 50. India has already exploded a nuclear device, but a "peaceful" one—for which reason it considers itself a non-nuclear-weapon state. Pakistan, on the other hand, is described as a "one screwdriver turn" away from possession of a useable weapon (*Washington Times*, 20 February 1995, p. A2).

22. National Press Service, 13 February 1995 (LEXIS/NEXIS); Xinhua News Agency, 11 July 1994 and 22 May 1990 (LEXIS/NEXIS).

23. United Nations Document 49/84, Resolution of 20 October 1994.

24. In addition, Secretary General Boutros Boutros-Ghali, at the NPT extension conference in spring 1995, called on the Middle Eastern states to establish a zone excluding weapons of mass destruction by the year 2000 (Federal News Service, 18 April 1995 [LEXIS/NEXIS]).

25. *Toronto Star*, 23 January 1996, p. 1 (LEXIS/NEXIS).

26. *Atlanta Constitution*, 2 May 1995, p. A9, and 29 June 1994, p. A9.

27. Reuters North American Wire, 19 October 1995 (LEXIS/NEXIS).

28. As of summer 1996, nine nations have not yet acceded to the NPT: India, Pakistan, Israel, Angola, Brazil, Djibouti, Andorra, Oman, and Cuba. Though Brazil is not a member, many NPT norms are applicable to it through the Treaty of Tlatelolco.

29. The 1978 policy statement reads: "The United States will not use nuclear weapons against any non-nuclear weapons state party to the NPT or any comparable internationally binding commitment not to acquire nuclear explosive devices, except in the case of an attack on the United States, its territories, or armed forces, or its allies, by such a state allied to a nuclear weapons state, or associated with a nuclear weapons state in carrying out or sustaining the attack" (reprinted in Arms Control and Disarmament Agency, p. 94).

30. Briefing by Robert Bell, Special Assistant to the President for Defense Policy, FDCH Political Transcripts, 14 August 1995 (LEXIS/NEXIS). The United Kingdom announced on 14 September 1995 its own intention to support a zero-yield comprehensive test ban treaty (Reuters News Service, 14 September 1995 [LEXIS/NEXIS]).

31. Reuters North American Wire, 1 February 1996 (LEXIS/NEXIS).

32. With respect to unilateral action, during fiscal years 1993-1995 the U.S. Navy's Office of Naval Research implemented the Arctic Nuclear Waste Monitoring Program (mandated by Public Law 103-139, and funded at \$10 million annually) to study the effects of radioactive contamination of the Arctic as a result of the dumping by Russian military and civilian entities of radioactive materials into known waste sites and certain river systems. The effort is part of the Nunn-Lugar cooperative threat reduction program. Funding, however, was discontinued for fiscal 1996. Bilaterally, the U.S. Secretary of Defense and the Russian defense minister signed a memorandum of agreement in June 1995 to cooperate militarily in the field of environmental protection and security. One outgrowth was the Arctic Military Environmental Cooperation program, which is a trilateral effort (involving the United States, Russia, and Norway) to study the effect of past dumping of radioactive materials and heavy metals in the Arctic and to devise plans for sound environmental management.

33. McCurry and Bell, 11 April 1996.

34. Tom Zamora Collina, "South Africa Bridges the Gap," *Bulletin of Atomic Scientists*, July-August 1995, p. 30; and South African Press Agency, "White Right Wing Could Have Material for a Nuclear Device," 6 November 1995 (LEXIS/NEXIS).

35. Fisher, p. 13.

36. *Ibid.* Also, following a statement by a right-wing Israeli legislator that Israel would never renounce its nuclear weapons program, Libya's official JANA news agency called on all Arab states to "use every means to acquire nuclear weapons" (Agence France Presse, "Libya Urges Arabs to Get Nuclear Arms," 27 January 1996 [LEXIS/NEXIS]). See also Reuters World Service, "Arabs Must Get Nuclear Bomb to Match Israel, Libya," 27 January 1996 (LEXIS/NEXIS).

37. Office of the Secretary of Defense, "Proliferation Threat and Response," April 1996, p. 25; *Times* (London), 26 February 1996; and Douglas Waller, "Target Gaddafi, Again," *Time*, 1 April 1996, p. 46.

38. J.D. Crouch II, Prepared Testimony before the Senate Foreign Relations Committee Concerning the Chemical Weapons Convention, 13 March 1996, Federal News Service. See also Robert Burns, "US Said to Have No Non-nuclear Way to Destroy Suspect Libyan Plant," Associated Press, 23 April 1996; and "Perry: U.S. Determined to Stop Libyan Chemical Weapons Plant Construction," Xinhua News Agency, 4 April 1996 (all LEXIS/NEXIS).

39. Article I(d) of the South Pacific Nuclear-Free Zone Treaty provides that "stationing means implantation, emplacement, transportation on land or inland waters, stockpiling, storage, installation and deployment."

40. Statement of the Soviet Government on the Rarotonga Treaty of 15 December 1986 (document on file with author).

41. Miriam Sami, Associated Press Worldstream, 11 April 1996 (LEXIS/NEXIS).

42. During the 1991 Persian Gulf War, U.S. military transport aircraft made stops for fuel in Colombo, Sri Lanka, and Bombay, India. Critics cited these brief visits as violations of the Indian Ocean Zone of Peace; see Xinhua News Agency, 9 February 1991 (on criticism of the Sri Lankan government by an opposition party) and Associated Press Newswire, 30 January 1991 (concerning the Indian episode).

43. The United States in 1995 unilaterally relaxed the entrance requirements previously required for visits to commercial ports by ships flying the Vietnamese, Cambodian, or Russian flags (Commandant, U.S. Coast Guard, "Shipping Agent Guidelines," Instruction 1-M166158.5).

44. *The Straits Times* (Singapore), 25 January 1996, p. 29; interview with U.S. Assistant Secretary of State Winston Lord. Lord observed that the United States, with all other nuclear powers, continued to have problems with the Southeast Asian NWFZ treaty; Washington's "single major concern is that the exclusive economic zone and continental shelves are included in the terms of coverage . . . and it is of major concern to us."

45. Briefing by Glyn Davies, Department of State Regular Press Briefing, FDCH Political Transcripts, 15 December 1995 (LEXIS/NEXIS); and briefing by Nicholas Burns, Department of State Regular Press Briefing, FDCH Political Transcripts, 8 December 1995 (LEXIS/NEXIS).

Eagles and Dragons at Sea The Inevitable Strategic Collision between the United States and China

Lieutenant Commander Ulysses O. Zalamea, U.S. Navy

ON 27 OCTOBER 1994, THE U.S. AIRCRAFT CARRIER *Kitty Hawk*, conducting routine operations in the international waters of the Yellow Sea, encountered a Chinese *Han*-class nuclear submarine.¹ The carrier launched an S-3 antisubmarine aircraft, which deployed sonobuoys to track the Chinese *Han*—only to discover that it was being watched, in turn, by two Chinese F-6 fighters.² For China, it was a close and serious encounter; for the United States, it was an unavoidable one. In Beijing, a U.S. attaché was informed that China “would take appropriate defensive reactions if there were violations of their airspace and territorial waters.”³ Washington, on the other hand, downplayed the event, indicating that with China beginning to send the fleet beyond its shores into waters that have been the sole domain of the U.S. Navy, “there’s inevitably going to be more and more of this kind of thing.”⁴

The Yellow Sea incident underscored the prevailing chill in U.S.-China relations. Once drawn together by a shared concern about the Soviet Union, the two countries drew apart when Washington imposed sanctions on Beijing after the attack on unarmed demonstrators in Tiananmen Square on 4 June 1989.⁵ Relations have marginally improved since; however, a perception lingers in the United States that Chinese attitudes on a broad range of issues run counter to American interests.⁶ At least one congressional China expert believes that “there is a body of opinion in this country, I don’t know how big, that thinks China is

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the enemy.”⁷ In Beijing, where the leadership is busily “fanning the flames of nationalism” in order to hang on to power, the attitude is equally hostile.⁸ Hard-liners believe that the United States, having disposed of the Soviet Union, will now move against China to eliminate a major barrier to global American supremacy.⁹ More significantly, the Chinese military, aiming for expanded budgets, leads in promoting aggressive nationalism and an unyielding atmosphere in Beijing.¹⁰

Is China a threat? Admiral Richard Macke, the former commander of U.S. Pacific Command, once observed that a combination of capabilities and intentions makes a threat.¹¹ China’s continuing military modernization program, started in the 1980s and including a new forward-looking maritime strategy, has already made the Chinese navy a potential regional power. However, it is more difficult to evaluate China’s intentions than its military strength. Indeed, according to certain State Department officials under President George Bush, China has a policy of “calculated ambiguity to mask its ambitions.”¹²

This article explores those “ambitions.” East Asia having an intrinsically maritime character, the focus is naval, befitting the primary medium of power in such a theater. Specifically, therefore, the article analyzes the Chinese navy’s shift in strategic direction from the support of land operations to the conduct of war at sea, arguing that though the Chinese navy’s present concept is one of forward defense, limited wars, and local conflicts, China clearly wants to be a global sea power. The implication is that China’s long-term goal of becoming a blue-water naval power is placing it on a strategic collision course with the United States, as each nation pursues its own interests in East Asia.

East Asia and U.S. Interests

Winston Lord, the Assistant Secretary of State for East Asian and Pacific Affairs, has asserted that of all the world’s regions, East Asia is “the most relevant to the President’s highest priority—namely his domestic agenda, the renewal of the American economy, getting the deficit down, getting more competitive, promoting jobs and exports.”¹³ President William Clinton himself described the region as “the most promising and dynamic area for American foreign policy.”¹⁴ Access to East Asia’s riches has always been one of America’s primary goals;¹⁵ it was trade that prompted the American merchant ship *Empress of China* to anchor off Canton more than two centuries ago.¹⁶ The new republic, isolated from the lucrative European markets, saw a bright future waiting across the Pacific; in today’s era of global interdependence, the United States looks again to the “far west” in a quest for economic renewal.

Noting that East Asia already accounts for 2.5 million American jobs, Admiral Charles Larson, when he commanded the U.S. Pacific Command, prophesied that

“our economic future” is in this region.¹⁷ The numbers are already impressive: “Thirty-six percent of U.S. trade is in East Asia (\$120 billion of U.S. exports), three times our trade with Latin America, and one-and-a-half times our trade with Europe. East Asia has almost half the world’s population. It contains some of the most rapidly growing economies in the world. Japan is already the second-largest industrial economy in the world. China already has a gross national product of about \$1.2 trillion. According to the International Monetary Fund, East Asia will, by the turn of the century, account for thirty percent of the world’s gross national product.”¹⁸

On the surface, East Asia, preoccupied with the pursuit of wealth, appears tranquil. But under its calm surface, it is a cauldron of competing interests. From the Russia-Japan quarrel over the Kuril Islands to the Malaysia-Philippines squabble over Sabah, territorial disputes in the region abound. The dispute over the Spratly Islands (referred to by the Chinese as the Nansha Archipelago) is, possibly, the most volatile. The competing claimants include China, Taiwan, Vietnam, Malaysia, the Philippines, and Brunei.¹⁹ Apparently (though not certainly) rich in oil and other natural resources, the Spratlys straddle major sea lines of communications through the South China Sea, which gives the dispute the potential to destabilize the entire region.²⁰

In 1949, when the communists took power, China observed the internationally accepted three-nautical-mile territorial limit. However, instead of using the low-water mark on the mainland coast as the baseline, China began to measure its territorial waters from a baseline connecting the outermost offshore islands, such that all the disputed offshore islands lay within China’s territorial waters.²¹ In February 1992 the National People’s Congress passed a “Law of the Territorial Sea and Contiguous Zone” that reasserted Chinese claims and authorized the use of military force to prevent other nations from occupying the islands.²² Moreover, in 1993 a book entitled *Can China Win the Next War?* appeared in China. The authors, almost certainly naval officers, discussed in alarming detail the scenarios for war in the disputed areas.²³

The implications are worrying. Geographically, the scope of this vast area closely resembles the extent of Chinese influence during the seventeenth century, when East Asian states paid tribute to China.²⁴ The chief of the Malaysia Institute of Maritime Affairs, Hamzah Ahmad, summed up fairly the foreboding felt in the region: “China should not attempt to revive the Middle Kingdom mentality and expect tribute from Southeast Asia.”²⁵ Strategically, the South China Sea can be considered a maritime “heartland”;²⁶ domination of it would give the Chinese political, economic, and military influence over the “rimland” nations and other states in the region. Japanese, Taiwanese, and South Korean imports, for instance, come through the South China Sea.

Beyond these security concerns lie more challenges for the United States. In the capitals of East Asia, American foreign policy resolve is being questioned;²⁷ there is a growing perception that the "U.S. has become inward-looking."²⁸ This may not be far from the truth. Indeed some Americans believe that the nation should go back to being, in the words of former ambassador to the United Nations Jeane Kirkpatrick, a "normal country."²⁹ Voices for disengagement and protectionism, though few, are growing louder. Further, domestic problems continue to dominate American politics. It did not help that the U.S. withdrawal from Subic Bay Naval Base and Clark Air Force Base, both in the Philippines, were accompanied by a massive downsizing of the overall military force. In addition, the budget deficit and the burden of the national debt threaten further cuts. Based on America's "long history of not understanding [its] own policy, being dislocated, sidetracked, and short-sighted," it is no wonder that allies are beginning to question the U.S. commitment to the region.³⁰

China and Regional Security

The American interests in East Asia that Winston Lord implies are of such significant, even vital, importance include peace and security, preventing the rise to dominance of any regional power, and guaranteeing commercial access.³¹ The fundamental objectives of U.S. policy in East Asia have remained basically unchanged for almost a hundred years. Today, China is challenging those interests.

In February 1995, the People's Liberation Army expanded its presence in the disputed Spratlys in the South China Sea by taking over an island claimed by the Philippines.³² Washington hardly noticed the incident, but the Chinese navy's enforcement of a territorial claim just 130 miles off the Philippine west coast sent a grim message across East Asia. Raising the Chinese flag in the appropriately named Mischief Reef was "an act that both in symbol and substance may foreshadow a role reversal in the Pacific, with the PLA Navy ultimately displacing the traditional U.S. Navy preeminence."³³

After centuries of decline, China today is an emerging maritime power, and the PLA Navy has become a considerable factor in the strategic equation in East Asia and the Western Pacific.³⁴ Although China has a naval history that goes back about two millennia, it is not a continuous or invariably proud legacy;³⁵ periods of unprecedented expansion were followed by much longer stretches of almost complete neglect. Consequently, when the PLA Navy was established in 1949, it inherited no seagoing tradition. Naval forces were viewed as merely a coastal arm of the ground forces; in 1950 Xiao Jingguang, their commander, dictated that the fleet "should be a light-type navy, capable of inshore defense. Its key mission is

to accompany the ground forces in war actions. The basic characteristic of this navy is fast deployment, based on its lightness.”³⁶

Lacking in naval warfare thought and experience, the PLA Navy adopted the naval doctrine of its military mentor, the Soviet Union, then based on the “Young School” of naval strategy, which promoted “coastal submarines, torpedo boats, and other coastal craft, supported by naval aircraft based on shore.”³⁷ Over the next three decades, the PLA Navy built a virtual “wall at sea” comprising hundreds of small vessels. It was, in effect, a navy for coastal defense only. Subservient to its more influential army brethren, the PLA—as evident in its very name—Navy followed a subordinate and limited naval strategy until the latter 1970s.

In 1974 the PLA Navy forcibly took the Paracel Islands (Xisha Dao) from the Vietnamese, but in doing so it was badly bloodied by a smaller force. Alarmed by the exposed deficiencies, the Chinese leadership set in motion a plan to modernize the fleet. More importantly, its strategic focus was shifted from coastal to open-water operations.³⁸ Ultimately, with the end of the Cold War, Chinese planners realized that new international conditions required new assumptions: though in the near future a world war was unlikely, limited wars were a distinct possibility.³⁹ Since then, the development of naval strategy has been concentrated on what the Chinese call “active defense and inshore warfare.”⁴⁰

The concept of “active defense” is, in reality, offensive in design and intent. Deng Xiaoping, the Party leader, explained in 1980 that active defense includes “our going out, so that if we are attacked, we will certainly counterattack.”⁴¹ The building of a navy capable of expanding China’s defense perimeter at sea is accordingly a key element of the new Chinese maritime strategy.⁴² Under the current “People’s War in Modern Conditions” doctrine, which emphasizes high technology in modern warfare, the fleet would aim to oppose the enemy “outside the country’s gates.”⁴³

The PLA Navy has made somewhat unclear public pronouncements about the actual distance implied by “inshore waters” or “green water.”⁴⁴ Admiral Liu Huaqing, as the commander in chief of the PLA Navy in the early 1980s, asserted that “the Chinese Navy should exert *effective control* of the sea within the first island chain.”⁴⁵ As defined by Admiral Liu, the “first island chain” includes the Japanese archipelago, the Ryukyus, Taiwan, the Philippine archipelago, and Indonesia. He added that “inshore” means the ocean expanse within the “second island chain”—which includes the Bonins, Marianas, and Carolines.⁴⁶ Accordingly, this new strategic interpretation extends Chinese naval operations far out into the Pacific Ocean.

Land powers react to maritime threats by going to the sea themselves to fight their enemies on the sea.⁴⁷ Sparta built hundreds of triremes to defeat the

Athenians, Carthage compelled Rome to build a navy, and Russia extended its defensive lines out into the oceans during the Cold War.⁴⁸ Today, China is building a modern fleet and, simultaneously, pushing its defensive depth hundreds of miles from the mainland shores. Eventually, China's transformed "active defense strategy" will oppose the United States *on* the sea. There, on the "inshore waters" of the Pacific, as the *Han* incident suggests, the PLA Navy's emerging strategy of "forward defense" is already sailing straight across the bow of the U.S. Navy's primary mission of "forward presence." Washington has been watching, and with growing concern. Last year, according to a Republican congressional staff member, the Pentagon's Office of Net Assessment ran a simulation exercise using a scenario that showed China successfully invading Taiwan;⁴⁹ in another, involving war between China and the United States, China won.

Warring States

Collision appears inevitable. On the eve of Taiwan's first presidential election in March 1996, the PLA Navy placed its forces on alert as China fired "test" missiles menacingly close to the Taiwanese shores. The United States quickly assembled two carrier battle groups near the straits. Taiwan's initial bid for democracy was the latest rupture in a series of crises that, over the years, have drawn China and the United States closer to confrontation. Neither side has been willing to cross the line so far; the Chinese and U.S. naval forces seem determined to stay clear of each other's way, at least until the next wrong assumption, or miscalculation.

Domain of the Dragon. China and Russia both have long coastlines, and most of the other states of East Asia are islands, peninsulas, or archipelagos. Of these littoral actors, China is potentially the most powerful. In Northeast Asia, the U.S. Seventh Fleet, homeported in Japan, provides a stabilizing counterweight; in Southeast Asia, on the other hand, the PLA Navy may fill the strategic gap created when the U.S. and Soviet navies left their bases in the area. The South China Sea, like the Strait of Malacca, is a vital link between the Pacific and Indian Oceans; passage through this area is very important for the economies of the United States and its allies.

China's new orientation toward its maritime interests is a key factor in guiding the PLA Navy's future course. Zhang Liangzhong, its present commander, has said that "to defend China truly and effectively from raids and attacks from the sea, we must strengthen the defense in depth at sea and possess naval forces that have the capability to intercept and wipe out the enemy."⁵⁰ On a related point, Liu Huaqing, now the deputy secretary general of the Central Military Commission, observed that "for mankind, the oceans today are not just paths to new

continents or keys to the control of the world; of more importance is the exploration and exploitation of the oceans themselves.”⁵¹ The upshots of these two statements are, first, that development and modernization of forces is central to the PLA Navy’s maritime strategy, and second, that a major task for the navy in the coming years will be to control and protect maritime biological, mineral, and energy resources.

The configuration of the South China Sea makes it ideal for the PLA Navy, in fact one of the principal “domains of the dragon.”⁵² Chokepoints can be guarded by small craft and fishing vessels. In addition, the shallow water favors submarines, which can “hide between the layers of the underwater thermals and maneuver among the rocks and shoals, where the acoustics are clouded.”⁵³ Moreover, some strategically located islands can be used as stationary “carriers” from which aircraft can be launched to support naval forces. Other smaller islands, rocks, and shoals can serve as missile platforms, communication relay stations, observation and listening posts, and temporary logistics bases.

The PLA Navy’s strategic focus of forward defense is suited to its improving capability and, importantly, the perceived threat. Moreover, the concept fits well with the fundamental national defense objective of “winning local wars under high-tech conditions.”⁵⁴ However, while the PLA Navy is adequate for missions close to home, ability to confront a modern opponent like the U.S. Navy must be viewed as a matter for the future. The PLA Navy is planning to attain such a capability over three phases. In the first, which is expected to be complete by the end of the century, the focus is on new equipment that will quickly enhance the navy’s combat capability in order to deter local threats and win battles at low cost and quickly. In the second phase, which extends to the first two decades of the twenty-first century, the projection capability of the navy is to expand beyond the Western Pacific to all the oceans of the world; high-technology task forces will center on aircraft carriers. The third phase extends beyond 2020 and envisions China as a global sea power.⁵⁵

China understands clearly that its oceanic aspirations are, for the moment, beyond the reach of its power. The navy’s new strategic direction is meant to ensure that the “inshore waters” do not always remain a distant domain. But territorial disputes will linger and, as shown by recent events, may sometimes become intense. Therefore it is not surprising the most Chinese leaders continue to assert that “the focus of the Chinese navy must be on modern technology, particularly on preparing for limited wars at sea in which high technology will be used.”

Can the Chinese Navy Win the Next War? Many analysts maintain that despite the progress of an ambitious modernization, China’s naval strength will remain limited for the near and middle term.⁵⁶ Indeed, Zhang Yunling, director of the

Institute of Asian and Pacific Studies under the Chinese Academy of Social Sciences, recently admitted that China and the United States “cannot have a face to face conflict,” simply because it is a lopsided “confrontation between the existing superpower and an emerging power.”⁵⁷ While such a realistic attitude is comforting for the West, at higher levels an impetuous stance prevails. A pro-Beijing newspaper in Hong Kong has quoted Chinese sources that the “PLA [Navy is] capable of seizing control of the entire Taiwan Strait and of burying any foreign intruder in a *sea of fire*.”⁵⁸ It is quite possible, then, that miscalculation of Chinese capabilities and of U.S. intentions could cloud Beijing’s vision. It does not help at all that many Chinese leaders cling to such bellicose litanies as “the weak defeating the strong, the inferior winning out over the superior, a standoff between weak and strong, and the conversion of weakness into strength.”⁵⁹

Chinese analysts have drawn lessons from recent conflicts, particularly the Falklands and Persian Gulf wars.⁶⁰ They note that during the Gulf war the coalition “scored a sweeping victory because it enjoyed three major advantages: sufficient time to transport troops, equipment and materiel by air and ship, its ability to cut off the enemy’s communication lines and [capacity] to effectively use advanced weapons, and its ability to move around a large number of troops without being monitored or running into resistance, by exploiting Iraq’s inferiority in weapons. Faced with this kind of expeditionary force which is equipped with superior hardware but is far removed from the battlefield, what strategy should the country on the defensive take?”⁶¹

The past reveals an easy, albeit incomplete, answer. Though the Chinese military has embraced new doctrines and strategies tailored to modern conditions, its leaders remain “steeped in traditional military thought.”⁶² They evoke their ancestors’ advice of seeking victory through deception and cunning rather than through passages of arms.⁶³ Mao Zedong’s teachings remain an influence. The PLA Navy once strongly advocated the “Young School” because, theoretically, it amounted to guerrilla warfare on the sea. It fused Sun Tzu’s advice and Mao’s teachings in a naval context: “the concealment of forces behind islands or among fishing fleets, the rapid concentration of forces for surprise night attacks, and mastery despite technical inferiority through audacity and tactical skill.”⁶⁴ In contemporary application, the PLA Navy may well simply saturate enemy tactical displays with hundreds of unknown and indistinguishable contacts. Or, China may resort to “irregular” warfare. Already Southeast Asia has become a center of pirate activity, and while it has not been positively established that the PLA Navy is involved, some marauding craft fly the Chinese flag.⁶⁵ The PLA Navy may choose to employ these renegades, alongside the country’s huge fishing and merchant fleets, near chokepoints so as to get near the enemy, thus overcoming the navy’s disadvantages in size, quality, and weapons ranges.

In addition, the Chinese navy has been developing new capabilities of its own. China's purchase of four Russian Kilo-type conventional submarines in 1995 raised both the military stakes and tension in the region.⁶⁶ An upgrade of the *Ming*-class patrol boats has also been undertaken, with help from Israel. The first *Song* submarine, a locally produced type that incorporates "many new technologies" including a low-noise screw, was launched in 1994.⁶⁷ By the turn of the century China plans to begin building two aircraft carriers, each capable of carrying twenty-eight fixed-wing planes. Several new ships have already joined the fleet: two *Luhu* guided-missile destroyers with French-built sonars, two *Jiangwei* guided-missile frigates, *Huang* and *Houzin*-class missile patrol boats, and two *Dayun* logistics ships.⁶⁸

Despite such actual and planned progress, however, the PLA Navy's power-projection capabilities remain constrained. Its inventory of modern, multipurpose platforms is modest. In addition, it lacks appropriate aircraft to support a large naval engagement.⁶⁹ Nonetheless, there is a strong feeling in Chinese military circles that "the strongest does not necessarily win final victory, with the wisest philosophy of war and the best battle strategy and tactics being the only magic weapons for winning ultimate victory."⁷⁰ It can be expected therefore that Chinese naval forces will use cunning in any military action, employing surprise to offset qualitative and technological deficiencies.⁷¹ Indeed, the early 1996 Chinese maneuvers near Taiwan exercised the principles of "a war of quick decision."⁷² "An effective strategy by which the weaker party can overcome its more powerful enemy is to take advantage of serious gaps in the deployment of forces by the enemy with a high-tech edge by launching a pre-emptive strike during the early phase of the war or in the preparations leading to the offensive."⁷³

"Magic" weapons, strategies, and tactics, no matter how superior, are worthless without platforms. Lacking modern ships, aircraft, and equipment, the PLA Navy today would be overmatched by a high-technology enemy. But situations change. Faced with this uncertainty, the U.S. Navy, as it continues to rule the "inshore waters," would be wise to observe that ancient Chinese principle of knowing the enemy and knowing yourself.

The United States wants to be, and in fact needs to be, engaged in East Asia, but its policies sometimes add uncertainty rather than stability to the strategic calculations of the states in the region. Territorial disputes, if unresolved, may therefore eventually lead to war, which could in turn conceivably involve the United States. Before that happens, an evaluation of current U.S. naval strategy is in order.

The Mischief Reef incident confirms the maritime dimension of the conflicting regional interests and suggests that it would be entirely possible for a war to start in the South China Sea “accidentally.” Poor communications could allow independent-minded Chinese naval officers to make their own rules.⁷⁴ Officially, the United States has distanced itself from the present territorial issues, yet such concerns as maritime access could ultimately drag the United States and the rest of the region into an unwanted confrontation with China.⁷⁵ In that event, U.S. naval forces would be indispensable, especially in a conflict that sprang from maritime disputes—and in East Asia almost every hostilities scenario includes such a basis.

Given the many weaknesses of the PLA Navy, the U.S. Navy will remain superior to the Chinese fleet for many years to come. That is not the issue. The danger, rather, is the possibility of an expansive, even bellicose, Chinese foreign policy provoking open conflict with a weaker neighboring state. Arms races and exacerbated regional tensions, on the one hand, and an entangling of American armed forces, on the other, are opposite evils to be avoided. However, the Chinese navy has markedly improved in capabilities and is clearly aiming for a blue-water capacity. It has already developed an “active defense and inshore warfare” strategy commensurate with its improving ability to deal with limited wars and regional conflicts, at the same time as the U.S. Navy is concentrating on the world’s littorals in support of its own new maritime strategy. The U.S. Navy’s recent white papers “. . . From the Sea” and “Forward . . . from the Sea” have changed its focus to operations near land. There is irony in the fact that while the U.S. Navy is slowly shifting away from its sea control mission, the PLA Navy is actively pursuing command of the regional waters.

While the Somalias and Haitis and Bosnias of today justify the current naval strategy, it must be kept in mind that the U.S. Navy’s maritime strategy of the 1980s was abandoned only because of the absence of a major naval competitor. General John M. Shalikashvili, Chairman of the Joint Chiefs of Staff, warned in a recent speech at the U.S. Naval War College of tomorrow’s “unicorns”; we may find soon enough that the unicorns have already moved onto the sea. Current U.S. naval thinking is based on two assumptions: “that the U.S. has uncontested command of the high seas, wherever and whenever it chooses,” and “that all military operations in response to a crisis will be joint.”⁷⁶ Today, Chinese naval power, as it gradually spreads into one of the world’s most important maritime arenas, may be undermining those very foundations.

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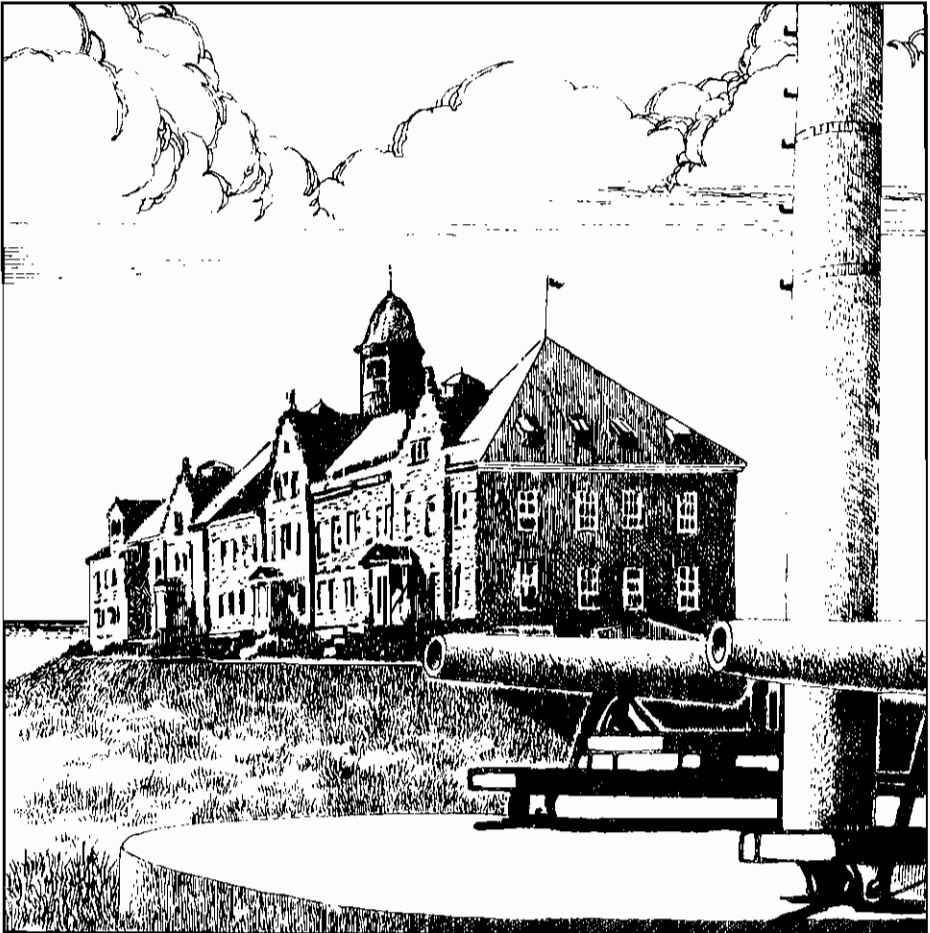
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Ψ



China

An Opponent or an Opportunity?

Rear Admiral Eric A. McVadon, U.S. Navy, Retired

I AM ESPECIALLY HAPPY, AFTER SEVERAL YEARS AWAY, to be here again at the Naval War College, this time to talk about China and East Asia. Part of my happiness in being before this audience is because I am not satisfied that the U.S. Navy and others in Washington have given adequate and appropriate attention to China. Let me explain.

In 1989 I was the U.S. and Nato commander in Iceland. I volunteered to leave Iceland and go to China when the Navy's turn to fill the defense attaché billet came around. No other Navy flag officer even put his hat in the ring for that assignment. Why would a U.S. Navy flag officer want to go to China?

Following a year in school, my wife and I arrived in China on 2 August 1990 and were greeted at the Beijing International Airport by virtually the entire Beijing attaché corps. There was not a single Chinese uniform to be seen. I was snubbed by the Chinese not only because of the Tiananmen Square aftermath but also because we had snubbed the PLA, the People's Liberation Army, the day before, refusing to attend their important Army Day receptions after they had accepted invitations to, and had attended, our Fourth of July celebrations. This was a foolish diplomatic spat, all too typical, but one that affected bilateral relations. My arrival and snubbing, however, were not the most significant events of the day; 2 August was the day Iraqi forces invaded Kuwait. After a long delay, I was finally accredited—swallowing my pride to meet unceremoniously with the most junior deputy in the Foreign Affairs Bureau. I was then promptly dispatched by Washington to have my first meeting with a PLA general officer, to demand

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An address delivered on 11 September 1995 to the students of the College of Naval Warfare at the Naval War College.

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of him that China support the United States in its condemnation of Iraq, cease shipments to the Hussein government, and provide prompt documentation to Washington that it was complying with these demands.

As you may have guessed, Ambassador James R. Lilley and I had to pull out the stops to gain Chinese support for the subsequent eleven United Nations resolutions concerning Iraq; but we and others succeeded. How we did so in that very negative environment is another story, but we did. I wondered whether Washington had any idea what it had asked of us and what we, primarily Ambassador Lilley, had accomplished.

I had not long to wonder. DESERT SHIELD was about to become DESERT STORM. The Iraqi armed forces, in addition to all the systems they had acquired from us and other Western countries, had much equipment supplied by China. I wanted to talk with Chinese officers about that equipment. The PLA, incidentally, asked if I could give them reports on any aspects of the war from which they could learn. We, thereby, had the potential to influence the PLA's view of this milestone event in warfare and possibly to read their reactions. Washington's answer was that I must rely on news reports for any information I supplied to the Chinese. Many of us regarded CNN as a timely and accurate source of information during DESERT STORM. I hope the Chinese remember my reports similarly—but I vividly recall how often CNN got it all wrong or parroted the words of some overoptimistic U.S. spokesman. At least the Chinese, who were also watching CNN, did not correct my errors to my face.

I excused much of this, rationalizing that Washington had a war to fight and that my problems were lost in the noise. The end of DESERT STORM, however, did not change things. For example, when U.S. Navy carrier aircraft mistakenly intruded into Chinese airspace, I—and the Ambassador—learned of it first from the Chinese; in response to my message, I eventually got a reluctant, partial explanation from Washington. There were, of course, many other similar oversights that must remain unmentioned.

In my final report from Beijing, I pointed out that the Navy flag officer in Beijing, the only U.S. Navy officer in China, was the least well informed person concerning the U.S. Navy and China of all those who cared. There was only one notable exception to this attitude of neglect. I asked then-Vice Admiral Stanley Arthur, an old friend who was the Seventh Fleet commander, how I should respond to questions by the Chinese and my fellow naval attachés in Beijing about U.S. Navy initiatives with the Indian Navy. He answered my questions promptly and fully. It felt good to give the PLA Navy a meaningful report, and, of course, our side of the story. In return, I got the only early and factual statement from the PLA Navy that it had decided, at least for the time being, not to acquire an aircraft carrier—because it cost too much, and also for all the reasons I had been

giving my PLA Navy contacts about why it did not make operational sense for them and would not sit well with their neighbors.

Anecdotes like these should illustrate that there is much that both sides have to gain from consultation and cooperation and that much is lost absent those things, things of far more sweeping consequences than in the cases I have mentioned. One of the major consequences of this situation is the loss of an ability for us to see the world as the Chinese see it. In an attempt to remedy that difficulty a bit, let me give a quick *tour d'horizon* from Beijing's perspective.

When Beijing looks north it breathes a sigh of relief and sees a Russia that is no longer an immediate threat to its survival; Russia now is a country to be cultivated as a source of high-technology military equipment. There remains, however, great uncertainty in China about the Russia of the future. No Chinese assessment of security threats omits mention of an unpredictable Russia.

Turning to the east, Japan is prominent as the most deeply hated of China's neighbors, primarily for the treatment China received at the hands of the Japanese in the 1930s and '40s. The Japanese now are tolerated as investors, as a source of aid (despite the freeze on grants imposed recently by Tokyo to protest Chinese nuclear testing), and as important joint venture partners, but the specter of resurgent Japanese militarism is another looming component of the security threat that China envisions.

Korea is not seen by the Chinese as simply a divided peninsula composed of an isolated and obstreperous North and a prosperous South. Korea is also remembered historically as a bordering state that has been a source of problems. The Chinese say publicly that they value their trade and new diplomatic relations with the South, that they support sympathetically the communist regime in the North, and that they want a stable, non-nuclear Korean peninsula. Privately some Chinese say that their interests might be well served by a continuing divided Korea, one that cannot so readily renew its ancient struggles with its big neighbor. What is left unsaid in most Chinese conversations about Korea is that "reunification" means absorption of the North by the South, a non-communist South that has clearly won the contest over which type of regime spells success for the Korean people. Chinese Communist Party ideologues and many other loyalists in China do not relish the demise of yet another communist government. It is already feeling very lonely at Communist Party headquarters in Beijing.

Beijing worries about a cozy Washington-Pyongyang relationship and active U.S. planning for continuation of an alliance relationship in Korea after reunification. Put more broadly, China does not view continuing American alliances with Japan and Korea, after the end of the Cold War, in the same benign light that most Westerners might. Chinese ask themselves against whom, if not China, these alliances are formed. We jar Beijing when we suggest, for instance, that the

U.S.-Japanese-South Korean cooperation that devised the light-water reactor deal for North Korea might evolve into a Northeast Asia multilateral security forum—is this not, they wonder, yet another ploy to get together and menace peace-loving China?

China being the biggest country in Asia and having the fastest-growing economy and military, should China be a part of our security arrangements for Asia or the target of them? Both sides need to keep that question squarely before them as the security calculus in Asia changes. It is not overlooked in Beijing's calculations.

Continuing the tour, due east is Taiwan. As we have all heard often during the latest serious crisis in Sino-American relations, there is no doubt that older Chinese leaders firmly hold the view that Taiwan is an inalienable part of China. We, in recent years, have had our bilateral spats with the People's Republic over human rights, trade, and missile sales. We rode out those bumps in the relationship. Then came the issue of the visit of Taiwan President Lee Teng-hui; that bump upset the apple cart, and we are still working hard to get it right side up again. Taiwan remains the most volatile factor in our relationship with China, the factor about which the Chinese will act most irrationally, from our viewpoint, and *the* issue that the Chinese say they would go to war over regardless of the projected outcome of the conflict.

From the Chinese perspective, the issuance of the visa to *the president of Taiwan* was a clear provocation, amounting to American support of Lee's campaign to break out of international isolation and attain for Taiwan a new role in the world—all anathema to Beijing, of course. When I have accused Chinese officials of overreacting to the Lee visit, they have responded that they reacted just as they have said for decades they would: President Clinton was the one who had not acted rationally. In any case, if we were uncertain before, we know now exactly where Beijing's sorest spot lies.

Let us turn to the South China Sea, another sore spot. China insists on its sovereignty over the Paracel and Spratly islands. The intensity of the claims by both China and others has kept pace with the (unsubstantiated) projections of large oil reserves in the area. Beijing aggravated the situation in early 1992 by enacting a law that suggested the Chinese might restrict passage through the South China Sea, based on their assertion of historical sovereignty over all the islands. They did nothing to implement that nebulous 1992 document, but concern lingered among various nations of the world. Following the incident early in 1995 with the Philippines, after the Chinese built facilities on Mischief Reef in the Spratlys near Palawan, Admiral Richard Macke [then the U.S. commander in the Pacific] made a firm statement about what the United States might do if freedom of navigation were threatened in the area. The reaction in Beijing was surprisingly favorable, that China "fulfills, according to international

laws, obligations guaranteeing the free passage of foreign vessels or aircraft in the South China Sea.”

Six governments, including Taiwan, claim all or part of the Spratly Islands. China, at least until very recently, has been bullying its way, dealing with the countries of Southeast Asia one-on-one to get what it wants, all the while spouting the conciliatory line that it favors joint economic development of the resources of the area while setting aside the territorial issues. China has avoided multinational diplomatic engagements, where the smaller countries can collectively reduce Beijing's advantage. However, China said at the 1995 session in Brunei of the Regional Forum of the Association of Southeast Asian Nations (or ASEAN) that it will negotiate with others making claims in the South China Sea, using international law, including the 1982 UN Convention on the Law of the Sea, as a basis.

Many people are keeping an eye on the South China Sea dispute, for all sorts of reasons. It is interesting in the present connection because it is displaying, for all the world to see, an orchestrated undertaking by Beijing that combines diplomatic finesse, economic factors, military power, and traditional Chinese patience. I do not necessarily imply that this is a sinister exercise by Beijing. History is rife with far more noxious examples of the employment of national power to achieve a goal. I do mean to imply that it is informative as to what we should expect of China as a rising world power.

Although the most recent brouhaha in the South China Sea was the occupation of Mischief Reef, a spat primarily between the PRC and the Philippines, the most serious confrontations in the area have been between China and its long-time enemy, Vietnam. The incidents have been numerous, including China's taking of six Spratly atolls in 1988, when the PLA Navy sank two armed Vietnamese resupply ships with the loss of over seventy lives. Vietnam is a rival in the South China Sea, and especially for the oil both nations hope is there; but beyond that, over the centuries China and Vietnam have learned to hate each other, for reasons many Chinese and Vietnamese probably cannot or do not bother to remember. Both sides do remember 1979, however, when the PLA invaded Vietnam to a distance of fifty kilometers over sixteen days to teach Hanoi a lesson for what it was doing in Cambodia. Most contend that China, although claiming victory, learned the bigger lesson, when it bogged down and found that it did not have the fighting forces or the logistics to carry out such a campaign. Beijing learned that the army it still proudly touted as having defeated the Americans in Korea was, twenty-five years later, capable of doing very little. The Chinese are still smarting from that military misadventure, a major impetus in their present effort to modernize their antiquated armed forces.

Sixteen years after the invasion, though there is still not much love lost between Beijing and Hanoi, relations between the two countries have turned

upward, with the normalization of relations in the early 1990s and establishment of many bilateral ties, primarily commercial. Beijing is now less inclined to hammer Hanoi, and Hanoi is less inclined to strike back, even when the two annoy each other over, say, an oil claim in the Spratlys. There is now much to lose for both countries in economic and diplomatic terms; Hanoi is doubly disposed to accommodate, because of China's size and weight. The two countries have agreed to keep negotiations over their land border separate from the contentious issues of claims in the South China Sea. In late July 1995, Vietnam became a member of ASEAN. It will be interesting now to see the effect that membership has on Vietnam and the effect Vietnam's membership has on ASEAN's interactions with China.

“ . . . [The] South China Sea dispute . . . is displaying . . . an orchestrated undertaking by Beijing that combines diplomatic finesse, economic factors, military power, and traditional Chinese patience[:] . . . what we should expect of China as a rising world power.”

In my opinion, the most important thing going on in ASEAN today is its Regional Forum, the ARF. This body had its second session during the ASEAN meetings mentioned above in Brunei in mid-1995, trying to come to grips with regional security issues—a novel undertaking in that part of the world. Of course, the real regional security issue is China: its military modernization and the absence of Chinese candor or transparency. China is participating in the ARF, as are we and several other non-ASEAN states, including Japan, Russia, and South Korea. (Taiwan is not part of the ARF, because the PRC, of course, adamantly opposes its presence in the group.) China's participation is one of many indicators that nowadays those in China who want the PRC to be a constructive member of the world community are more often carrying the day in the internal arguments in Beijing. For many Westerners it will be hard to give up the convictions, the preconceived notions, to the contrary, but Chinese government officials are not all troglodytes, and the government is not a monolith. Despite tendencies to retreat to these characteristics when pressed, there are many Chinese officials who are reasonable and ethical—even personable.

One can disparage the results of the first two meetings of the ASEAN Regional Forum, pointing out, for example, that China has not committed itself to confidence-building measures to assuage the concerns of its neighbors over its military modernization program. On the other hand, in the ARF meetings, which are continuing, very senior Chinese officials are repeating assurances that they seek a peaceful solution of South China Sea disputes, that (surprisingly) they will now

negotiate the matters collectively with ASEAN members, and that they will publish a defense white paper.* The more often these things are said, and the more ways they are embellished by various Chinese leaders, the better. Putting all this another way, it is absolutely amazing that not only has ASEAN put together a multinational forum for discussing security issues, but that the PRC sits at that table, and also that Vietnam has been allowed to join the Association years ahead of when most experts expected that to happen. The ASEAN Regional Forum is certainly no Nato, but it is surely an organization worth watching, whether from Beijing or Washington.

Moving westward, Burma, or Myanmar, is the next location where the Chinese are causing consternation. The concern is not in Rangoon but, most intensely, in New Delhi, in other regional capitals, and even in Washington. China's trade with and military support of Myanmar are significant, but an item of specific concern is naval cooperation. China has built a naval facility of some sort on an island in the mouth of the Irrawaddy for the purpose, as the Indians put it, of expanding into the Indian Ocean and further threatening Indian security. Some Indian officials have advocated bombing the site. Appropriately for the Orient, both the Chinese and Burmese are being inscrutable, keeping their own counsel, in this matter. Those who know even a little about the PLA Navy find it hard to believe that China is routinely operating ships remote from their homeports; to put it bluntly, the PLA Navy has its hands full trying to operate and support its traditional three fleets—North Sea, East Sea, and South Sea—from its own bases in China. Further, Chinese officials who have been forthright about other things deny that they have a base in Myanmar. They also deny reports, by the way, that China has formed a fourth fleet, to be known as the Ocean Fleet, with headquarters near Shanghai.†

My conjecture is that a few years ago China became flustered when the Indian Navy seemed headed for a regional hegemonic role, and that Beijing began to work with a willing Burmese government to set up a way to monitor Indian Navy activities more closely than they had been. Although the din over that purported Indian naval threat has subsided somewhat as the means for Indian Navy expansion have faded, Beijing has had nothing to lose by keeping an outpost on the Burmese coast.

Despite the reciprocal Chinese and Indian concerns about the extension of naval power and over their lingering border dispute, there has been an improvement in Sino-Indian relations. Rajiv Gandhi's fruitful 1988 visit to Beijing and

* That occurred in late 1995, with publication of a paper that was less specific than had been hoped for, but was a start.

† I have been able to discover nothing more since this address was delivered about the rumor of a new fleet and headquarters.

also a détente in 1993 greatly eased tensions. India has reportedly moved three divisions away from the Chinese border area, to Kashmir. In the summer [1995], India and China agreed to withdraw forces from four border points in eastern Tibet, where the proximity of troops from the two sides had made clashes more likely. Complicating the Sino-Indian situation, however, is the bitter struggle between India and (China's friend) Pakistan. Possibly the best example of these complications is the Indian development of advanced ballistic missiles capable of delivering nuclear weapons against Pakistan. China has long supported Pakistan, clandestinely in nuclear weapons technology, openly in the sale and production of conventional arms, and mysteriously in the acquisition, somehow, of something at least resembling the M-11 missile.*

Many in the United States are convinced that China has delivered that missile, assembled, to Pakistan; many more are convinced that at least major components have been transferred. Pakistan, in carefully couched statements, officially denies those assertions, as has China. It fell to me officially in Beijing in 1991 and '92 to make some sense of all these contradictory statements and bits of evidence. It is still unclear today, but I would not be surprised to find that China has on one or more occasions, probably at times when they were most unhappy with the United States and vice-versa, transferred to Pakistan missiles approximating the M-11. If this is verified, the Chinese will likely assert that the transferred missiles did not violate the Missile Technology Control Regime guidelines and parameters that China considered applicable to itself at the time of the transfer—that is, the range or payload were below the MTCR limits. They will then launch into the usual diatribe about how the United States provides other countries with the F-16 and other aircraft at least as destabilizing as any missile China has transferred.

All this may make one wonder what value there was in China's agreement (during Secretary of State James Baker's November 1991 visit to Beijing) to comply with the MTCR or in its confirmation in fall 1995 that it would not export to any country missiles "inherently capable" of a range of three hundred kilometers with a payload of five hundred kilograms. I would argue that, absent these constraints on the Beijing bureaucracy—imperfect as they may be in practice—China might have transferred to Pakistan more, and more capable, missiles. India, in response, would probably have put greater effort, even earlier, into its own missile program, a problem many in Washington fear may be rearing its head again now. What could have happened then in South Asia would have made the

* The Chinese M-11 (also known as the CSS-7) is a modern, two-stage, solid-propellant ballistic missile with a range of three hundred kilometers and a payload of five hundred kilograms. Also known in China as the Dong Feng ("East Wind") 11, it can deliver conventional and, probably, nuclear warheads with an accuracy of about one-tenth of one percent of the target range. Developed for export, it is in the same "family" as the longer-range M-9 (Dong Feng 15 or CSS-6) used in the 1995-1996 missile "tests" intended to intimidate Taiwan. [Ed.]

enduring Kashmir conflict and the 1995 beheading of the Norwegian tourist only unpleasant cocktail-party chatter.* There is, therefore, a good chance that this is a case where the good—if not the perfect—has been achieved by our diplomatic efforts with a reluctant China, a new sort of China where, in the internal debates in Beijing, level heads can sometimes prevail.

China's worrisome reach in southwest Asia extends beyond Pakistan. Aside from the famous 1988 sale of outmoded, liquid-fueled CSS-2 ballistic missiles to Saudi Arabia and the supply to Iraq of military material, China also continues to assist Iran—in its nuclear reactor program, in the acquisition of first-line cruise missiles, and reportedly in medium-range ballistic missile technology. Earlier this year [1995], President Clinton was stepping up efforts to isolate Iran, and getting nowhere in trying to get the Chinese to cooperate in that anti-Iranian endeavor.

"We and they can continue to dwell on the issues that divide us, and we can convince ourselves of all that is bad about China, while they do the same about us. In the end, both will have a fully defensible and remarkable list—but an indefensibly and remarkably useless one."

I have been ridiculed, albeit in a friendly way, by a Pakistani brigadier for puzzling over the affinity that exists among China and these countries of South-west Asia. I had asked if the ties were, especially in the case of Iran, based to a great extent on a Chinese desire to perpetuate its access to petroleum; of course, in the case of Pakistan, there is the matter of a common enemy, India. The Pakistani officer's response was an enigmatic smile.

It is my impression that there is, among these countries, a feeling of camaraderie, a sense of being kindred spirits in a developing world—a world not of their making, dominated by countries that do not understand how deeply many Western concepts are despised by some Asians. I do not offer this conclusion with complete conviction, but it is worth keeping in mind as one ponders other things that have come about, such as the 1995 naval exercises Iran and Pakistan held, saying the exercises fostered "a greater strategic alliance."

I now have come almost full circle in this *tour d'horizon*, to the Central Asian states, former republics of the Soviet Union, in an area that earlier had the name Western, or Russian, Turkistan. China is not happy to have to deal with this motley group of sometimes chaotic new countries bordering its volatile western

* In July 1995, near Srinigar, India, an obscure guerrilla group kidnapped several Western hikers, threatening to kill them unless India freed jailed Muslim militants. India refused, and in August the decapitated corpse of a Norwegian hostage was found ("1996 Asia Yearbook," *Far East Economic Review*, p. 130).

reaches. China's far western Xinjiang Uighur Autonomous Region (significantly, once known as Eastern, or Chinese, Turkistan) is largely populated by people who look far more Turkic than Chinese and speak a Turkic language. As many know, Beijing had ample practice before the Tiananmen massacre in suppressing dissent by killing demonstrators; prominent among the places where dissent was suppressed by bloody force is Xinjiang. It is now Beijing's fear that dissidents in its far west will be supported or joined by factions in the Central Asian republics, demanding further autonomy or self-determination. Beijing has no intention of letting that flower bloom or even begin to bud, not only because of a firm intention to hold on to that territory and its oil reserves (and the Lop Nor nuclear weapons testing area) but also because the Chinese do not want the sprouting of independence to spread to Tibet and Inner Mongolia or, even worse, to inspire those who advocate independence for Taiwan. Strong actions by dissidents or separatists in Xinjiang or Tibet could be a catalyst for chaos throughout China.

I have tried briefly to provide an annotated Chinese view of Asia. China is a central figure in much that is transpiring in Asia, including many of the things we care most about on that continent. I did not mention the arrest in Xinjiang (and tardy but timely release) of the Chinese-American citizen Harry Wu, the visit of Hillary Rodham Clinton to Beijing and Ulan Bator, or the 1995 Women's Conferences in Huairou and Beijing. I did, however, mention regional issues of real interest to the United States and China, issues with which we should be engaged with Beijing, issues on which, as the case may be, we should be consulting, disagreeing, agreeing, accommodating, holding the line, resolving the problem, setting the matter aside, finding ways to help, or making quite sure we do *not* help. These forms of engagement happen rarely in our relations with China. To examine that phenomenon of non-cooperation and why it is occurring, let us now see how things look when those in Beijing raise their eyes and peer out beyond Asia, eastward across the Pacific, and see the United States.

Many of the Chinese who know something of the United States see our country most of all as an almost magic realm in which to get a college education and get rich—but many also see it as a perilous place, where violent crime is commonplace; where elders are treated with disrespect; where people do not save money but compulsively buy things they do not need; where parents let their children become hoodlums and then criminals; and where greed, unsavory conduct, sexual promiscuity, and lewdness are unbounded. Our government is frequently called imperialistic, hegemonic, and arrogant—guilty of repeated interference in the internal affairs of other nations, the cultures of which it little understands.

I have mentioned that the latest really big upset in the relationship between the United States and China resulted from our permitting the president of the Republic of China, Lee Teng-hui, to visit the United States, unofficially, and take

part in a ceremony at his alma mater, Cornell University. Beijing has reacted in an extreme way to what it sees as a blatant violation of the mutually agreed one-China policy—as contrasted with two Chinas (a PRC on the mainland and an ROC on Taiwan) or with one China and one Taiwan. They want us to adhere to that one-China concept and also to say often, and even believe as firmly as they, that this concept, not the Taiwan Relations Act, serves as the basis of the U.S. position on Taiwan's status. Like it or not, the one-China policy, formally established in 1979, is the accepted basis of our diplomatic relations with China, to which Republican and Democratic administrations have given innumerable affirmations over these sixteen years.

From our viewpoint, letting the president of Taiwan come here was altogether reasonable. Taiwan has proven itself a world economic power and over the last several years has moved from an authoritarian government to an affluent democracy. The United States has good, if unofficial, diplomatic arrangements with Taiwan. A compelling argument can be made, even absent the congressional pressure for the visit, that President Clinton was right to permit Taiwan's president to make an unofficial visit and should continue to permit visits by senior officials from Taipei.

From Beijing's viewpoint, this was not only unreasonable but the last straw, an action that demanded forceful reaction. The Chinese saw us as yet again blatantly violating the three communiqués that they very firmly hold as fundamental to the diplomatic relations between the PRC and the United States.* They have long been unhappy with our sales of military equipment to what they consider the illegal government of their sovereign province of Taiwan, and even some of the most balanced China specialists in the West considered that we had violated the 1982 communiqué when President George Bush, during the 1992 presidential campaign, announced that we would sell 150 F-16 fighter planes to Taiwan. (The Chinese, remarkably, stomached that announcement with only a modicum of grumbling. Beijing is not always joining with Washington in sabotaging the bilateral relationship—just most of the time.)

With the Lee Teng-hui visit, it appeared to Beijing that the United States was openly abandoning the one-China policy, encouraging Taiwan's independence movement, and setting an intolerable precedent for other countries to follow. Next, Beijing feared, Japan and others would invite or allow senior Taiwanese officials to visit, undermining the firm PRC position that Taiwan is just a renegade province. As I was told by a Chinese representative soon after the Lee

* The 1972 Shanghai Communiqué was a milestone American acknowledgement that "there is but one China and that Taiwan is a part of China." In a 1978 communiqué on the "normalization" of diplomatic relations the United States recognized "the Government of the PRC as the sole legal government of China." A 1982 joint communiqué included an American pledge to limit arms sales to Taiwan, and also a promise by Beijing to seek peaceful reunification.

visit, whether the American Congress understands and agrees or not, Beijing is adamant about Taiwan. "How could the White House have misunderstood that point, made so clearly and often by my government?" he inquired incredulously. "How could this preposterous White House explanation about congressional pressure to issue a visa be offered? All know that American presidents, under the U.S. Constitution, are responsible for foreign policy, not the Congress. Clinton had only to ignore the congressional grumbling." It was a ploy, he had concluded: there had been collusion between Capitol Hill and the White House, a conspiracy. But, he announced with conviction, the Chinese had seen through it.

Furthermore, in this episode the professed current American policy toward China of comprehensive and constructive engagement was revealed as a hoax. Just look at the facts: the United States has long been trying to weaken and contain China, just as it did with the Soviet Union. With respect to the pompous American meddling in China's internal affairs under the guise of human rights, why has the United States singled out Beijing, a government simply enforcing its domestic laws? Washington has turned a blind eye to Russia's excesses in Chechnya, and it reacted far less vigorously over the years to so-called human rights problems in South and North Korea, Taiwan, Vietnam, and elsewhere. American condemnation of China for its alleged violations of human rights, and all the noise made over Tiananmen, were not about justice and concern for Chinese citizens, but empty words. They come from a country that, at a point in its history resembling China's current situation, imported many thousands of slaves from Africa, still treats those former slaves as second-class citizens, and cares nothing for the homeless and jobless who populate its cities. The American actions are meant to undermine the Communist Party and the Chinese government, to bolster immature or misguided dissidents who wish to bring about chaos, maybe even civil war; and the U.S. government wants to do so at a crucial time, when China is on the brink of becoming a world economic power. China needs domestic tranquility to continue its march toward greatness, and the United States encourages those who foster discontent. It is quite clear: this is, in fact, all part of a U.S. policy actively to weaken and even divide China.

Not only has the United States supported Taiwan but it has also recognized Vietnam, a long-time Chinese adversary and the country with which China is seriously struggling over sovereignty of the Paracel and Spratly islands. Americans, even congressmen, advocate the separation of Tibet from the PRC, a prospect that resembles the Americans' relinquishing Alaska, Hawaii, or Puerto Rico, and just because of the inevitable, vociferous hecklers. U.S. officials attempt already to undermine the restoration of China's sovereignty over Hong Kong in 1997, a matter in which the United States has no role.

Beijing's long list continues. The United States has dug up excuses not to let China enter the World Trade Organization. The U.S. government threatens trade

sanctions every few months, strangely whines today about trade deficits instead of sticking to its former line of free trade, and accuses China of proliferating missiles and nuclear technology and material. Meanwhile, Washington is selling dangerous combat aircraft and transferring nuclear materials and know-how to a far greater degree than China. And what of American motives in the diplomatic and security arenas in Korea and Japan? Are not the Americans trying to put together with those two countries a continuation of Cold War security arrangements in Northeast Asia, but with these alliances now directed against China? Why does the United States strongly criticize China for its forty-third nuclear weapons test when it has itself conducted a thousand? The Americans have found their new communist enemy, the peaceful People's Republic of China, and have developed a coordinated policy of containment, an intent that has now been revealed by these and many other American actions.

I did not contrive or embellish this scenario; many in Beijing have long believed it or its essence. They are led by the hard-bitten octogenarians who recite tales of over a hundred and fifty years of American and Western mistreatment of China dating from the Opium War of 1840. Many more Chinese leaders are coming to believe it now. The People's Liberation Army commanders are beating the drums to this rhythm. Those in China who dislike and distrust the United States and those who are simply uncertain about it have now joined the top PLA leadership in a chorus of anti-American chants along the lines just described. Even many dispassionate, not particularly ideological, Chinese have become convinced, or are afraid to say otherwise. In Brunei in July 1995, the astute and sensible Chinese foreign minister said U.S. forces should leave Asia, apparently abandoning the view that American forces have contributed to stability in the region and, to put a finer PRC point on it, have kept East Asia safe from Japan. There is now even talk that the United States is forming a worldwide coalition, including Japan and others of China's neighbors, to contain China's military and economic growth. All this cacophony drowns out the already weakened arguments of a few brave souls in Beijing who take a more measured—and we would say more accurate—view of the United States policy toward China.

The intensity of the anti-American voices is amplified by the leadership succession underway in Beijing. Paramount leader Deng Xiaoping has grown too decrepit to exercise influence and will not live much longer. His potential successors do not have Deng's political clout and connections with the military. They cannot afford to be seen as showing weakness toward the United States, of kowtowing to foreign forces bent either on the destruction of China or on changing China by "peaceful evolution." To do so would mean their political demise, effectively their elimination from the post-Deng political scene.

The American view of China and its policies is not much clearer than its view of us, especially since the suppression by the Chinese military of the Tiananmen uprising in 1989. China, as big as it is, has to a great extent been hidden from Americans for more than seven years by the smoke that arose from the reprehensible actions by the People's Liberation Army against the students who filled that huge square, students who were searching for democracy and seeking an end to corruption, misrule, and massive mistakes by the Beijing government and the Chinese Communist Party. As terrible as that event was, however, China is too big, too diverse, and too important in Asia and the world to remain obscured by the pall of American disgust and distrust that arose after those events of 1989 in the heart of Beijing.

To make things worse, U.S.-Chinese relations since that time have been further clouded for Americans gazing westward ten thousand miles across the Pacific. Trade disputes, more human rights issues, missile sales, military modernization, nuclear testing, spats over the Spratly Islands, and, most recently, tussles over Taiwan have led many Americans—and what is particularly important, American congressmen and some senior officials, civilian and military—to see China as an enemy, or at least a potential adversary. All these factors obscure our view of a country of 1.2 billion people and prevent us from seeing that there is much more to understand about China than disagreements in the bilateral relationship.

Plainly, our view of China, although it contains much that is true, is about as useful in understanding that country as is the Chinese view of our own. We and they can continue to dwell on the issues that divide us, and we can convince ourselves of all that is bad about China, while they do the same about us. In the end, both will have a fully defensible and remarkable list—but an indefensibly and remarkably useless one.

I rush to say at this point that having lived in Beijing for two years, traveled repeatedly throughout China, worked intensely on China since 1989, I know well how corrupt and cruel the Chinese Communist Party can be, how arrogant that authoritarian government can be, how bungling the Beijing bureaucracy can be, how viciously the Chinese people can treat one another. I do not suggest that Americans should learn to like these things. I do suggest that they should have a broader view of China, a view that will not only help put China in perspective but allow us to have a relationship with China that will serve our interests. Such a view will also foster an environment where the best of the Chinese people, with American support, may have a chance to bring salutary change to that huge and dramatically developing country.

As I have heard Ambassador Jim Lilley, for whom I first worked at the embassy in Beijing, say, history is strewn with the corpses of those who have tried to change China. However, China has changed and is changing rapidly—changing for the better. As I and others see it, the force behind those changes has been the economic

development of China and the many influences from the outside that have either brought about the economic growth or are a consequence thereof. I often assert, to the annoyance of Beijing officials I am sure, that China is now undergoing a *real* revolution. The revolution they celebrate incessantly, the one culminating in the 1949 defeat of the Kuomintang by the Communists, certainly made a profound difference in China, with many good and bad consequences. The revolution underway in China today, however, will change not only China but Asia, and the world as well.

The Chinese people today are fed, housed, and clothed. Meat and even vegetables are sold throughout the year; store shelves now hold items people want and need to buy. Annual per capita national income has soared to about \$1,200. There is at least some medical care for most Chinese. Life expectancy has more than doubled, reaching seventy-eight years. Literacy is at the level of a developed country, 85 percent. Of course, the Communist Party claims credit for these incredible accomplishments in the most populous and difficult-to-control country in the world. I argue, again to the annoyance of Chinese Communist cadres, that it may be more accurate to say the progress has been despite the Party, that all this has been accomplished while the Party has acted erratically and even destructively. There were decisions of former Chairman Mao that led, among other things, to the disastrous Great Leap Forward of the late 1950s and to ten years of terror, destruction, and death during the Cultural Revolution, from 1966 to 1976. But the devil must be given his due. Chinese citizens, under their present government, now have economic opportunity, real chances to provide for their families, and even to get rich. Some have become obnoxiously wealthy. Unlike in the past, they can change jobs, move from rural to urban areas or to other cities, express unhappiness with conditions, sue the government, and do other things that we have long considered natural but that have been unheard-of in China. United Nations reports characterize China as one of the "top ten" in improved human development from 1960 to 1992, taking into account such factors as health, infant mortality, life expectancy, education of children, adult literacy, absolute poverty, and similar standard measures.

There are still 800,000 mostly backward peasants in China. And yes, as a recent book on China points out, among them are some who do not know that the earth revolves around the sun or why anyone would care about that phenomenon. As a PLA Navy officer told me, there are many farmers who favor democracy because they think it will give them the right to have more than one wife. That cannot long remain the case; every villager can now see national television, and many see international TV via quasi-legal satellite dishes. In even greater contrast, there are very competent Chinese airline pilots training at Boeing in Seattle to be better at the job of flying 767 airliners, and Chinese air traffic controllers can now say what they previously could not: "Roger, 802, *radar* contact." There are Chinese

women who stride out of hovels in the hutongs of Shanghai's dense housing areas in heels, hose, short skirts, and stylish hairdos headed for jobs at foreign joint ventures that demand computer skills, three languages, advanced training, and much more. The millions of people who resemble these folks will never wear the Mao suits and think the Chairman Mao thoughts from the little red books by which their fathers and mothers lived.

Travelers to China, even the most casual tourists, see that China is a country under construction: hotels, office buildings, apartment buildings, roads and bridges, factories, even single-family homes. But China is a country under construction in more ways than that. China has had economic growth averaging about 9 percent per year since 1979, when Deng Xiaoping instituted reforms. China seems destined to be one of the greatest economic powers on Earth, even if it encounters some dips along the way. Some international economists say it will surpass all others early in the next century. China wants to have a military that matches these prospects. Chinese military officers are tired of the old joke that the PLA is the world's largest military museum. To them, military modernization is not a threat to anyone but something natural that any responsible flag or general officer would see as a top priority for China.

The Chinese political structure is also being reconstructed. The Party still plays its role as a spoiler of freedom for the citizenry; its Public Security Bureau remains able to make life unpleasant, or far worse, for those who openly disagree with Party policies and practices. However, there has been severe erosion of the Party's means of enforcement among the masses. To varying degrees, primarily as a consequence of economic modernization, it has lost control (that it had for decades exercised tightly through the *danwei*, or work unit) of the systems for household registration, rationing of commodities, allocation of housing and jobs, and the provision of schooling, recreation, and other services, and even retirement. To the millions of dynamic young people of China, and many others as well, communist ideology and the Party have no bearing whatsoever on their lives. For the cosmopolitan Chinese entrepreneur, often seen with a cellular telephone to his ear, the Party is something to be tolerated, something to be joked about and largely ignored.

The Party itself has recognized that it cannot survive if the opportunity for improved economic welfare of China's people, the promise of a better life, is not sustained. Economic growth must continue, or the Party will further falter. The citizens of China tolerate the Party now because they do not want the instability, the chaos, that is the anticipated result of widespread dissidence, of movements like that which resulted in the Tiananmen massacre. It is widely acknowledged that internal stability is essential to continuing economic development and improvement in the living conditions of the country. The reality of a better life *now* looks better than the fuzzy, long-term dream of freedom, a concept that many

in China do not comprehend and may not even value. Many think the students and other dissidents are just young and immature idealists who will, as at Tiananmen, fail to appreciate the consequences of ill-conceived actions.

When we look at China we should by now be seeing, through the much dissipated smoke of Tiananmen, a country achieving enormous economic growth and progressive change. We should see also an almost desperate Chinese Communist Party hanging on to power, a Party fully aware that if the opportunities to make money and lead a better life are taken away from the Chinese people now, the Party will face dissent and opposition that will precipitate its downfall or bring about drastic changes in the power structure. As China scholar Professor Tom Robinson puts it, "the party is no longer a pyramid, with all power concentrated at the top, but an umbrella, spreading ever wider and thinner to contain within its bounds the swirl of politics among many organizations and factions that could eventually form the basis of a multi-party, proto-democratic polity." The Party faces great difficulty in sustaining its membership. In important decisions in local communities, it is the person who can bring jobs who has the clout, not the Party hack. I recently heard a Chinese diplomat react to this assessment of the Party, starting his rebuttal with "But, but. . . !" I wanted to tell him I agreed only with the "but, but" part of his statement, though I would spell those "buts" with two "t"s. The Party still has two capabilities: to butt heads and to be the butt of some of the best jokes told in China today. The Chinese diplomat would not, I suspect, have found my play on words amusing—or at least not have felt free to show it. Even that could soon change.

We in the United States do not like all we see in China today. We may not like all that we see as change continues there: greater crime, new forms of corruption in a country where corruption seems to have been invented, greed and conspicuous consumption that may rival the West. We are certain to continue to dislike the way the Chinese people treat each other. Not even the Japanese treated the Chinese like they mistreat each other.

However, regardless of our likes or dislikes, we in the West must remain more relevant to China itself than to the waning Communist Party. We need better to understand China and what is happening there. We must strive not for only economic and cultural influence in China but also for the ability to consult regularly and seriously with the Chinese government on things that matter to Asia and the world. Beijing must be convinced that its interests are served by such consultations and cooperation. We want further successes like those we had in the early 1990s, when China curbed its exports to Iraq as we asked, agreed to alter its policies on export of ballistic missiles, and finally, after more than two decades of refusal, acceded to the Nuclear Non-Proliferation Treaty. We currently want Beijing actively engaged in the ASEAN Regional Forum, as that body works

to lead China to be more transparent about its military modernization and to undertake confidence-building measures to reassure neighbors about that modernization. We want Chinese help both up front and behind the scenes as we try to solve the problems on the Korean peninsula, where China has better influence and more interests than anyone else.

More broadly, we do not want twenty years from now to have to explain to our grandchildren how we in the United States grew so far apart from that awakening giant of Asia; how we could not find a way to bridge the gap, to solve the (admittedly very difficult) problems; how we failed to consult, understand, and conceivably even influence military developments for that huge armed force; how we failed to be a part of Chinese strategic thinking; how we lost our opportunities to be vitally engaged in the biggest market and largest economy on Earth. The hardest thing for me to explain will be how I, first as a senior naval officer and then in my work on Sino-American relations, failed to convince others that to consider China an adversary was a self-fulfilling prophecy.

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Samuel Eliot Morison Supplemental Scholarship

The Director of Naval History has established a \$3,000 supplemental scholarship in honor of the late Rear Admiral Samuel Eliot Morison, USNR, an eminent naval and maritime historian and Pulitzer Prize-winning author. The scholarship, intended to pay for expenses related to research, travel, and the purchase of books, is awarded to a selected active-duty, unrestricted line, U.S. naval officer (grades O-2 through O-5) who is pursuing graduate study in history, international relations, or a closely related field. The objective is to promote the study of seapower in the context of the American political-military decision-making process.

Officers wishing to compete for the scholarship for the 1997-1998 school year should submit a letter of application, via their commanding officer, to the Senior Historian, Naval Historical Center, 901 M Street, S.E., Washington Navy Yard, Washington, D.C., 20374-5060. The application should identify the graduate program and detail relevant qualifications.

The Emergence of a Command Network

Captain John W. Bodnar, U.S. Naval Reserve, Retired, and
Second Lieutenant Rebecca Dengler, U.S. Marine Corps

IN TODAY'S DYNAMIC WORLD, THE EFFECTIVENESS of any organization at every level depends on how well the individuals within it can cooperate. Whether an organization is as small as a platoon of individual Marines or as large as a joint military comprising separate armed services, coordinated action depends on the flow of information and commands among its parts. In turn, the effectiveness of any organizational structure responding to a rapidly changing environment depends directly on the ability of the members of the unit to communicate among themselves.

We suggest that in the much-discussed "Revolution in Military Affairs" huge changes in organizational doctrine are emerging, and specifically that among the most noteworthy features of the "RMA" is the military's ability to communicate on a global scale, for this ability offers an exceptional opportunity to enhance effectiveness.¹ Organizational structures, though still diagrammed as they were fifty years ago, actually operate very differently in the Information Age. In fact, procedures (or practices) and doctrine that were suitable in the past only for very small units can now be effective for an entire joint military.

The emerging military organization, which we term a "command network," has the strengths of both a network and a hierarchy. It has, in fact, often been used in such settings as infantry companies, shipboard departments, submarines—or even small, primitive societies. Recently, however, command networks have arisen in much larger organizations; one unexpected result has been that the responsibilities of their members and leaders have changed dramatically.

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We argue in this article that the biggest challenge posed by the growth of command networks—even at the national level—is that leadership and organizational doctrine must be redefined. To examine that challenge, we must ask, what *are* command networks? Why have they exploded in size in the last century? What have been their effects upon the concept of responsibility within organizations?

Informed Inaction or Uninformed Action?

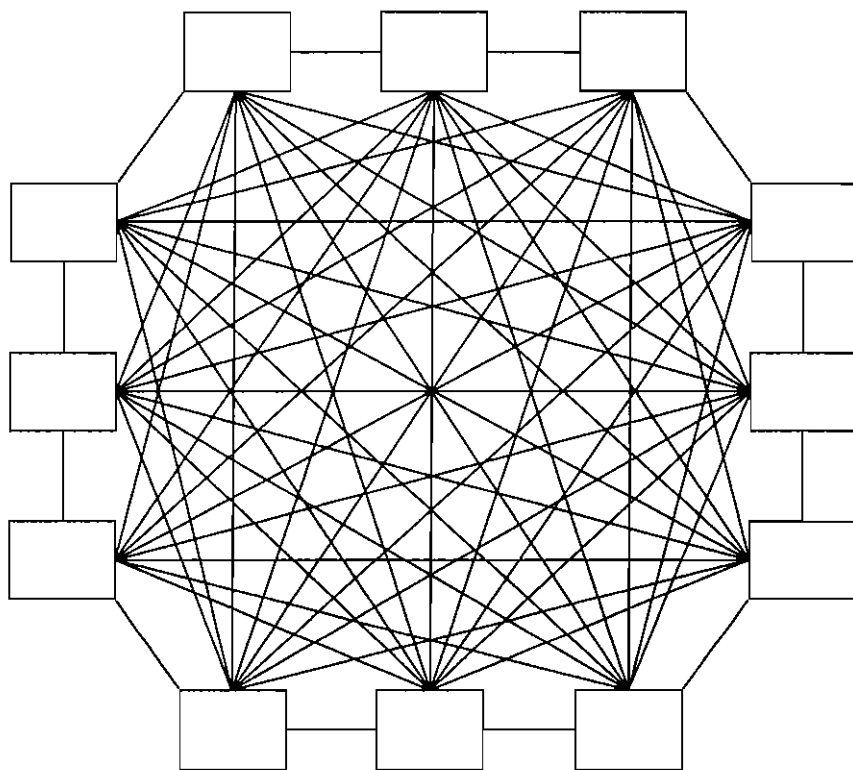
Organizational structures are based primarily on lines of communication. The strengths and weaknesses of any organization, therefore, depend on how data (observations about the environment), information (assessments of the meaning of data), commands (orders for action), and doctrine (rules for action) are passed within it. In the same way that chemists use theoretical substances, such as ideal gases and perfect crystals, to study the structure and dynamics of molecular organizations, we will use two theoretical units—a pure network (Figure 1) and a pure hierarchy (Figure 2)—to study the structure and function of military organizations.

In a pure network, all the individuals are equal and autonomous, and all possible lines of communications can be used. With no leader, all organizational decisions—if indeed any can be made—are reached by consensus, and any individual can interact directly with any other in the network. On the other hand, in a pure hierarchy there are strictly defined lines of communication, “the chain of command”: data and information go up the chain, commands and doctrine come back down. Of course, “pure” networks or hierarchies do not actually exist; real networks—like communes, car pools, and the Internet—have hierarchical components, and real hierarchies, even as rigid as Nazi Germany or Hussein’s Iraq, have elements of a network in them. Nevertheless, our theoretical organization types allow us to examine the strengths and weaknesses of each.

A network provides for *rapid and extensive communication emphasizing assessment*. In a network, no individual is (or can be) more than one communication “step” from any source of information. New data collected by any individual in the network are accessible to all, and all network members can become directly involved in the assessment of any data the network receives—again, through a single communication step. In fact, each must independently consider all the data to determine his own proper course of action. In contrast (as seen in Figure 2), nodes of a hierarchy have access to information only indirectly and through defined channels; communications in a hierarchy are likely to be slow, because of the presence of intermediaries, and assessment may be less reliable, because information is filtered at each step.

A hierarchy provides for *long-distance communication* in a large organization *emphasizing command and doctrine*. Each individual has a line of communication, defined but mostly indirect, to every other member of the hierarchy. New data can be routed to commanders or to “action officers,” who assess them and direct the organizational response; in this way all parts of the organization are coordinated with respect to that response, even if they were too distant to have been sent the initial data. A hierarchy can act in a coordinated manner beyond direct-communication distance because components need to be able to communicate with their immediate superiors rather than with all other counterpart

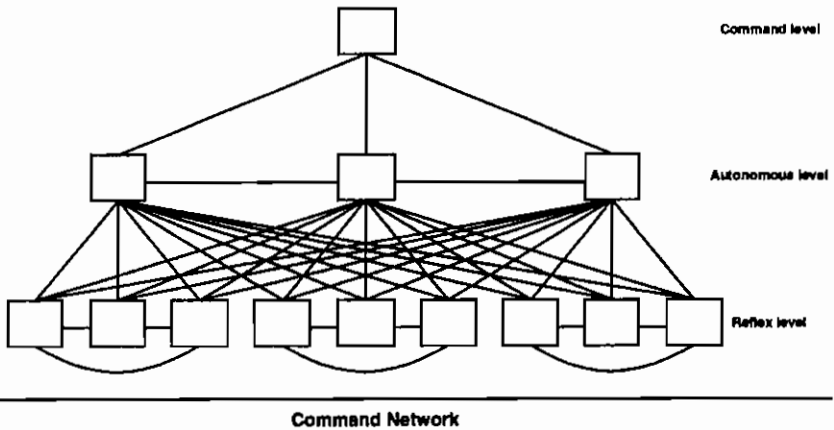
Figure 1



Network

components. Additionally, in the temporary absence of communication within a hierarchy, individuals can “store” commands in the form of doctrine and act thereby even when cut off from the rest of the organization. The price, however,

Figure 3



Organizations with essential characteristics of command networks have arisen in many times and places—societies, military units, manufacturing enterprises, commercial firms, even municipal bodies. We will offer a simple example—a single task in a complex mission—of how the strengths of a network and those of a hierarchy are integrated in a command network.

In our illustration, the organization is the battle-stations team of a submarine; the task is to set the correct search depth for a Mark 48 torpedo. In a submarine-versus-submarine scenario, the commanding officer (CO) takes a station in the control room, where such task leaders as the Fire Control Coordinator (FCC), Weapons Control Coordinator (WCC), and the Engineering Officer of the Watch report to him. The WCC, in turn, has the weapons control team and torpedo room reporting to him. When the ship closes to attack, the CO orders, “Make tube one ready in all respects for a submarine contact”; the WCC passes that order to the fire control team and torpedo room, who a few minutes later, having accomplished the task, report back, “Tube one is ready in all respects.” This procedure dates back to World War II, when torpedoes ran straight until they hit something. Today, a Mark 48 torpedo can be given up to forty separate settings (e.g., search speed, ping interval, search pattern, and search depth), but this organization—a command network—causes all forty to be set properly each time with only the single order.

The strength of this command network is its efficient dissemination of information and *silent* assessment of a tactical situation. Long before General Quarters is set, the Weapons Officer and fire control technicians sit down with

technical manuals, sound-velocity profiles, and weather data for the operating area and recommend torpedo settings for as many attack scenarios as they can envision. The Weapons Officer obtains the CO's approval of these contingency plans before the ship even reaches the engagement area. Thus when the order is actually given to make the weapon ready, the fire control technicians and the torpedo room (the reflex level of this command network) have a plan of action; there remains only to compare their own depth and that of the contact with the latest bathymetric data to ascertain the best search depth (so that the sensor and the weapon will be on the same side of any thermal "layer"—through which sound tends not to pass—as the target). The WCC obtains the necessary information either from instrument panels or from the FCC (these two officers constituting the autonomous level) and then passes it simultaneously, via a single phone circuit, to the fire control technicians at the control room firing panel and at the torpedo room monitoring panel, as well as to the torpedoman chief in the torpedo room.

Without further order, the fire controlman enters all the appropriate settings into the torpedo computer, announcing on the phone circuit each step, for instance, "Search depth set at four hundred feet." The WCC in the control room and the fire control technician and the torpedoman chief in the torpedo room all listen without replying, verifying on their own panels that each action takes place correctly and that values applied are consistent with doctrine and the predetermined plan of action. If all goes according to plan nothing is said in the control room until tube one is reported ready. At that point, if the CO (representing, of course, the command level) has a question or believes conditions are different from the scenarios, he can review the indications on the FCC's panel. Thus every setting of the forty on the Mark 48 is discussed by at least three people, and verified by four, prior to launching the weapon—all with a simple exchange of fifty-year-old commands.

This example shows that a command network can act as fast as a hierarchy, because the traditional chain of command is used to pass command and doctrine. A command network can also, however, assess information as well as a network, because open communication channels involve everyone who has the need and ability to be a part of the decision process.

Communications and the Size of a Command Network. Command networks have been around for a very long time, but before World War II they were used only in small organizations. Now they have begun to emerge in much larger structures. Today, in the Composite Warfare Commander organization of a carrier battle group, ships report simultaneously to antisubmarine warfare, antisurface warfare, and anti-air warfare commanders. If a ship faces a submarine and a missile threat at the same time, independent (reflex) action may be needed to address the most

pressing threat while coordinating with nearby ships and the warfare-area commanders about how to deal with the other. Thus command networks now prevail in battle groups, and they are beginning to be seen also in joint operations among all the services. But why has the increase in size of command networks been so recent?

The reason seems to be communications capability, which may be the limiting factor in the size of any network. For a network even to exist, as noted, each node in it must be able to communicate (even if it chooses not to) on a routine basis with every other node in the network. Therefore, a network can be only as large as a single communications link. It follows then that to make a *command* network effective the commander must be able to interact with all subordinates on a day-to-day basis (even if by merely monitoring communications between them). Until the advent of radio, video transmission, and computers, command networks could not be physically larger than one could travel across in, say, a single day, or numerically larger than the number of people one could communicate with at the same time (a hundred or so). Larger organizations had ultimately to become hierarchies, to allow long-range communication or to encompass more personnel (communicating indirectly, through middlemen).

Unquestioning—or Unquestionable—Obedience? It is almost inevitable that the more hierarchical an organization, the more centralized are authority and responsibility within it. In the past, large hierarchies could operate very effectively in this manner. Nonetheless, the strictly defined chains for both information and command meant that those at the bottom of the chain would almost inevitably have to act upon incomplete information. Consequently it was extremely difficult for them to evaluate the efficacy, legality, or even, sometimes, the morality of an order.

As communications became more sophisticated, however, it became possible to obtain information by means other than the chain of command. When it did, the concept of responsibility within an organization began to change. Moreover, judges at the trials of Nazi war criminals at Nuremberg had rejected every defense argument that “obedience to orders” could excuse grossly immoral acts. Every leader—indeed, every person in uniform—is held to be a moral being responsible for each action, including orders issued or carried out. The evolution of a certain Army training manual reflects this obligation. Its 1941 edition addressed the issue of authority in these terms: “Success in battle, which is the ultimate aim of all training, requires the cooperation of every individual to the common end. Cooperation requires centralization of authority. Someone must make the decision; when once it is made, everyone must carry out the decision energetically and unquestioningly.”² The 1953 version altered a single suffix in that passage: “unquestioningly” became “unquestionably.”³

This tiny change signalled a major shift in the concept of individual responsibility in an organization, toward one that combined what is demanded in a network with what is required by a hierarchy. In a network, individuals bear responsibility for their own actions, since in a pure network there are no commands or doctrine to appeal to—only data and information. In a pure hierarchy, responsibility rests (theoretically) with the commander, inasmuch as each individual receives only commands or doctrine—not the data and information behind them. In contrast to both, data and information in a command network is shared between the commander and the individual, as are the commands and doctrine. Accordingly, responsibility lies with *both*—the commander, because he has all the background necessary to conceive the order, and also the individual, because he has enough information to assess whether the ordered action will be effective or legal.

In the command network, then, responsibility flows both from the top down and the bottom up. However, turning this approach into military policy has been problematic. Its first codification was in W. Edwards Deming's concept of Total Quality Management (TQM), which was adopted by the military, in modified form, as Total Quality Leadership (TQL). Studying the characteristics of organizations in information and communication-rich environments, Deming postulated that the effectiveness of an organization depends on collecting all data possible, analyzing it most appropriately, and using that data at the lowest possible level. In essence, TQM argues that the best organization arrangement is the one that comes closest to a network while still being able to act effectively: the command network.

The Leadership Challenge of the Command Network

The implementation of TQL from TQM was controversial, and it sometimes became more a battle of buzzwords than a struggle to produce a new organizational approach for the Information Age. We suggest that the reason was that military leadership in a command network is significantly different from that previously known in any unit larger than a company or a submarine. To go beyond TQL, then, to a new organizational approach suitable to a joint military requires a fundamental reassessment and redefinition of organizational dynamics, especially the role of senior leadership.

The need for a new kind of leadership in the Information Age has led to a command network model often termed "leadership by negation." The organizational and leadership dynamics inherent to a command network are quite distinct; though they have always been around in smaller units, some are contrary to the way that large units and formations have been run.

The organization must be *as close to a network as effective action will permit*. As we have seen, a pure network draws upon the observations and ideas of all of its members—it is very well informed. But in practice, a large network is overwhelmed by the flood of inputs, which makes a pure network ineffective in action. A real structure that maximizes the communication channels of a network to the limit of ability to coordinate action must operate, by definition, on the verge of disorder.

It must be clear *who will decide*. In a submarine's General Quarters team, any of several people, from the commanding officer down to the torpedo room phone talker, could establish the inputs for the Mark 48 torpedo. However, the organization can work effectively (and silently) only if everyone knows who has responsibility for each decision.

Decisions must be made *at the lowest possible level*. Defining where in a unit any decision is to be made involves a tradeoff: the elements lowest in the hierarchy are usually closest to the action and have the most pertinent information; but the commander can be expected to have the most comprehensive grasp of the situation. Therefore, different types of decisions are best made at differing levels. Reflexive actions, such as immediate responses to flooding, must be done as fast as possible by the first person on the scene; the aptness of those actions is largely conditioned by the command doctrine (inculcated by training) that applies—though even here, the person on the scene is expected to interpret doctrine (i.e., training) with respect to the conditions at hand. Similarly, the actions of a component on the “autonomous level,” such as the antisubmarine assets of a battle group, need to be coordinated with the battle group's other functions, but they do not require the direct and continuous attention of the battle group commander; they require from him only clear doctrine as to how antisubmarine warfare affects the mission. While decisions at the lowest level benefit from rapid response, the immediate access to primary data, and the combined “brainpower” of the individuals directly involved, decisions at the highest level incorporate knowledge of the needs of the entire command. Given high-level input provided ahead of time—as doctrine—decisions in a command network can best be taken at the lowest possible level. “Executing ASW Plan One” may be all that the Antisubmarine Warfare Commander need signal to apprise all units and the battle group commander of a tactical situation and his (doctrinally approved) response. Only if the battle group commander has a larger organizational reason to override that preapproved decision would the lower-level order be negated.

“*Any fool can obey orders!*”—the words of Sir John (“Jackie”) Fisher, the great, reforming First Sea Lord of the Royal Navy before and during World War I. Though made, of course, in a different context, his remark has special weight in a command network, wherein an order is in essence an agreement between holders of shared responsibility. Here, plainly, is a stumbling block; but the issue arises

unavoidably. In a command network, no order should be executed without examination by its recipients, for two reasons. First, the composite "brainpower" offered by the network is mobilized only if every individual involved in an action is always thinking about its consequences. Secondly, if both the commander and an individual are responsible for an action, then both must be proprietors of it. There are, of course, situations where urgency, safety, or other overriding considerations require simple and instant obedience; doctrine can identify these, and the hierarchical dimension of a command network admits of them. But they must be exceptional. In general, a commander who requires that his orders and decisions be followed without question will find that he is the only one in the organization who is thinking.

Continual training is critical to command network operation. If each order is to be examined, then constant training under realistic operational conditions is required. Foreseeable or fundamental ambiguities must have been resolved in advance. In exercises, commands can afford, for educational purposes, to let unintended consequences of orders run their course, or to let subordinates question them ("But, sir . . . !") and take the time to examine the matter or at least discuss it soon afterward. As an actual current example, when Trident submarines on patrol go through a launch-sequence practice, only a few officers on board know that it will not culminate in the firing of all twenty-four nuclear-armed missiles. Everyone on board thus has ample opportunity to question the details and to ponder any moral reservations they may have about nuclear weapons; should the "real thing" ever occur, their crews will be ready, both technically and personally.

Commanders set guidelines. In a command network, where decisions are made at the lowest possible level and are practiced often, the commander has many chances to evaluate his subordinates in action. Thus command input becomes guidance as to discretion decisions by subordinates, in view of their effect upon the unit's mission. Here, the best commander has so trained the unit that in tactical situations he need do virtually nothing but watch the unit perform. With team coordinators making recommendations or taking appropriate autonomous or reflexive steps, his decisions will almost exclusively be to resolve disagreements—such as conflicting claims upon the same resources.

The commander will *let pass without comment* any decision within his guidelines. Within a command network so many different actions and decisions can happen simultaneously, with several individuals monitoring and assessing each one, that most network communications must necessarily be received silently. If everyone on a fire control team replied to each correct Mark 48 setting, there would be bedlam. Similarly, PC users in an e-mail network read many more messages than they actually answer. Only actions that are incorrect or not understood are overtly acknowledged—thus "command by negation," a phrase

full of pejorative connotations. In fact, the useful redundancy afforded by silent monitoring up and down the chain of command is a major strength of command-network leadership and merits a more positive name: perhaps “network leadership,” or “command through confidence.”

There is no doubt that a new leadership doctrine is required for the emerging organizations of the Information Age. TQL and leadership by negation are a beginning. Those models can and should be transcended, however, by reassessing the fundamentals of responsibility and communication.

Toward a Military Command Network

A major advantage of a command network is its flexibility in adapting not only to changing missions but also to changes in the size of an organization. It may therefore be possible to form throughout the U.S. military a “virtual organization” with the characteristics of a command network, one that can rapidly regroup and reassemble in response to threats. As force levels decrease, the ability quickly to integrate disparate units from all services into a joint task force will become vital.

But what is the maximum possible size of a command network? While in the U.S. military a worldwide hierarchy has already been achieved, through the Unified Command Plan, a worldwide network requires that every individual in the American armed forces be able to communicate with every other individual, anywhere in the world, and (with due regard to classification restrictions) have access to all data, information, doctrine, or commands stored anywhere on the network—and both on a real-time basis. Such “connectivity” may well be technically achievable within the next decade; the ultimate size of a command network will soon be limited not by technology but by people. A “virtual” command network thus would make it easier to form and re-form effective units rapidly, even at the unified commander-in-chief level. New doctrine, therefore, will be most useful if it anticipates the existence of a worldwide military command network with certain characteristics of the World Wide Web; it should begin to apply the lessons of face-to-face command networks to a web-based, national-scale command network. We can suggest a framework for such organizational doctrine.

First, a command network should be a network when considering options but a hierarchy when issuing and implementing decisions. Given certain precautions against “groupthink” and other handicaps, networks generate the most options and produce the fullest information, so in the evaluation and deliberation process a command network should structure itself as closely as possible to a pure network. When (as is usually the case in military operations) there are considerable time pressures, decisions are best reached by a well informed hierarchy. In

any event, unless a consensus obtains, the need for closure requires an authoritative (i.e., hierarchical) decision. Once a decision has been made, commands and doctrine should flow downward through a hierarchy—silently monitored and validated throughout the surrounding network. Thus individuals in a command network need to be comfortable switching between hierarchy and network modes depending on whether the organization is considering or implementing decisions.

Second, each individual should give and receive commands and doctrine through the command hierarchy. Individuals within a command network should continue to follow the traditional chain of command whenever coordinated action is necessary. This means passing recommendations for action up the chain as well as commands and doctrine downward. As in the past, orders should be acknowledged by repeating them back (signifying both understanding and acceptance of responsibility), and they should not be considered delivered until the senior receives that acknowledgement.

Third, each individual should pass data and information to the network while monitoring and filtering information from it. This is the major challenge in defining doctrine for a military command network. The more pertinent information any individual has, the better informed his decisions or recommendations can be; the more silent monitoring that occurs, the better advised decisions and actions can become. Thus, in theory each individual should monitor all information available throughout the network; doing so in practice, however, could rapidly lead to inability to act due to information overload. To maximize the network character of a military command while still retaining the ability to function, a number of basic steps are possible.

- All communications, and every document or video image, should become part of a military “web.” As is now the case with the World Wide Web, access to any such message, document, or image is simple if it has associated links. The technology and procedures to build this kind of web are partly in place: such links are already part of military communications, in message headers (e.g., FROM, TO, INFO, SUBJ, REF, and the SSIC).

- Each individual should monitor information affecting the steps in the command hierarchy above and below, and also the units on his own level. This is already an ingrained habit for many (“Read the message board!”). Shipboard officers, for instance, automatically receive messages addressed to them for action or information, but effective officers at least scan many more. A submarine’s Reactor Controls (RC) division officer who routinely looks at traffic for all the other engineering division officers and the Engineer in addition to his own should be a more effective Engineering Officer of the Watch and be ready much sooner to become an Engineer. A web structure gives the “message board” a new dimension by providing access to information in parallel chains of command. In

the submarine example, if the RC division officer had a problem with a control rod motor he could not only check all the technical manuals online but find very rapidly any other submarines that had already solved a similar problem. Also, by regularly scanning the “subject lines” of all messages addressed for action to other RC division officers in the squadron, he could significantly enhance his own effectiveness and training. Individuals at every level of a command network should “read the message board” of all those a step away in the hierarchy.

- Filtering information in parallel chains of command can provide new links across several levels of the command hierarchy. If each individual in the command network scans and analyzes a unique set of information on a daily basis, he can provide important inputs for decision-making anywhere in the organization by simple but thoughtful recommendations. Consider how the following insights (reached by linking associated messages on the web) could help the effectiveness of a command: “Three subs in this squadron have had the same problem with the rod control motors in the past month”; “Five different pilots in the Gulf report a new type of electronic intercept during their last combat air patrol”; “There are only two ‘widgets’ for SPS-48E radars available in-theater.” So important are the possibilities for exploiting vast amounts of computerized information that two of the “hottest topics” in the Management of Information Services field are *rapid accessing of multiple databases* and *easily customized data-filtering*.

Fourth, commanders need to balance their dual roles—at the command level of their own units, and at the reflex level of the larger grouping of which their units are a part. The military is already forming a “nested” command network, in which the commander of a single unit links that unit to a larger command network. These commanders can perform much more effectively than in the past, because, with the distributed decision-making inherent in a command network, each has fewer operational decisions to make than before. A commander’s major job within his unit is to define guidelines for action in accordance with its mission. At the same time, within the reflex level of the larger command network, his primary task is to interact with other units and autonomous coordinators so as to adjust his unit’s mission and operation to that of the larger organization.

Upward and parallel links from unit commanders are currently the weakest in the emerging military command network, because such relations traditionally have been handled in hierarchical fashion. The commanding officer now has the assets to monitor and evaluate information both from above and in parallel (just as the division officer always has done). Thus his jobs up and down the chain are, for once in history, compatible—but only if he knows how to act simultaneously at the lowest and highest levels of command.

Command networks have been around (if not by that name) in the American military for a long time, and the best leaders knew how they operated when they were majors or lieutenant commanders. In the Information Age, forming a command network that encompasses the entire U.S. military has become possible, but it requires reexamining both leadership models and organizational doctrine. The challenge for leaders is to apply the lessons they learned and information channels they used as department heads or company officers to the larger organization they have (or will) become responsible for at more senior levels. This entails reassessing and going beyond the lessons of Total Quality Leadership and leadership by negation, taking advantage of the new ability to integrate and assess large amounts of information, and adopting the concept of shared responsibility for every order. The key to jointness at a national level, as at any other level, is not technology itself but how it allows individuals within the organization to interact and communicate to make all their efforts mutually reinforcing with respect to a common, proper goal.

Notes

1. On the RMA generally, see Colin S. Gray, "The Changing Nature of Warfare?" and James H. Patton, Jr., "The New 'RMA': It's Only Just Begun," *Naval War College Review*, Spring 1996.
2. John McComsey and Morris O. Edwards, *The Soldier and the Law* (Harrisburg, Penna.: Military Service Publishing, 1941).
3. Morris O. Edwards and Charles L. Decker, *The Serviceman and the Law* (Harrisburg, Penna.: Military Service Publishing, 1953).

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Call for Papers Siena College World War II Conference, 29–30 May 1997

Siena College continues its annual multidisciplinary conference on World War II. The foci for 1997 will be 1947 (the Aftermath) and 1937 (the Beginnings). For 1947, papers dealing with the Holocaust, displaced persons, war crimes trials, literary and cinematic studies, veterans affairs, the G.I. Bill and economic conversion, and others, will be welcome. For 1937, papers on fascism and nazism, Ethiopia, Spain, literature, art, film, women's and Jewish studies of the era, and the Sino-Japanese War will be particularly appropriate. Inquiries to: Prof. Thomas O. Kelly II, Dept. of History, Siena College, 515 Loudon Rd., Loudonville, NY, 12211-1462, (518) 783-2595, fax (518) 783-4293. Deadline for outline/abstract, 1 December 1996; final paper, 15 March 1997.

IN MY VIEW . . .

"Arab Horsemen on White Steeds"

Sir:

I would like to commend Lt. Cdr. Paul Wrigley on his fine article, "The Impact of Religious Belief in the Theater of Operations" (*Naval War College Review*, Spring 1996, pp. 85-101). Lt. Cdr. Wrigley correctly pointed out the importance religious beliefs have in the strategy, planning, and conduct of military operations. It is an area not frequently considered and less frequently taken into consideration when undertaking military operations. As the role of today's military continues to change and evolve, religious considerations will, one hopes, play a more prominent role.

In just the last few years our military personnel have been involved in various types of operations, in Kurdish areas, Rwanda, Somalia, and Bosnia. In all of these actions the religious beliefs of our soldiers and our knowledge of the religious beliefs of the inhabitants have been important factors.

I would particularly like to comment on Lt. Cdr. Wrigley's section on DESERT SHIELD and DESERT STORM. He correctly points out several examples of how Saddam Hussayn attempted to use propaganda and misinformation to stir up anti-U.S. religious feelings in the region and how Saddam also used coalition sensitivities toward religious shrines to help protect his military assets. To those examples I would like to add another.

Shortly after Iraq's occupation of Kuwait, Saddam was shown on Iraqi TV dutifully praying at a mosque and later, in a speech, issuing a call to all Muslims for a *jihad* (holy war) against the United States and all the Western countries that had

come to the aid of Saudi Arabia. Saddam's call for *jihad* was certainly intended to bolster the morale of the Iraqi people in general and the Iraqi military in particular. In the West, the call for *jihad* sent shivers down the spines of policy makers and military planners. They saw visions of Arab horsemen on white steeds swooping down on the infidels and cutting off heads with their curved swords.

Picturesque to be sure, but to most Westerners the term "holy war" does conjure up these images from the Crusades, or that of hordes of Iranians marching in Tehran and burning the U.S. flag and effigies of President Carter. Many thought that Saddam's plea would unleash the fury of Islamic fundamentalism. But it didn't; and the reasons are well grounded in Islamic religious beliefs. Islamic law, or *shari'a*, clearly sets off the conditions under which *jihad* can be invoked. None of these conditions existed at the time Saddam issued his call.

A true *jihad* can only be called by the recognized leader of the Islamic world. Saddam was not recognized as a Muslim who faithfully practiced his religion, never mind the religious leader of Islam. Thus his call was an empty one. Technically, in today's Islamic world, no single leader can declare *jihad*. The schism created by the secession struggles after the Prophet Mohammad's death, over the fourteen centuries of Islamic history, eroded the legal and religious authority for any one figure to declare *jihad* for all sects of Islam.

Islamic religious law under which *jihad* can be invoked is subject to interpretation, and the various sects of Islam have each chosen to define it in their own way. The largest sect of Islam, the Sunni (Saddam's sect), has adopted the most conservative interpretation, in which *jihad* includes both temporal and spiritual efforts to defend Islam. The Sunni have identified four types of *jihad*: of the heart, the tongue, the pen, and the sword. The first three of these address challenges to Islamic values, including a personal, moral struggle of the soul. Only the fourth refers to a challenge from a non-Muslim source, which could require armed conflict.

Saddam hoped that, in addition to bolstering morale at home and among his troops in Kuwait, his call for *jihad* would have an emotional impact among all Arabs and galvanize support among Islamic fundamentalist groups for his struggle against the coalition. Arab peoples in general and Islamic fundamentalist groups in particular saw through Saddam's charade. His call went unheeded, and the coalition remained intact and as formidable as ever.

The lesson from this and Lt. Cdr. Wrigley's article is that military planners, strategists, and policymakers would be well counseled not only to take into consideration the religious beliefs of their troops but also those of the enemy.

Ronald A. Perron
Program Director of Middle East Area Studies
National Cryptologic School
Fort George G. Meade, Md.

Nato Expansion

Sir:

As a postscript to my letter published in the Spring 1995 *Naval War College Review*, I am distressed to find repeated rumblings in the press and political journals to accept former Warsaw Pact and East bloc countries into Nato. Some of our so-called political/military experts appear to encourage the actions.

Dr. Peter Schoettle wrote in his essay entitled "Key Geostrategic Trends" (*Naval War College Review*, Winter 1995), "The magnitude of the [Russian] transformation is not to be underestimated. In the last few years the Soviet Union and now Russia have striven to manage changes that almost overwhelmed three of America's greatest presidents: Washington, in establishing the institutions of a new federal government; Lincoln, in keeping the country united; and Roosevelt, in overcoming the Depression. The Russians are grappling with all three *simultaneously*. It is only to be expected that the reform process will not go smoothly and that it will suffer reversals."

At this time we need to be particularly neutral if not supportive: certainly not provocative. It is in *our* best interests to do so.

With respect to a "what-if" exercise, does the Naval War College have computer programs that project alternative consequences of political/military behavior rather than consequences resulting solely from military alternatives?

I have the uncomfortable feeling that many Nato expansion advocates either have not considered the potential consequences of their recommended actions or that their behavior is largely self-serving.

The issue deserves, in my view, considerable attention, given the dangers inherent in a bad decision.

Bruno Gruenwald
Lebanon, Penna.

"The Changing Nature of Warfare?"

Sir:

Yes, Colin Gray (*Naval War College Review*, Spring 1996, pp. 7-22), I-war is "the new fashionable topic." And in our enthusiasm for I-war gadgetry we are coming to rely utterly on microelectronics and chips and digital displays for moving information on the battlefield, ship-to-shore, air-to-ground, etc. But the flashy new gadgets bring with them new vulnerabilities.

Remember electromagnetic-pulse (EMP) weapons? They are still around. A small-yield, nuclear EMP weapon (even too small to cause prompt casualties), employed at low altitude, could "cook" chip circuits badly enough to cause many

of our costly digital displays to fail. And of course they will fail at the worst possible moment, because the enemy will choose *when* to employ an EMP airburst.

I have no quick or easy solution to this. But we'd better be shielding our chips against irradiation and training junior leaders to fall back on old-fashioned, low-tech communications when necessary. (I'm old enough to have used hand-and-arm signals, red-filtered flashlights, and three different colors of cloth flags, as a young armor lieutenant at Fort Knox.)

Robert Fairchild
Lt. Col., Army National Guard

— Ψ —



Alfred Thayer Mahan

Twice President of the Naval War College
and author of *The Influence of Sea Power upon History, 1660–1783, 1890*

SET AND DRIFT

Warfare Theory

Commander Joseph A. Gattuso, Jr., U.S. Navy

THERE ONCE WAS A YOUNG CARDIAC SURGEON well skilled in meticulously following written instructions for heart surgery. Yet he freely admitted to ignorance regarding “just exactly how that little baby works.”

Just so, young warriors can fulfill their tactical tasks by simply following instructions and mastering tactical fundamentals. However, as they progress up the chain of command and assume more responsibility, officers require a deeper understanding of warfare theory—the underlying foundations, principles, and general mechanics of conflict—to master the profession of war. The temptation to remain fixated at the tactical level, just following “schoolbook instructions,” must be overcome as command responsibility increases.

What is warfare theory? A theory is the track upon which the train runs. It at once provides the foundation, establishes the direction, and enables movement. In general, the track defines where the train will go. “A valid theory is at least three things: a compact description, a clue to explanation, and a tool for better work.”¹ To senior warfighters then, warfare theory is a description of the elements of their profession, a clue to the workings and interactions of those elements, and a tool to wring victory from confusion.

Commander Gattuso, a naval aviator, is the requirements officer and liaison to the acquisition community at the Naval Strike and Air Warfare Center, Fallon, Nevada. He flew A-7Es and F/A-18s prior to his selection as an Aerospece Engineering Duty Officer.

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It appears that many in the United States military have forgotten that a warrior's best weapon is his mind. There is a tendency today to disdain theory as something that resides only in academia, unsuitable for the world of the operator. Perhaps this inclination has escaped scrutiny because of the overwhelming superiority in force enjoyed by the United States as the world's sole superpower. Or perhaps as administrative tasks consume much of their time, too many officers allow their intellectual rigor to erode because they fail to invest sufficient "quality time" to reading, study, and reflection. Just like the hapless surgeon, who could succeed only in routine heart surgery, today's senior warfighter might succeed in a "routine" tour but fail in a critical time of change and unorthodoxy due to a lack of an understanding of warfare theory. And few wars are "routine."

Why is warfare theory important? Understanding the theory of war allows a senior commander to break free from the constraining bonds of petrified instruction, obsolete doctrine, and slavish adherence to "how we fought the last war."² It helps the warfighter shape developing situations; it lets the leader dictate and act, not react. In conflict with others who have not studied as well, the master of the elements writes the rules.

Another critical reason to understand the theory of war is that it determines one's warfighting style, which in turn drives one's doctrine. A nation's doctrine determines the type, size, and character of its force structure; the nature, quality, discipline, and morale required of its personnel; and the type of support and direction needed from political authority. Warfare theory, therefore, is fundamental.

The sequence is as follows: Warfare theory determines the warfighting style, which drives the doctrine, from which most else follows.³ Warfare theory is fundamental to every aspect of the military profession.

To get a tangible feel for warfare theory, it is useful to consider how one fights personally. What underlying "rules" do you generally use to plan for combat? How do you approach an assigned target or opponent? To what extent do you invoke established methodologies, and how often do you explore innovative procedures to accomplish the mission? Are you dependent upon checklists, or do you refer to them? Do you seek the enemy's strength or weakness? Do you strike for his body or his mind? Do you announce your intentions honorably, or are you inclined to stab him while he is distracted? Do you wait until you have overwhelming force before you move against him, or, given the opportunity, do you risk a quick thrust with a thin, sharp blade? How do you fight?⁴ What is your warfare theory?

Fortunately for this discussion, historically there have been but two broad "tracks" upon which warfare theory has run. While the division is not clear-cut, the *theory of attrition* advocates material superiority, mass, and attacks upon the

enemy's strength; *maneuver theory* attacks the enemy's will, critical weakness, and cohesion.

Attrition Theory

The theory of attrition is essentially concerned with the destruction of the enemy's mass, his physical forces. It searches for the enemy's strength, his center of gravity. The attritionist seeks victory by attempting to destroy the forces in the field, necessitating a focus on *battle*—the tactical event wherein those forces are engaged and destroyed. Doctrine, force structure, and personnel are accordingly written, procured, and trained toward the decisive battle where the enemy is brought to the field, met cleanly, and decisively defeated. Battle is the preferred method for winning wars. "The key concepts in attrition warfare are those of 'initial-force ratios,' the real or perceived numerical and material superiority of one side or the other; 'loss ratios,' the rate of losses in men and materiel by both sides as a result of battle; and 'fractional exchange ratios,' expressed algebraically as the loss ratio over the initial-force ratio. Attrition warfare . . . seeks to improve the force ratio by achieving and sustaining an acceptable loss ratio over the enemy."⁵

Characteristics of attrition theory include an emphasis on the superiority of competing forces, a focus on technology and equipment, primary attention by all command levels to the tactical level of warfare, and the destruction of the enemy's forces by impact and superior firepower. Since attrition theory focuses on force relationships and relative measures of technological advance, an attritional military organization views warfare as scientific, measurable, and definable.⁶ The focus is on the quantifiable, the tangibles of war.⁷ Warfare is approached systematically.

Attritionist militaries tend to concentrate on their own capabilities in military planning, identifying enemy "targets" but eschewing overmuch consideration of enemy capability or will. As such, they tend to be weak in intelligence support, assessment of enemy performance, and predictions of enemy intent.⁸ They are usually focused upon their own plans and activities (they like route packages, target sets, and air tasking orders), and they are thus often surprised by the enemy's actions; when they react, they usually do so late. Attritionist military organizations are usually predictable, because they fight a certain way against a given scenario and threat. Attritional combat tends to be bloodier than maneuver warfare, since there are more frequent incidents of contact with the enemy. Massed assaults, trench warfare, heavy reliance on artillery, and strategic bombing campaigns are all associated with an attritional warfighting style.

There are numerous examples of attrition applied at the tactical and operational level. For example, Napoleon's warfare style exemplified a genius for

attritional theory. His method of quickly massing his army to achieve complete destruction of the enemy's forces in the field took the modern world by storm. During the U.S. Civil War, many of General Ulysses S. Grant's later campaigns, with industrial backing and superior manpower, were characterized by attempts to take the battle to the more elusive Confederate enemy, and by horrendous bloodshed when he found it.⁹ The invasion of Normandy during World War II, while employing deception regarding locale, was a massive attritional approach at the operational level against Fortress Europa. Each South Pacific island assault was one of brutal attrition against a determined enemy.

U.S. forces in Vietnam would, for the most part, be categorized as attritional, attempting to engage the enemy on the field of battle. In *On Strategy: A Critical Analysis of the Vietnam War*, Colonel Harry Summers recalls an April 1975 conversation in which he remarked, "You know you never defeated us on the battlefield," to which his North Vietnamese counterpart replied, "That may be so, but it is also irrelevant."

Desert Storm exhibited such operational deception and maneuver as threatening an amphibious landing in Kuwait, swinging many of the ground force units west to avoid a direct assault on the Iraqi forces' strongest positions, and incapacitating the Iraqi command and control structure. Notwithstanding, the overriding military objective was the destruction of the Iraqi military forces in the field—and this is attritional.¹⁰

The American way of war has, typically, been attritional, relying on the strengths of its industrial society to provide machines, personnel, firepower, mass, and technology.¹¹ Because its national strengths have matched the demands of what Martin van Creveld calls "trinitarian wars," the United States has been fairly successful.¹² Where it has been unable to bring these strengths to bear against its enemies, it has been relatively unsuccessful.

The advantages of adherence to attrition theory depend upon one's material assets and whether one has a cooperative foe. With superiority in assets and a greater ability to replenish those assets, a nation is in a good position to engage in conflict an opponent employing a similar warfighting style but less well equipped. One advantage inherent to the successful practitioner of attrition theory is the possibility of reducing casualties through massive amounts of firepower. This is an American tendency (borrowed from the French), though other militaries have also adopted it. The attritionist will expend a considerable amount of explosives (since he has them to spend) rather than risk lives.

Attrition theory fits naturally with a centrally controlled military possessing massive amounts of firepower and advanced, expensive technology—indeed, firepower and technology are the signposts of an attritional military. Political and moral imperatives frame the case for close control of the employment of such destructive power and costly equipment. The predictability and "scientific logic"

of attrition theory makes it more attractive and easier to learn than maneuver warfare for those charged with its execution.

In militaries adhering to attrition theory, requirements for personnel with high initiative are reduced. Since attrition frames war as a measurable, quantifiable event, it gives less credence than does maneuver to the intangibles requiring human decision-making abilities, and hence has less need for such skilled officers. Centralized control, antithetical to high initiative, independent thought, and innovation, also reduces the need for these kinds of character traits.

The disadvantages of attrition theory are fairly self-evident. Should a nation lose its superiority in either technological or industrial capacity, it would discover its dependence upon attrition theory insupportable and no longer in its national interest. Also, should the nature of the enemy imply less vulnerability to attritional measures, success in war will come to depend upon matters other than technological mastery or industrial might. Then, adherence to attrition theory would be dangerous, and a military based upon it would be, in Summers's word, irrelevant.¹³

In future, using attrition theory in a war that does not clearly divide combatants from civilians might make it difficult to engage the enemy on whatever the field of battle might be. To use Van Creveld's phrase, identifying "the woman with the bomb in her purse" will not be easy. Viewing war as quantifiable, scientific, and measurable, having the goal of destroying the enemy's fighting forces, attrition theory will not serve if victory in a conflict (assuming it is identifiable at all) is dependent upon less tangible factors.

In operations other than war, where the military finds itself arrayed against nonmilitary opponents, several requirements emerge that attrition theory fails to meet. In such unorthodox situations, the unexpected is the norm, demanding from leadership innovation and creativity. An attritionist officer corps cannot meet these challenges. Too, such varied operations are consistently characterized by complicated rules of engagement. To attempt to satisfy the myriad "letters of the law," or for central authority to create rules for every situation, is much more difficult than to call upon a thinking officer who can discern the correct course of action and remain flexible within the guiding spirit of the commander's intent.

Devotion to attritional warfighting produces leadership that has difficulty getting its officers to think creatively. Generations of dependence upon an attritional warfighting style eviscerates the officer corps's ability to think and operate independently, dilutes its willingness to discard irrelevant paradigms, and blurs its perception of future needs.

Success in attrition theory depends upon maintaining superior industrial capacity, ensuring a higher quality of technology than one's opponents, possessing

numerical advantages in mass and firepower, and fighting wars in which one is fairly certain about the course of events at the tactical and operational levels. A noteworthy disadvantage of this type of warfare is its inherent predictability, from which an astute enemy can learn much. And such knowledge is central to the employment of maneuver theory.

Maneuver Theory

Maneuver theory is as old as the first barbarian to attack his opponent from behind. Sun Tzu captured its essence in his classic work. Yet only recently has a clear and embracing definition of this type of warfare been offered for modern tactics and operations. Retired Air Force Colonel John Boyd, during a study of U.S. success with the F-86 fighter aircraft in combat over Korea, distilled the modern definition of maneuver warfare. His work is described by a later scholar: "Conflict can be seen as time-competitive observation-orientation-decision-action cycles. Each party to a conflict begins by observing. He observes himself, his physical surroundings, and his enemy. On the basis of his observation, he orients, that is to say, he makes a mental image or 'snapshot' of his situation. On the basis of his orientation, he makes a decision. He puts the decision into effect, i.e., he acts. Then, because he assumes his action has changed the situation, he observes again, and starts the process anew. His actions follow this cycle, sometimes called the 'Boyd Cycle' or 'OODA [Observe, Orient, Decide, Act] loop.'"¹⁴

In contrast to attrition theory, which targets the enemy's physical forces, maneuver theory concentrates on outperforming the enemy's thought processes with the intent to destroy force cohesion.¹⁵ The enemy's mental, moral, and physical stability is the object of maneuver theory; its focus is upon the enemy's ability to observe, orient, decide, and act. This may or may not entail a primary concern with the enemy's forces in the field. The maneuver theorist eyes the enemy closely and adopts whatever methodology works to preempt, dislocate, or disrupt him. This style of warfighting carries enormous consequences for doctrine, force structure, personnel requirements, and leadership.

The first characteristic of a maneuverist military is a tendency toward decentralization. The primary need is to work quickly through the OODA loop; passing information up and down a centralized chain of command is inimical to deciding and acting faster than the enemy. Maneuver theory produces a military notable for generating and then thriving upon confusion and disorder in enemy organizations. Because decentralized command arrangements depend upon local subordinate-unit initiative to solve the situation at hand, the enemy is likely to discern no regular pattern of operations. The maneuverist military disdains standardized or traditional solutions to problems. "There is no formula you can learn. When someone says, 'cut all the bull about theory and tell me what to do,'

you can't. You can talk about how to think, and about some useful techniques. But you can't give new formulas to replace the ones . . . taught."¹⁶ A maneuverist military places a strong emphasis on the quality, trust, and independence of thought and action of and within its officer corps. Discarding a dependence upon formulas or fixed solutions requires lower-level leaders who can act individually based upon the situation, personalities, and intentions involved. A great degree of trust is required from senior leadership.

With the focus on the enemy's thought processes, as well as the requirement for high-initiative, creative, innovative, and trustworthy leadership, a maneuverist military tends to be "people-centered" in contrast to an attritionist military, which by nature tends to focus on technology and hardware. Maneuver militaries ensure that their officers are sufficiently educated in the profession of war, look with a close and stringent eye to promotions and other reward systems, and place emphasis upon rigorous historical study.¹⁷ As a corollary, they prefer less complicated technologies and weapons; technology is the trade—people and leadership are the professions.

When it succeeds, maneuver warfighting accomplishes its goal more decisively than does attrition. The collapse of the enemy, wrought through the destruction of mental, moral, or physical cohesiveness, is more dramatic. Panic, rout, or a resigned passivity are the hallmarks of an enemy defeated by maneuver warfare.

Hannibal's victory over the Romans at Cannae was an early example of tactical maneuver warfare. More recently, in U.S. history, the early successful campaigns of the Confederacy exhibited an ability to outthink opponents at the operational and tactical level and strike sharply at Union operational and strategic cohesiveness. Early in the Second World War, the Germans were exemplars of maneuver warfare, especially in their 1940 campaign in France; the French high command was literally paralyzed by the assault upon its awareness and control of the battle. During the war in Vietnam, the North Vietnamese and the Viet Cong, maneuver warfare theorists to the core, applied their theories at the tactical, operational, and most notably the strategic level, where they effectively attacked their opponents' national cohesion and will to fight. In 1979, Vietnamese units effectively repelled an invading People's Liberation Army force, causing the leaders of China to reconsider their nation's attritional approach to ground combat.

Maneuverist high commands focus on the development of leadership, and that leadership takes care of much that belabors the attritionist organization. The advantages of maneuver warfare infuse energy, trust, efficiency, and innovativeness in an officer corps. Such a structure has higher morale, fewer discipline problems, and a better ability to solve unique "people problems" brought about by change, such as stressful social and moral conditions. The reduced reliance on technology to solve military problems usually causes required weapon systems to migrate toward the lower end of the complexity (and therefore cost) scale.¹⁸ Less

affluent societies are well suited to this type of warfare; in fact, this can be the sole reason why they adopt maneuver warfare theory. When arrayed against an attritionist mindset, the maneuver theorist finds fertile ground on which to work and in the past has often been successful.

The disadvantages of maneuver theory, however, are also self-evident. The primary one is its strong dependence upon individual leadership. (Recall the impact of "Stonewall" Jackson's death on subsequent campaigns.) There are also immense and sweeping cultural differences between a decentralized maneuver military and a centralized attritional service. Establishing the latter involves money, people, time, and resources; developing the former requires something more rare, the development of military tradition, esprit, and education in the military art. For high command to relegate to its lower leadership crucial combat decisions implies a degree of interpersonal understanding and trust not easily achieved. Such trust and understanding must be forged within the framework of a mutual drive toward agreed-upon goals for the common good. Creating this frame of reference, this bonding of shared values and morals, is becoming exceedingly difficult in an amoral American society.

Maneuver warfare theory is not well understood. The very name misleads the casual inquirer to presume that it speaks of moving forces to fire more advantageously. Of the two theories, it is the more difficult to embrace, understand, or infuse. It deals in intangibles, where attrition is the theory of the tangible. Maneuver theory is art, not science; it has no formulas and little in common with engineering disciplines. It is therefore not well received in technologically oriented military organizations or societies. Also, maneuver theory does not play to the strengths of technology. It employs but does not feature them. If a nation is well advanced technologically relative to its potential enemies, and also wealthy, it may find maneuver theory unsuitable for its purposes. Further, it does not align itself with a traditionally chivalrous way of looking at war. Many Westerners view sneaking about hunting for the enemy's weakness and attempting to win at little cost, or even before the battle begins, as smacking of immorality, cowardice, and a general lack of fortitude.

Maneuver theory entails risk. There is more risk for high command because critical decisions are made by commanders actually at the scene, and because the objects of attack are the enemy's enigmatic "cohesion targets" instead of his very tangible, threatening, and visible armed forces in the field. There is also great risk if the battle develops and flows in ways that the high command did not foresee, or could not have.

Success with this theory is dependent upon the level of trust throughout the command structure, the ability of officers to devise creative and unorthodox solutions to problems. It relies on their capacity to discover, at every level of

warfare, just what constitutes the enemy's critical weakness, the linchpin of his cohesion, upon which the least amount of force will exert the greatest leverage.

Which Theory Is Best?

The answer, of course, depends upon one's needs, assets, and the nature of political oversight. Regardless of military or national inclinations toward one theory or the other, certain parameters must be considered.

Personnel. Contrary to expectation, in a theory that espouses high technology, attrition requires a lower level of intellect and imagination than does maneuver. Most people can be made to adhere to checklists and be taught to operate or maintain even the most complex pieces of technology.

However, maneuver warfare requires creativity, innovativeness, a propensity toward the unorthodox, and a certain independent cast of mind. Personnel systems must be structured to identify and promote officers possessing these intangible but indispensable qualities. This places a significant burden on those who must screen and evaluate fitness reports, which will contain subjective commentary on each officer's character. And it takes character to know character. Attrition theory places much less demand on personnel systems. Assessing officers using quantifiable measures with numbers or relative numerical rankings is simpler. Personnel are required mainly to possess engineering or scientific skills. Maneuver theory will be concerned with what an officer *is*, attrition with what an officer *does*.

Where attrition warfare calls for scientifically inclined personnel, maneuver warfare requires a different sort of individual, one with a martial bent and dedication to certain tenets that Western societies may find extreme. These tenets can be moral, religious, ethnic, or conceptual—such as the devotion to old-fashioned ideals of the military officer or the sustaining hope of a new nation born in the fires of revolution. Maneuver theory requires a greater degree of moral courage among its practitioners; innovative and independent officers will naturally encounter situations where disobedience of orders will be required if they are to succeed.

Equipment. Attrition-warfare armament must exceed at least the quality and preferably the quantity of that of the enemy. It takes the highest priority.¹⁹ Attrition theory demands significant wealth and technological expertise. The strength of an attritional military rises or falls with the strength of its equipment, which in turn depends upon the strength and vitality of its national economy. Fiscally constrained militaries will find adoption of or continued adherence to

attrition theory unsustainable, unless they expect to face even more constrained foes.

While maneuver warfighting also depends to a degree upon equipment quality, its primary reliance upon the ability of leadership enables its adherents to go further with less (as has usually happened). Maneuver militaries are therefore less subject than attritionists to the vicissitudes of national economic strength.

The more complex the equipment, the more time needed to train to use and maintain it. If one's theory holds that equipment is the centerpiece of strength, such a commitment is quite acceptable. On the other hand, if one's theory holds that people are the strongest part of the military, complex and expensive equipment is potentially incongruous; the preponderance of training time will be devoted to improving the intangible skills of the officer corps.

Threat. A military selecting a particular warfare theory will need to consider carefully its likely threats. Will it encounter diverse, nontrinitarian, unorthodox guerrillas, low-intensity conflict? Maneuver theory has proved the most successful tool against such enemies.²⁰ Facing traditional military enemies employing conventional combined-arms battlefield techniques, attrition has proven more effective, as in the world wars against industrial nation-states. Will the conflict be long or short? In the short term, attrition has not performed well against maneuver warfare theorists—only after an extended period of buildup (and, frequently, heavy casualties) can those who employ attrition theory overwhelm their maneuverist enemies.

Risk. The level of acceptable risk that senior military leadership is willing to endure is very important when selecting a suitable theory. Maneuver warfare usually entails more risk. There is a comforting certainty in viewing warfare as quantifiable, measurable, and scientific. It ameliorates the mystery and terror of something otherwise uncontrollable, indecipherable, and opaque. We may conjecture that this is a main reason why maneuver warfare is resisted in America. Americans hope that war is not inevitable; but if there is a war, they expect someone of great genius to emerge and take care of things until the nation can mobilize its great power. Such a philosophy has brought heavy casualties to American troops in the beginning of conflicts. Only later do they rely on massive firepower and technological superiority. Unfortunately, geniuses rarely appear on cue.

Attrition theory suits the style of societies that believe human nature is inherently good; that war is an avoidable aberration; that war takes place between military forces—clearly designated combatants; and that aggressors can be dissuaded by the clear demonstration of overpowering force.

At the foundation of maneuver warfare is the philosophical tenet that human nature is inherently flawed and that because of human greed and frailty, warfare is an inevitable fact of life. Here is found the belief that war is an all-embracing human activity, not confinable to the clean (if bloody) boundaries of the battlefield, and that the crux of warfare is man's mind.

Notes

1. Stephen B. Jones. "A Unified Field Theory of Political Geography," *Annals of the Association of American Geographers*, 1954, p. 111.

2. This is not to imply that all doctrine is either restrictive or to be disdained. With a more complete understanding of warfare theory, doctrine is improved. The two are complementary, not exclusive. There may be times, however, when established doctrines do not address the exact situation, and it is here that an understanding of theory enables one to enter waters unexplored and unsupported by existing doctrine.

3. That so much follows from doctrine may seem anomalous, our attention having only recently been turned to it. Yet, codified or not (mostly not), our doctrine largely determines how we fight, or perhaps how we think we will fight, and what we think we will need to fight with.

4. Coming late to an understanding of warfare theory and the art of war is not uncommon in our modern military, as Colonel John C. Studt, USMC, Ret., recalls: "I served over 31 years active duty with the Marine Corps, saw combat in both Korea and Vietnam, and attended service schools from The Basic School to the National War College. Yet only toward the end of my military career did I realize how little I really understood the art of war. Even as a Pfc [private first class] in Korea after being evacuated along with most of my platoon after a fruitless frontal assault against superior North Korean forces, it seemed to me there had to be a better way to wage war." See William S. Lind, *The Maneuver Warfare Handbook*, Westview Special Studies in Military Affairs (Boulder, Colo.: Westview, 1985), Foreword, p. xi. As Harvey Logan asks, "Rules? In a knife fight?" William Goldman, *Butch Cassidy and the Sundance Kid* (New York: Bantam, 1969), p.26.

5. Robert Leonhard, *The Art of Maneuver: Maneuver-Warfare Theory and Airland Battle* (Novato, Calif.: Presidio, 1991), p. 19.

6. "If the [attritionist] appreciates war's intangibles at all (such as morale, initiative, and shock) he sees them only as combat multipliers with which to fight the attrition battle better." Ibid.

7. Secretary of Defense Robert McNamara's approach to warfighting is perhaps the most notorious recent example.

8. While the attritionist military often employs very high technology to garner intelligence, and thus gathers a great deal of it, its ability to disseminate appropriate or applicable intelligence to the fighting forces tends to be weak, because subordinate decentralized commanders are less important than the centralized command element.

9. The Vicksburg and Chattanooga campaigns are in notable contrast.

10. Ironically, Saddam Hussein apparently also was adhering to an attritional theory. Reportedly, he believed that his ground forces could inflict such high casualties on the coalition forces that domestic support for the war, especially in the United States, would collapse.

11. Doctrinal assertions to the contrary (see *Joint Warfare*, NDP-1), the evidence found within our force structure, acquisitions, personnel policies, and training reveals that attrition theory is still our dominant model.

12. Martin van Creveld uses this term for the "three-legged stool" upon which nations have traditionally built their warmaking potential—the army, the state, and the people.

13. Enemy resistance might be based upon an ethnic, religious, or political cause, or upon the political will of the people.

14. Lind, p. 5.

15. Some have said this theory is ill named—that it has little to do with the actual movement of forces. Further, it in no way implies the maneuverist will make less use of firepower; it is simply that the target differs.

16. Lind, p. 7.

17. This is not to endorse slavish imitations of historical solutions to problems of the past (which is one way the study of history can be dangerous).

18. Nothing here should be construed as implying that the maneuver theorist eschews advanced technology. He views technology as servant to the warrior, whereas the attritionist is likely to end up serving his technology.

19. Note the list of attendees at the recent rollout of the F/A-18 E/F Hornet aircraft at McDonnell-Douglas Aircraft Company.

20. Compare the varied experiences of the U.S. Marines, typifying maneuver theory, and the U.S. Army, as a more attritional force, in Somalia.

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Essays toward Improvement

edited by

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Naval War College*

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Casualty Incidence during Naval Combat Operations A Matter of Medical Readiness

Christopher G. Blood, Richard T. Jolly, M.D.,
and Michael S. Odowick

MEDICAL RESOURCE PLANNING for military operations requires estimates of the casualties likely to be sustained by both shipboard forces and ground troops. These casualty projections are required inputs to models that forecast the beds, medical equipment, supplies, and health care personnel needed to support an operation. Given that shipboard casualties may require transfer to medical facilities farther away and across a more hostile topography than that required for casualties on land, evacuation and treatment conceivably pose greater logistical problems for maritime forces than for their ground-based counterparts.

Projections of casualties among forces afloat require two separate sets of forecasts. First, estimates must be made of the likely numbers of ships that will sustain hits by enemy forces, and second, the incidence of casualties aboard the individual ships must be projected. The numbers of ships hit during a naval combat scenario and the casualties incurred during specific ship strikes are functions of a complex set of dynamics that include shipboard defenses, combat tactics, weapons possessed by the adversary, crew readiness, ship structural design, and human performance.

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The Historical Data

In a step toward forecasting casualties that might be sustained in future operations, the present investigation examines casualty rates sustained during previous naval combat operations, the incidence of successful strikes on surface naval vessels, and the casualties resulting from individual hits. The operations examined were those of: U.S. forces during World War II; United Kingdom (UK) forces during World War II; U.S. forces during the Korean conflict; and UK forces during the Falklands War (Operation CORPORATE).

U.S.: World War II. At the Operational Archives Division of the Naval Historical Center in Washington, D.C., is a listing of all afloat combat operations and engagements, the ships involved in each, and the dates of each ship's participation. Because dates of combat engagements within larger operations sometimes overlap (for instance, in 1944 the battles of Surigao, Samar, and Cape Engano all were in progress 24–26 October, as was the overall Leyte operation of which these battles were components), casualty and ship hit rates were computed for the combined operation rather than individual engagements where there was a degree of uncertainty as to the particular battle in which a ship participated. Data on specific naval warfare incidents were obtained from *The Summary of War Damage* and the *Naval Chronology, World War II*. Combining the incident data with the dates of the ships' involvement in various operations allowed the computation of "ship hit rates per hundred ship-days," calculated as the number of ships struck divided by the number of ship days, multiplied by one hundred.

Casualty rates were computed using Bureau of Personnel casualty lists, which are also kept at the Naval Historical Center. Casualty incidence was computed as "rates of casualties per one thousand strength per day." Additionally, casualty frequencies from specific weapon strikes were obtained from the Medical Officer Reports and After-Action Reports maintained at the Naval Historical Center, as well as from deck logs at the National Archives.

UK: World War II. Ship hit rates were computed for Royal Navy ships and merchant vessels participating in specific convoy operations. Analyses of the attacks sustained during these operations were confined to the periods in which the British forces were engaged by the enemy, not the time leading up to the attacks, when travel was unfettered and the risk of attack was relatively small.

Specific naval operations examined included: Operation PEDESTAL, a convoy of fourteen merchant ships escorted through the Mediterranean Sea by sixty-four Royal Navy warships in August 1942; two eastbound arctic convoys (PQ-17 and JW51B) in July and December 1942, in which four and ten Royal Navy ships, respectively, escorted thirty-four and fourteen merchant vessels; two eastbound convoys (HX229 and SC122) composed of thirteen naval vessels and ninety merchant ships, traversing the North Atlantic together in March 1943; two

westbound convoys (ONS.18, ON.202), which left Liverpool and Milford Haven and jointly crossed to North America in September 1943; and a joint convoy (SL.139 and MKS.30) travelling from Gibraltar to the UK in November 1943.

Though incomplete data prohibited computation of personnel casualty rates for these operations, casualty frequencies were available for 137 attacks on British ships during the war. The mean wounded-in-action (WIA) and killed-in-action (KIA) were computed by weapon and ship type.

U.S.: Korean Conflict. Ship hit rates were calculated from two major operations during the Korean conflict: the Chinese spring offensive of 22 April–8 July 1951 and the Chinese summer-fall offensive of 9 July–27 November 1951. U.S. Navy afloat casualty rates per thousand personnel per day were also computed for the two campaigns. Additionally, the mean casualties were computed by weapon and ship type for the ships sunk or damaged during all Korea operations.

UK: Falklands War. Ship hit rates per hundred ship-days were computed for the United Kingdom naval forces during the Falklands War. Casualty rates per thousand personnel per day were computed for Royal Navy warships and Royal Fleet Auxiliary (RFA) vessels. The numbers of WIA and KIA were extracted from Operation CORPORATE medical records maintained during the 1982 conflict, and mean casualties were computed by weapon and ship type.

Ship Hit Rates and Casualty Incidence

U.S.: World War II. Table 1 is a presentation of the number of hits, total ship-days, rate of hits per hundred ship-days, and WIA and KIA rates sustained aboard surface ships during thirty-six World War II operations. These data indicate a wide variability in the casualty and hit rates. The overall hit rates across Pacific and Atlantic operations were 0.32 and 0.20 hits per hundred ship-days; the daily WIA and KIA rates across Pacific operations were 0.30 and 0.26 per thousand strength, respectively. In the European theater, the WIA and KIA rates were 0.53 and 0.31 per thousand strength per day.

The mean casualties sustained aboard major combatants by weapon type are shown in Table 2. The "multiple weapon" category, which represents strikes by two or more different weapon systems, had the highest average number of both wounded and killed; kamikazes yielded the second-highest mean number of WIA, while torpedoes ranked second in KIA inflicted. The mean wounded and killed, respectively, for each weapon type were: kamikaze 39.0, 23.3; gunfire 22.5, 19.0; bomb 30.3, 33.3; torpedo 37.3, 78.1; mine 24.2, 24.0; and multiple 71.5, 135.2. The overall mean WIA and KIA across all weapon types for the 513 attacks on major combatants were 34.8 and 38.1.

Table 3 displays the mean WIA and KIA sustained on auxiliary ships by weapon type. The average number of wounded and killed across the 355 attacks were 16.4

and 10.8, respectively. The mean total casualties (WIA and KIA combined) by weapon types were: kamikaze 26.7; gunfire 8.6; bomb 31.6; mine 27.5; and torpedo 52.7.

UK: World War II. Ship hit rates for Operation PEDESTAL are shown in Table 4 for both naval vessels and the merchant ships being escorted. While the Mediterranean Sea segment of this operation was only two days in duration, there were nineteen hits on the seventy-eight ships in this convoy, yielding an overall hit rate of 14.7 hits per hundred ship-days. Also presented are the hit rates for two eastbound arctic convoys, one in July 1942 (PQ-17) and one in December 1942 (JW51B); the overall rates for these two operations were 12.4 and 4.3, respectively. Hit rates for two eastbound convoys that crossed the North Atlantic together (HX229, SC122) in 1943 are also shown in Table 4. While no naval vessels were struck during this operation, the twenty-nine hits on merchant vessels yielded an overall rate of 7.7 hits per hundred ship-days. Lastly, Table 4 displays the hit rates for a joint westbound convoy (ONS.18, ON.202) traversing the North Atlantic from the United Kingdom to North America, as well as a joint convoy (SL.139, MKS.30) traveling from Gibraltar to Britain. The overall hit rates for these two operations were 1.95 and 0.89, respectively.

Additionally, Table 5 shows the mean frequencies of WIA and KIA incurred during various attacks on Royal Navy battleships, carriers, cruisers, and destroyers. The mean number of wounded across the 137 shipboard attacks was 13.2, while the average killed-in-action per incident was 51.7.

U.S.: Korean Conflict. Of the fifteen casualty-producing incidents during the two major Chinese offensives, thirteen were attacks by shore batteries and two were mine detonations. The number of hits per hundred ship-days were 0.13 and 0.09, respectively, for the spring and summer-fall offensives, while the total casualty rates were 0.045 and 0.02 per thousand strength per day. Table 6 displays the mean WIA and KIA aboard all U.S. ships attacked during the Korean War (attacks occurred between September 1950 and July 1953). The mean WIA across these 93 incidents was 4.66, while the mean KIA was 1.58.

UK: Falklands Conflict. The casualty statistics for the Falklands data are based upon thirty-six Royal Navy surface warships and twenty-three RFA ships that participated in the conflict. Because the focus of this paper is on surface ships, submarines have been excluded from these analyses, as have the thirty-six merchant "ships taken up from trade" (STUFT) for use in Operation CORPORATE. (Note that while there were several attacks on the merchant ships, casualties were sustained aboard only one.)

Seventeen Royal Navy warships were successfully attacked, as were six of the RFA units. The rate of WIA was 0.32 per thousand strength per day, while the KIA rate was 0.22. During the period of 30 April through 16 June, a total of 1,723

ship-days and twenty-three attacks yielded a ship hit rate of 1.34 per hundred ship-days.

Of these twenty-three attacks on British warships and auxiliary vessels, sixteen were bomb attacks, five were cannon fire, and two were air-launched Exocet missiles. The mean WIA across all attacks was 8.26, and the mean KIA was 5.78. Table 7 displays the mean casualties by weapon and ship type for the twenty-three incidents. The mean WIA for bombs, cannon fire, and missiles were 8.9, 1.8, and 19.0, respectively. The average number of KIA for the three weapon types were 6.2, 0.0, and 16.5.

"A Formidable Undertaking"

Planning for naval combat operations must ensure that sufficient medical resources and evacuation assets are allocated for the casualties that may be sustained. As a preliminary step toward projecting casualties afloat in future operations, the authors examined hit rates of previous combat operations and also the casualties resulting from such attacks.

While the World War II British convoys had the highest incidence of ships hit of all the naval operations examined, these rates were based on the time periods in which escort ships and merchant vessels were particularly vulnerable to attack by German forces—that is, when the distances between the convoys and land were not great. The notion that littoral operations place naval vessels at heightened risk is supported by the fact that the highest hit rates occurred among the convoys that were approaching land or were within restricted waters. Also, though some U.S. amphibious operations in World War II exhibited high ship hit rates, the large numbers of ships involved and the extended lengths of some littoral and landing operations (e.g., Leyte, Okinawa, and Iwo Jima) yielded relatively low ship hit rates even though substantial numbers of ships were struck. The ship hit rate for the Falkland Island conflict, a relatively brief operation, was comparatively high, again indicative of the heightened risks of littoral operations. Ship hit rates of U.S. coastal forces during the Chinese offensives in the Korean War were low, reflecting the Navy's supporting rather than direct role, and the fact that opposition attacks were limited mainly to mines and shore batteries.

Interestingly, the United Kingdom's rate of casualties per thousand personnel in the Falklands operation were similar to the overall WIA and KIA rates for U.S. World War II Pacific operations, which suggests that contemporary changes to ships may not make much difference in the number of casualties sustained when an adversary is able to penetrate air defenses.

The mean numbers of casualties sustained in various attacks against surface ships are lower for more recent data (Korea and the Falklands) than for data from World War II (U.S. and the UK). It needs to be emphasized that the average

numbers of casualties seen in more recent bomb and mine incidents are based on smaller numbers of observations, which in turn yields greater uncertainty as to their predictive validity.

This investigation has focused on operations and ship strikes for which official documentation exists. It is noted, however, that a number of ships were attacked, particularly among forces in World War II, for which the exact numbers of casualties is not available; these consequently have not been included as a basis for future projections. Nevertheless, understanding the casualties suffered during previous operations and engagements may provide insight into future naval combat scenarios. While U.S. surface, subsurface, and air superiority over potential adversaries is widely recognized and respected, the formidable undertaking of treating and evacuating seriously wounded personnel from a potentially hostile marine environment must be recognized and respected as well.

Table 1

**Rates of Hits on U.S. Vessels
during World War II Operations**

Asiatic-Pacific Area					
Operation	Ship Hits	Total Ship Days	Hit Rate*	WIA Rate**	KIA Rate
Philippine Islands operation	40	4,489	0.89	0.44	2.56
Netherlands East Indies	1	24	4.17	0.92	0.15
Coral Sea	6	102	5.88	2.17	8.90
Midway	2	160	1.25	1.81	1.71
Guadalcanal-Tulagi landings	14	220	6.36	6.63	11.55
Capture/Defense of Guadalcanal	26	2,903	0.90	0.48	0.70
Eastern Solomons	2	57	3.51	2.04	2.04
Cape Esperance	4	18	22.22	13.82	17.24
Santa Cruz Islands	8	24	33.33	18.77	13.51
Guadalcanal (3d Savo)	19	141	13.48	8.84	21.34

* Hit Rates are per 100 ship days.

** Casualty rates are per 1,000 strength per day.

Table 1 (cont.)

**Rates of Hits on U.S. Vessels
during World War II Operations**

Asiatic-Pacific Area					
Operation	Ship Hits	Total Ship Days	Hit Rate*	WIA Rate**	KIA Rate
Tassafaronga (4th Savo)	4	22	18.18	14.06	36.44
Rennell Island	2	52	3.85	2.25	2.90
Consolidation Solomon Islands	12	7,456	0.16	0.13	0.05
Aleutians operation	3	1,095	0.27	0.07	0.02
New Georgia Group operation	21	2,444	0.86	1.28	1.73
Bismarck Archipelago operation	13	3,451	0.38	0.29	0.24
Treasury-Bougainville operation	19	2,086	0.91	0.53	0.32
Gilbert Islands operation	13	3,541	0.37	0.24	0.32
Marshall Islands operation	5	4,776	0.10	0.08	0.02
Western New Guinea operation	8	5,801	0.14	0.12	0.05
Marianas operation	37	26,275	0.14	0.08	0.02
Western Caroline Islands operation	11	22,076	0.05	0.02	0.01
Leyte operation	91	18,529	0.49	0.85	0.49
Luzon operation	76	9,362	0.81	1.24	0.52
Iwo Jima operation	56	10,936	0.51	0.23	0.13
Okinawa Gunto operation	290	118,912	0.24	0.25	0.16
Kurile Islands operation	1	169	0.59	0.02	0.00
Borneo operations	21	4,723	0.44	0.24	0.04
Tinian capture	2	1,654	0.12	0.62	0.16
Consolidation So. Philippines	2	4,745	0.04	0.15	0.05
European-African-Middle Eastern Area					
North African occupation	20	13,907	0.14	0.34	0.21
Sicilian occupation	29	4,834	0.60	1.14	0.64
Salerno landings	15	3,771	0.40	0.77	1.41
West Coast of Italy OP-1994	13	5,103	0.25	0.84	0.56
Invasion of Normandy	39	15,125	0.26	1.11	0.46
Invasion of So. France	10	21,495	0.05	0.11	0.02

* Hit Rates are per 100 ship days.
** Casualty rates are per 1,000 strength per day.

Table 2
Mean Casualties Sustained on Major Combatants by Weapon;
World War II

Weapon	Ship Type	No. of Incidents	Mean WIA	Mean KIA
Kamikaze	Battleship (BB)	16	47.7	16.2
	Cruiser (CA)	5	35.2	11.0
	Cruiser (CL)	8	54.6	26.6
	Carrier (CV)	16	88.6	59.8
	Carrier (CVE)	17	63.1	36.2
	Carrier (CVL)	4	42.2	32.2
	Destroyer (DD)	100	30.4	20.3
	Destroyer (DE)	24	14.2	6.8
Gunfire	Battleship (BB)	14	30.9	8.4
	Cruiser (CA)	10	48.5	33.2
	Cruiser (CL)	7	9.3	14.6
	Carrier (CV)	2	21.5	4.0
	Carrier (CVE)	2	140.0	63.0
	Carrier (CVL)	1	28.0	7.0
	Destroyer (DD)	78	15.0	18.6
	Destroyer (DE)	4	37.8	25.0
Bomb	Battleship (BB)	4	34.0	13.8
	Cruiser (CA)	4	12.0	18.8
	Cruiser (CL)	11	53.1	44.0
	Carrier (CV)	13	72.6	76.2
	Carrier (CVE)	2	11.5	7.0
	Carrier (CVL)	1	182.0	101.0
	Destroyer (DD)	46	12.9	22.8
	Destroyer (DE)	2	1.5	00.0
Torpedo	Battleship (BB)	6	26.7	91.8
	Cruiser (CA)	9	67.3	149.6
	Cruiser (CL)	10	29.4	108.1
	Carrier (CV)	5	50.0	39.4
	Carrier (CVE)	2	106.0	232.5
	Carrier (CVL)	1	44.0	17.0
	Destroyer (DD)	28	24.1	61.2
	Destroyer (DE)	14	40.0	34.6
Mine	Cruiser (CL)	1	00.0	00.0
	Destroyer (DD)	15	23.1	24.2
	Destroyer (DE)	3	44.0	31.3
Multiple	Battleship (BB)	3	82.0	415.7
	Cruiser (CA)	4	129.8	344.8
	Cruiser (CL)	3	47.7	56.7
	Carrier (CV)	3	97.7	84.3
	Carrier (CVE)	3	65.0	28.0
	Destroyer (DD)	11	51.1	57.6
	Destroyer (DE)	1	45.0	19.0

Table 3

**Mean Casualties Sustained on Auxiliary Ships by Weapon;
World War II**

Weapon	Ship Type	No. of Incidents	Mean WIA	Mean KIA
Kamikaze	Mine craft	45	14.6	7.8
	Tank landing ship	16	12.5	5.6
	Transport	36	29.2	11.2
	Motor torpedo boat	2	7.5	4.0
	Subchaser	4	11.8	3.0
	Cargo	5	8.8	1.2
	Oiler	2	8.5	1.0
	Tender	5	20.6	13.8
Gunfire	Tug	2	18.5	4.0
	Mine craft	14	4.9	3.2
	Tank landing ship	33	5.9	0.7
	Transport	7	15.7	12.7
	Motor torpedo boat	11	1.6	4.6
	Subchaser	2	6.0	2.5
	Cargo	3	1.0	0.0
	Tender	1	0.0	0.0
Bomb	Tug	2	4.0	0.5
	Mine craft	15	8.7	4.1
	Tank landing ship	17	16.6	6.3
	Transport	13	13.9	15.2
	Motor torpedo boat	6	5.0	5.7
	Subchaser	3	20.3	9.7
	Cargo	3	10.0	5.7
	Oiler	7	20.3	54.1
Mine	Tender	5	24.6	68.6
	Tug	1	49.0	18.0
	Mine craft	35	15.7	5.7
	Tank landing ship	7	51.3	12.4
	Transport	1	53.0	0.0
	Motor torpedo boat	3	6.3	0.0
	Subchaser	3	7.3	6.7
	Tender	1	62.0	16.0
Torpedo	Tug	1	10.0	7.0
	Mine craft	3	57.3	39.3
	Tank landing ship	16	29.1	37.6
	Transport	10	18.2	22.2
	Subchaser	1	8.0	29.0
	Cargo	7	22.4	4.3
	Oiler	5	22.8	23.8
	Tug	2	23.5	25.5

Table 4

Ship Hit Rates during World War II Royal Navy Convoy Operations

	Total Ships	Ship Days	Hits	Hit Rate*
Operation PEDESTAL (11–13 Aug. 1942)				
Naval ships	64	103	9	8.74
Merchant ships	14	26	10	38.46
Convoy PQ-17 (4–10 July 1942)				
Naval ships	4	28	0	0.00
Merchant ships	34	158	23	14.56
Convoy JW51B (29–31 Dec. 1942)				
Naval ships	10	28	3	10.71
Merchant ships	14	42	0	0.00
Convoy HX229/SC122 (16–19 Mar. 1943)				
Naval ships	13	52	0	0.00
Merchant ships	90	326	29	8.90
Convoy ONS.18/ON.202 (18–23 Sept. 1943)				
Naval ships	20	112	4	3.57
Merchant ships	67	402	6	1.49
Convoy SL.139/MKS.30 (18–21 Nov. 1943)				
Naval ships	19	73	1	1.37
Merchant ships	66	264	2	0.76

* Hit rates are per 100 ship days, for periods in which convoys were at greatest risk.

Table 5

Mean Casualties Sustained by Weapon and Ship Type among UK Forces during World War II

Weapon	Ship Type	Number of Incidents	Mean WIA	Mean KIA
Bomb	Battleship	7	15.4	7.4
	Carrier	3	59.3	54.3
	Cruiser	25	22.9	42.4
	Destroyer	54	9.6	22.8
Gunfire	Battleship	1	3.0	1,421.0
	Carrier	1	34.0	1,204.0
	Cruiser	3	4.0	1.3
	Destroyer	15	5.3	39.0
Mine	Destroyer	1	23.0	59.0
Torpedo	Cruiser	2	1.5	6.0
	Destroyer	10	8.7	45.1
Multiple	Battleship	3	9.0	251.3
	Cruiser	2	4.0	1.0
	Destroyer	10	14.9	8.5

Table 6

Casualties Sustained on U.S. Ships during Korean Conflict

	Shore Battery			Mine		
	No. of Incidents	Mean WIA	Mean KIA	No. of Incidents	Mean WIA	Mean KIA
Minesweeper (AM)	6	1.0	0.3	2	39.5	6.5
Motor minesweeper (AMS)	7	0.8	0.3	2	9.0	15.5
Salvage ship (ARS)	1	0.0	0.0			
Fleet ocean tug (ATF)				1	5.0	2.0
Battleship (BB)	2	2.5	1.0			
Heavy cruiser (CA)	6	3.3	0.3			
Light cruiser (CL)	1	0.0	0.0			
Destroyer (DD)	40	2.9	0.6	4	26.0	11.0
Antisubmarine destroyer (DDE)	1	1.0	0.0			
Radar picket destroyer (DDR)	3	5.7	0.3	1	18.0	9.0
Destroyer escort (DE)	3	0.7	2.3			
Destroyer minesweeper (DMS)	6	2.3	1.2			
Dock landing ship (LSD)	2	2.0	1.0			
Landing ship (rocket) (LSMR)	1	4.0	1.0			
Tank landing ship (LST)	1	0.0	0.0			
Patrol escort (PF)	3	6.3	0.7			

Table 7

Mean Casualties Sustained by Weapon and Ship Type among UK Forces during the Falklands Conflict

Weapon	Ship Type	Number of Incidents	Mean WIA	Mean KIA
Bomb	Destroyer	2	11.0	9.5
	Frigate	6	8.8	4.3
	Landing ship	6	10.2	9.2
	Light cruiser	2	3.5	0.0
Cannon	Frigate	3	3.0	0.0
	Landing ship	2	0.0	0.0
Exocet (ALCM)	Destroyer	1	24.0	20.0
	Light cruiser	1	14.0	13.0

Ψ

BOOK REVIEWS

A book reviewer occupies a position of special responsibility and trust. He is to summarize, set in context, describe strengths, and point out weaknesses. As a surrogate for us all, he assumes a heavy obligation which it is his duty to discharge with reason and consistency.

Admiral H.G. Rickover

“The Origins of the Somalia Debacle”

Stevenson, Jonathan. *Losing Mogadishu: Testing U.S. Policy in Somalia*. Annapolis, Md.: Naval Institute Press, 1995. 183pp. \$24.95

THE BOOK JACKET OF *LOSING MOGADISHU* quotes the former U.S. ambassador to Kenya, Smith Hempstone, famous for his prediction of Somalia as America's next “tar baby,” as saying that this book is “required reading of anyone interested in the origins of the Somalia debacle.” I would go one step further: it should be required reading for anyone involved in a U.S. humanitarian effort overseas. Not only does this comprehensive, thoroughly researched book provide an honest appraisal of what went wrong in Somalia, it also spells out how the lessons learned from the experience should guide our foreign policy, the use of U.S. military force in humanitarian interventions, and our relationship with the United Nations. We would do well to heed its warning.

Although author Jonathan Stevenson cites numerous reasons for the United States' poor performance in Somalia, two stand out in particular: the failure to understand Somali culture and a fear of repeating Vietnam. To this reviewer, who was in Somalia at the time of Operation RESTORE HOPE, these factors are more important than others because their impact is so far-reaching. In addition, they are deceptively benign, so it is important that others less familiar with Somalia understand them.

In his early chapters, Stevenson, a lawyer turned journalist, introduces us to Somali culture—a multifaceted society with one pervasive feature, the clan. One's clan affiliation determines everything in Somali life. This alone defies any notion of a centralized politic, a fact not appreciated by everyone determining American policy in the country. Stevenson further characterizes Somali culture as a series

of “shifting loyalties and fluid allegiances.” Loyalty extends only to the sub-clan, whose “collective alignment [rolls] with the moment.”

The author also addresses America’s patronage of Somalia during the Cold War, specifically with respect to how remote the United States was. Such distancing precluded any attempt to learn about Somali culture. America’s interests in the country were focused instead on the port of Bardera, which in 1980 became the U.S. Rapid Deployment Force’s base on the Indian Ocean. Over the next few years, the United States would pour more money into Somalia, not to help the Somalis shoulder up against Soviet-backed Ethiopian border excursions but rather to overhaul facilities intended to help expand American military power in the region.

Stevenson believes Vietnam was another reason why America kept its distance from Somalia. The United States’ experience in Vietnam not only made it reluctant to insinuate its military into another country, it also “soured U.S. policy makers on the practice of intimately conditioning local governments to further American ideological interests.” Thus another opportunity for a deepened understanding of Somali culture was lost.

The consequences of failing to understand Somali culture and of being a slave to Vietnam’s memory come through loudly and clearly in Stevenson’s analysis of Operation RESTORE HOPE and the subsequent debacle. He describes a force that could “put a very large bomb on a small target from very far away” yet could hardly utter a “hello” to a Somali, a task just as important to the success of the operation as dropping bombs. There are discussions about the bungled psychological operations (PSYOPS) messages, innocent encounters that got rough because of a language barrier, and potentially embarrassing situations resulting from the failure of many soldiers to realize that most Somalis are Muslim. Although Stevenson applauds a PSYOPS campaign that was designed to keep the Somali population informed about task force activities, he points out that Somalis did not want just to be informed, they wanted to be included.

He also describes how the original optimism slowly eroded with time. Marines became less friendly and more cautious. Somalis stopped perceiving Americans as saviors. As more time passed, the American forces simply “got cynical.” There came to be two worlds in Mogadishu, one within the walls of the UN compound, equipped with most of the comforts of the Western world, and one outside the walls, with no running water, no sewerage, and no electric power.

With this sort of information provided as background, the reader is hardly surprised by the disaster of 3 October. It simply represented the unfortunate culmination of ignorance of who Somalis are, American arrogance (in assuming Aidid’s militias were incompetent, unarmed, and unorganized), and, to quote Stevenson, America’s falling victim to “an old Third World seduction: simple people, simple problems, simple solutions.”

Stevenson's command of the facts and his intuitive understanding of the whole of Somalia make him well qualified to tell us how the U.S. experience there should guide the nation in the future, and he does so in the last few chapters of the book. His lessons run the gamut, from gentle reminders of things that should be obvious ("Military Intervention Is the Last Resort" and "Establish Tight Command and Control") to the less obvious ("Know Your Enemy" and "Keep Vietnam in Perspective"). He also has extensive sections on the U.S.-UN relationship and the moral impetus of American foreign policy in the post-Cold War world—which the United States may or may not want to have.

What makes this book so compelling is the author's ability to link the United States' poor performance in Somalia to such factors as ignorance and a fear of repeating the past. It is also compelling because of its timing. This book was published just as the United States was deciding to become involved in the Bosnia crisis. One can only hope those involved with Bosnia, either militarily or politically, had a chance to read this book before they took any action.

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The Aspen Institute. *The United States and the Use of Force in the Post-Cold War Era*. Washington, D.C.: Brookings Publications, 1995. 289pp. \$10.95

A product of the Aspen annual summer conference conducted in August 1994, *The United States and the Use of Force in the Post-Cold War Era* joins a mushrooming body of literature on intervention. This volume asks the right questions: When and how should the United States intervene in international situations that threaten global security or stability? What policy guidelines should underwrite decisions on intervention? What limits should constrain intervention? How should U.S. decisions be influenced

by other countries and international organizations?

The debate on these issues in the United States is sharp because only that nation possesses the wherewithal to choose when, where, and to what extent to intervene. No other state in the world today has such interventionary capability. Consequently, struggling with the issues has become a major spiritual problem for America—the flesh is strong, but the spirit is hesitant.

The essays have been penned by first-class analysts, and their overall quality is comparatively high. The special strength of the book derives from its middle three essays; comprehensive and thought provoking, they focus on the constraints placed on intervention

by the Congress, the executive branch, and the press. They are written by, respectively, James M. Lindsay, professor of political science, University of Iowa; Jane E. Holl, executive director of the Carnegie Commission on Preventing Deadly Conflict; and Andrew Kohut, director of the Times Mirror Center for the People and the Press, with his associate, Robert C. Toth. Lindsay's "Congress and the Use of Force in the Post-Cold War Era" is the most complete and readable chapter on the subject that has recently appeared in print.

The book's weakness stems from its having been edited anonymously. While Bruce Berkowitz of the Aspen Strategy Group composed a useful introduction (indeed, the key to selecting other chapters to read), no editorial responsibility has been assigned. One result, among others, is that there are glaring inconsistencies across the chapters, even in such straightforward issues as agreement on terminology. For example, the essay by Richard Haass, "Military Intervention: A Taxonomy of Challenges and Responses," forces the reader to warp backward in time to when "peacemaking" meant imposing peace and the term "peace enforcement" did not exist. Haass maintains a death-grip on the old terminology, even though the military, most analysts, and other government departments have adopted the language introduced by Secretary General of the United Nations Boutros Boutros-Ghali in his 1992 pamphlet *An Agenda for Peace*. He even cites Boutros-Ghali and offers an analytical footnote explaining why he refuses to adopt Boutros-Ghali's terminology. An engaged editor would have resolved this problem of language, which will confuse those readers who are not versed in the fine points of the debate over "peacemaking" as a purely diplomatic activity and "peace enforcement" as the use of force to establish and maintain a state of peace.

Presumably an editor would also have established quality control over the material. Some articles are riddled with typographical errors, while others are proofed, parsed, and punctuated perfectly. Most of all, an editor would have appreciated the great contribution a bibliography would have made to the appeal of the book—it is not a difficult exercise.

Three essays at the end of the book provide contemporary insights about the British, French, and Russian perspectives on intervention. Of the three, Sergei Karaganov's "Military Force and International Relations in the Post-Cold War Environment: A View from Russia" is by far the most enlightening. It is also the only essay that remotely considers the conditions under which nuclear weapons might be used, which in itself is food for thought. However, one is left to puzzle why such essays were included, given the title and orientation of the book.

The United States and the Use of Force in the Post-Cold War Era offers a useful roundup and generally evenhanded discussion of the key aspects of intervention. However, to obtain a more detailed and less abstract grip on the central issues, one should read *U.S. Intervention Policy for the Post-Cold War World: New Challenges and New Responses*, edited by Arnold Kanter and Linton F. Brooks, published in 1994 by W.W. Norton & Co., New York.

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Denoon, David B.H. *Ballistic Missile Defense in the Post-Cold War Era*. New York: Westview, 1995. 230pp. \$55

Dr. Denoon, a professor of politics and economics at New York University, discusses

the complex issues of U.S. ballistic missile defense policy, tracing its evolution from the beginning of the Cold War to the post-Cold War era. Denoon's past responsibilities as Deputy Assistant Secretary of Defense enable him to provide insight and perspective into issues that in other books are sometimes lacking. Readers seeking a comprehensive understanding of this subject will find this work helpful.

In the first part of the book, Denoon provides a convenient, terse synopsis of the early history of ballistic missile defense. He explains how the concept of deterrence based upon "mutually assured destruction" (MAD) precluded the maturation of ballistic missile defenses during the Cold War, by a confluence of interests among the defense contractors who were building U.S. strategic offensive systems, the Defense Department bureaucracy, and academic defense specialists committed to arms control.

In the second part of the book, the author reviews the ballistic missile threat to the United States and its interests. He discusses how the Persian Gulf War helped to renew interest in ballistic missile defense (which has waned in the mid-1990s) and goes on to address both theater missile and national missile defense. Denoon treats ballistic missile defense as insurance against catastrophe and suggests ways to determine whether its value as protector will outweigh the cost of procurement. He recognizes that deployment of substantial missile defenses by the United States will require changes in political, economic, arms control, and industrial policies as well as in military doctrine and strategy.

It surprised this reviewer that a contemporary book covering such breadth of material would be published without an index, limiting its value as a convenient reference. Also, the attention and space given to discussion of the Patriot

performance in the Gulf war seem at odds with the policy focus of the rest of the book.

Readers familiar with the technical aspects of ballistic missile defense will find value in the book's perspective on the motivation and rationale of both the proponents and opponents of such defenses, while those interested in national security policy will appreciate its succinct and balanced summary of the issues and their evolution.

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Sagan, Scott D. and Waltz, Kenneth N.
The Spread of Nuclear Weapons: A Debate. New York: W.W. Norton, 1995. 136pp. \$16.95

Should we welcome or fear the spread of nuclear weapons? This is the question posed by Waltz and Sagan in this book, organized as a debate on the probable consequences of nuclear proliferation. Kenneth Waltz is a "nuclear optimist," while Scott Sagan is the "nuclear pessimist." Each author presents his arguments about the meaning of nuclear proliferation for future world politics in two wide-ranging essays. Also included is a set of rebuttal essays in which Waltz and Sagan respond to each other's criticisms, identify areas of agreement, and discuss their disagreements.

Waltz uses neo-realist assumptions and concepts to support his conclusion that the spread of nuclear weapons will deter their use in the future. He believes that fear of a devastating nuclear reprisal will act as a major restraint on would-be aggressors. To support his position, Waltz discusses the increased deterrent value of small second-strike forces as new nuclear weapons states build and

protect nuclear weapons. He does not believe that leaders of new nuclear states will show less concern about command or control issues than leaders of current nuclear states. Thus he rejects the proposition that military-controlled governments will be more likely than civilian governments to make dangerous preventive strikes.

Waltz also predicts that the gradual spread of nuclear weapons will make nuclear weapons outmoded instruments for blackmail or war. By downplaying the risks of nuclear proliferation (loss of command and control by new nuclear states), Waltz makes a plausible argument that the gradual spread of nuclear weapons may stabilize relations in the international community. According to Waltz, nuclear proliferation will restore "the clarity and simplicity lost as bipolar situations are replaced by multipolar ones."

Sagan, however, rejects the rational deterrence theory and Waltz's argument that future nuclear states will behave reasonably. He doubts that small nuclear states will develop the requisite second-strike capability needed to deter preemptive or retaliatory attacks, or the safety systems and command procedures needed to ensure that these weapons are not inadvertently used. He also discounts the view that military leaders will be as likely as civilian government leaders to refrain from preemptive nuclear strikes. Instead, Sagan believes that future nuclear-armed states will use nuclear weapons because of a lack of civilian control.

Sagan uses an organizational behavior perspective and examples of near-use of preemptive nuclear weapons and nuclear accidents to justify his belief that "professional military organizations—because of biases, inflexible routines, and parochial interests—display organizational behaviors that lead to deterrence failures and deliberate or

accidental war [more] than [do] civilian government officials."

He stresses that nuclear security and stability issues are complicated by the existence of several new sovereign states, such as Kazakhstan and Ukraine. He notes that these states were "born nuclear"; they did not spend years developing nuclear technology. Thus they failed to acquire the experience necessary for the safe handling of nuclear weapons. It is this view that leads Sagan to emphasize how important it is that the United States adopt a strong nonproliferation policy that will reduce the demand for nuclear weapons and facilitate the conditions necessary for alternative security arrangements. Specific policies advocated by Sagan include continued support of the Non-Proliferation Treaty, acceptance of a comprehensive test ban, and adoption of a "stringent doctrine of acceptance of defensive last resort." He also calls for deeper reductions in the U.S. nuclear arsenals so that the United States can "lead by example."

Both authors are eminently qualified to represent opposing viewpoints on this important but complicated policy debate. Kenneth N. Waltz is professor emeritus of political science at the University of California at Berkeley. He is the author of many books and articles on national security and international relations, including *Man, the State, and War*. Scott D. Sagan is an assistant professor of political science at Stanford University. As the author of several analyses on post-Cold War security concerns and of the causes of nuclear accidents, he is gaining a reputation in these fields. Among his studies are *Moving Targets: Nuclear Strategy and National Security* and *Limits of Safety*.

This debate follows the usual format. Both men perform a valuable service by using a clear and jargon-free style. The book offers the reader an easy-to-read and stimulating dialogue that may prove

useful to a wide audience interested in key theoretical and policy issues relating to nuclear proliferation. It may be particularly interesting to those who are too young to remember the "first generation" of debates about nuclear deterrence, and also for those who are unfamiliar with research that uses an organizational behavioral perspective to understand the behaviors of nation states.

Although the authors use different theoretical lenses, their analyses share commonalities that limit the book's usefulness. Both men focus on future probable behaviors of nuclear nation-states and use examples gleaned from the experiences of the two superpowers during the Cold War. Only Waltz briefly considers (but quickly dismisses) the possibility that terrorists may use nuclear materials, including warheads, in the future. In light of the reports of efforts to sell or smuggle nuclear fuel and advanced weapons components from former Soviet states, the idea of terrorist attacks should be seriously considered. Unfortunately, the rapid spreading of nuclear weapons by covert arms deals between nations, crime syndicates, current and former civilian and military employees, and free-agent arms merchants is absent here.

Also absent is any discussion of the lessons we should learn from the leaders of such diverse countries as Argentina, Brazil, and South Africa, who made the decision to abandon all nuclear weapons programs. Both authors have also ignored the findings of a growing body of systematic comparative studies that have examined and compared factors promoting or inhibiting the decision to "go nuclear." Instead, Sagan and Waltz use similar intuitive methodologies of logic and plausibility, bolstered by selective examples, to support their conclusions.

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Godson, Roy; May, Ernest R.; and Schmitt, Gary, eds. *U.S. Intelligence at the Crossroads*. Washington, D.C.: Brassey's, 1995. 315pp. \$25.95

Intense discussion on the future of the U.S. intelligence community dominated, in that sphere, the first part of the 1990s. Although some changes have been made since then and more are sure to come, redesigning U.S. intelligence is so grand an undertaking that changes cannot and should not be implemented without serious discussion. An important contribution to that discussion is this volume of eighteen essays written by academics and senior producers and consumers of intelligence.

In 1992 the Consortium for the Study of Intelligence formed the Working Group on Intelligence Reform. The essays in this book were either presented at group meetings or authored by its members.

Aside from a brief introduction by editors Roy Godson, Ernest May, and Gary Schmitt, the essays are divided into three groups: "Defining the Debate," "Elements and Reform," and "Policies and Policymakers." In "Defining the Debate" the authors explain that at the same time that the U.S. military and intelligence communities are becoming smaller, the distinction between strategic and tactical intelligence is becoming blurred, as policymakers request more information on such topics as economic competition, ethnic conflict, weapons proliferation, and trade negotiations.

The first essay, "What is Intelligence?: Information for Decision Makers," by Jennifer Sims, sets the underlying theme,

which Walter Jajki captures succinctly: "As policy without intelligence is thoughtless, so intelligence without policy is purposeless; the challenge has been to tie the two together." Yet in today's world, "policy" can range from a platoon leader who needs to know what is on the other side of the hill to the president requesting information on the intentions of a foreign leader.

In Part II, Douglas MacEachin recounts the efforts made by the CIA to make analysis more responsive to consumer needs. Since most policymakers view themselves as analysts in their own right, intelligence analysts cannot expect their judgments to go unquestioned. MacEachin recommends making the facts and logic so apparent that no one could disagree. Joseph Nye, in "Estimating the Future," notes that estimators are not fortune tellers but educators. Their analyses should deal with uncertainty by presenting alternative futures, highlighting what is not known, and providing signposts that would indicate which scenario appears to be emerging. Robert Kohler in "The Intelligence Industrial Base" argues for the necessity of keeping a robust intelligence community due to the need to respond quickly in a national crisis.

Essays on denial and deception, counterintelligence, the changing mission of the FBI, and covert action round out Part II. Roy Godson, in his thought-provoking essay "Covert Action: Neither Exceptional Tool nor Magic Bullet," argues for the use of covert action as a normal part of statecraft. Richard Kerr agrees with Godson and urges cooperation between intelligence analysts and covert operators to define opportunities clearly. Ernest May, however, takes gentle exception and would restrict its use to exceptional circumstances.

In Part III, in "Policies and Policymakers," Randall Fort writes about economic intelligence and concludes that it

should remain about as it is, a valuable source of information for government officials. However, economic espionage should be avoided, in part because of the difficulty in sharing the information and determining what exactly is a U.S. company. Britt Snider notes that crime can no longer be classified as foreign or domestic; it knows no borders. Cooperation between law enforcement and intelligence is risky because disclosure of evidence in the courtroom is both likely and necessary. Finally, James FitzSimonds, in "Intelligence and the Revolution in Military Affairs," warns of the prodigious intelligence demands generated by modern weapons and doctrine. The relationship between intelligence and military operations will—and must—grow closer.

U.S. Intelligence at the Crossroads is first-rate. For those who will chart the future of U.S. intelligence, it should be required reading. Failure to heed its central theme—closer ties between producer and consumer—could have grave consequences.

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Greenberg, Maurice R. and Haass, Richard N. *Making Intelligence Smarter: The Future of U.S. Intelligence*. New York: Council on Foreign Relations, 1996. 39pp. (No price given)

The Council on Foreign Relations assembled a group of distinguished individuals from both the private and public sectors to discuss what to do with the U.S. intelligence community in the post-Cold War era. They concluded that "intelligence is a critical resource and

tool and its maintenance and improvement ought to be a national priority." This small book is the result of that study.

It outlines intelligence priorities, including the status of nuclear weapons in the former Soviet Union; political and military developments in Iraq, Iran, North Korea, and China; terrorism; and unconventional weapons proliferation. Also important are political developments in Russia and its relations with neighboring states; the stability of Mexico, Egypt, and Saudi Arabia; Indian-Pakistani relations; Middle East peace negotiations; and international criminal organizations. Also, of course, political-military developments in the Balkans would necessarily be a high priority. The task force did not include environmental protection, population growth, or general political and economic developments, for which open sources are normally sufficient.

The task force focuses on both intelligence collection and analysis. It calls for greater contact between analysts and policymakers, arguing that irrelevance is potentially a greater problem than politicization. Also, economic intelligence should be used to protect American firms from unfair foreign trade practices but not to help U.S. firms win contracts. Further, robust human intelligence capabilities are essential for shedding light on the intentions and capabilities of adversaries; strong covert action serves as an alternative or complement to diplomacy, sanctions, and military intervention.

Making Intelligence Smarter does, however, call for some organizational changes. Although there have been arguments for an "intelligence czar," the task force concludes that it would be preferable to give the Director of Central Intelligence more budgetary power and nomination authority for top community posts. It also argues that overseas FBI and Drug Enforcement Agency

operations be subordinate to the CIA, because foreign policy ought to take precedence over law enforcement. There is also the suggestion that Congress consider merging its oversight committees to streamline the process.

The task force offers a warning about the military's influence over intelligence: "a danger that spending on intelligence to support military operations will take priority over other important or even vital national security ends." Although the task force supports the consolidation of imagery and mapping functions into a single agency, it questions whether that agency should be located in the Department of Defense. It is a paradox that a society that does not question civilian control of the military is allowing intelligence collection and analysis, which informs national policy, to come increasingly under the control of the military. It is unfortunate that media attention on the suggestion to use journalists in operational roles has unfortunately overshadowed the lion's share of the task force's findings, which deserve careful consideration.

This report is a strategic road map for refocusing and retooling the American intelligence community. The study's attention to the intelligence process, to American foreign policy, and the substance of international relations should make this book the centerpiece of companion studies by the Brown Commission and the House Permanent Select Committee on Intelligence. This is a concise and expert study that could not have been written within the intelligence community, due to the bureaucratic interests that preclude strategic thinking.*

RICHARD L. RUSSELL
Directorate of Intelligence
Central Intelligence Agency

* The views expressed in this review are solely those of the author.

Hong, Seoung-Yong; Miles, Edward L.; and Park, Choon-ho, eds. *The Role of the Oceans in the 21st Century*. Honolulu, Hawaii: The Law of the Sea Institute, 1995. 777pp. (No price given)

This volume publishes the proceedings of the 27th annual conference of the Law of the Sea Institute that was held in Seoul, Korea, in July 1993. The institute, which has always been in the forefront for the discussion of the uses of the oceans, focused this conference on the role of the oceans in the next century, with presentations by leading experts on oceans legal and policy issues, representing the international community. The conference addressed initially the policies governing oceans, then explored specific uses of the oceans within that context. Specifically addressed in panel discussions were coastal zone utilizations, oceans industries, new and emergent hard ocean minerals, and the future of oceanic oil and gas. Two panels addressed broad economic impacts of oceans uses, the contributions of ocean resources to the East Asian economy, and the economic benefits of its environmental use. The major focus was international fisheries, one of the key concerns of the world community.

Of particular interest to the military reader is the address by Ambassador Igor K. Kolossovsky of the Russian Federation on how the 1982 United Nations Convention on the Law of the Sea can serve as the basis for the maintenance of legal order and peace in the oceans into the next century. Other presentations of interest are the Joint Conference with Korea—Sea Lanes of Communications (SLOC), on the “Post-Cold War Era” and “SLOC Security in East Asia.” Among the maritime jurisdiction issues in the Asia-Pacific region that may impact the legal regime of navigation

addressed by the Joint Conference were the status of Indonesia’s archipelagic jurisdiction and the 1992 Territorial Sea Law of China.

The Law of the Sea Institute plays a preeminent role in the formulation of international ocean policy, and the published proceedings of its conference provide an excellent reference for developing international perspectives on issues that affect U.S. naval operations.

PETER MITCHELL
Commander, U.S. Coast Guard

Howes, Ruth H. and Stevenson, Michael R., eds. *Women and the Use of Military Force*. Boulder, Colo.: Lynne Rienner, 1993. 246pp. \$38

This book stems from a series of multidisciplinary workshops about female attitudes toward the use of (primarily) military force. Its principal question is, “Is there a fundamental difference in the way women and men utilize force and view its utilization on the international scale?”

The book is divided into two main parts comprising several chapters each, followed by a concluding chapter written by the editors. The various chapters are written by scholars from a range of academic disciplines, including physics, psychology, sociology, philosophy, political science, and folklore. Editors Howes and Stevenson are refreshingly honest, stating that most of the fourteen chapters are written from a feminist (however defined) perspective. Unexpectedly, this does not detract from the book’s value or the interest of the general reader (as might straight feminist polemics), because the contributors generally present their evidence and make their cases dispassionately. Many readers

might question some of the assumptions, but few will complain about the fairness of the reasoning.

The first part of the book is entitled "Theories, Concepts, and Attitudes." It addresses such topics as "Feminist Perspectives on Women and the Use of Force," "The Gender Gap in Popular Attitudes toward the Use of Force," and "Women in Groups: Implications for the Use of Force." The second part looks at women's past performance in a range of jobs having to do with the use of military force. It considers women in the U.S. armed forces, in national security policy-making positions (including such powerful leaders as Golda Meir, Indira Gandhi, and Margaret Thatcher), in the peace movement, and in various revolutionary movements worldwide. An interesting chapter examines the largely unknown contribution of women scientists to the Manhattan Project.

There is broad consensus among the contributors on the key questions: Are women as a group inherently more peaceful than men? Do they "speak in a different voice that is more caring and connected to other people and the environment?" If there is a "gender gap" between the sexes about the use of force, what causes it, and what are the implications? Will increased participation of women change the way the military functions?

There is a great diversity of answers, which is what makes this book interesting and more than a politically correct tract. Contributors differ, for example, about female views regarding the moral legitimacy of force and whether women are required to "go native" if they are to survive professionally in male-dominated military organizations.

There are a few areas of general agreement, however. For example, polling data "consistently show that women tend to be less willing to use force than their male counterparts." Also, "There is

little doubt that women are willing to use force to counter a perceived threat to their homes and families," whether as an individual protecting her property or as prime minister of her nation.

The concluding chapter, written by the editors, attempts to tie the essays together, but it is of lesser quality. Unlike the other essays, which mostly rely on empirical or historical data, the summary reflects the authors' value judgments. For example, they claim that the reasons for using military force are changing from predominately male values to those supported more by women, i.e., "the protection of homes, the defense of a means for earning a living, and the protection of the innocent"—one wonders why male officers serve. The book ends fatuously with the declaration, "Increasing the number of women in power positions within the military and the policy elite may actually assist the United States in adapting to the more female approach to foreign policy required by the new world order."

About eighteen months ago, a female admiral gave a brief concerning the growing assignment of women to jobs involving the direct use of force, to a group of naval officers assigned to various billets in the Office of the Secretary of Defense. She prefaced her remarks by admitting frankly that the extraordinary changes in Department of Defense assignment policies with respect to women in combat had been made with hardly any debate either among the public or in Congress. What little discussion has occurred has been heavily politicized (and within the military, de facto, heavily censored). There is a compelling need for an honest and dispassionate debate, given the importance of the subject, which after all directly affects the future effectiveness of the U.S. military. Were that debate to be held with the decorum and intellectual responsibility shown in this book, it might be a fruitful one.

JAN VAN TOL
Commander, U.S. Navy

Gaston, James C. and Hietala, Janis Bren, eds. *Ethics and National Defense: The Timeless Issues*. Washington, D.C.: National Defense Univ. Press, 1993. 250pp. \$8 (Order from the U.S. Government Printing Office, Washington, D.C.)

In this volume, Gaston and Hietala have given us a broad selection of the best papers delivered in recent sessions of the Joint Services Conference on Professional Ethics (JSCOPE). JSCOPE is the principal forum for debating ethical matters among military professionals, a rewarding and appropriate activity. In the last decade the Joint Conference has heard and debated a number of papers, both controversial and noncontroversial. These essays are a broad selection dealing with recurring ethical problems—a few of which any serving officer is likely to encounter.

Participation in the conference is completely voluntary, and it is perhaps for that reason that the quality of the papers is uneven. However, Gaston and Hietala, editing with a light hand, have assured any interested reader ready access to the material.

All the authors appear to have a personal stake in the ethical issues they address. With a few exceptions, all the authors are serving officers. Those exceptions are notable, however. One is W. Hays Parks, who discusses teaching the law of war. He is a reserve officer better known for his distinguished work for the U.S. Army Judge Advocate General on the law of war. Another author is a former officer who is now an academic. He wrestles with what it is precisely that we

profess in the Oath of Office. A third example: two intelligence professionals in the CIA coming to terms with the ethics of clandestine and covert activities.

The essays are grouped under four headings. "Ethical Foundations of Military Service" includes two different but insightful papers on the oath of office, one on careerism, and a fourth paper on treason, based largely on Operation VALKYRIE, the attempted assassination of Hitler. The second group deals with "Professions within a Profession": an excellent treatment of client-loyalty conflicts, the parallel problem for military physicians, and the paper cited above by two CIA professionals on intelligence dilemmas.

The third group will draw the attention of many serving commanders, with its two essays that discuss "Training for Ethical Behavior in the Armed Forces." The first, by Dr. Daniel Callahan of the Hastings Center, is clearly expressed, grounded in experience, and unequivocally helpful and positive. If I were still giving Commander's Calls, I would post extracts of this essay on the inside cover of the notebook I kept for drafting remarks. The other essay is Hays Parks's "Teaching Law of War." Although narrower in focus, it is another positive, clearly written article.

Three papers make up the fourth and final section, "Contemporary Issues in Military Ethics." The three topics discussed are ethical dimensions of the strategic defense initiative, a moral strategy for American participation in small wars, and women in combat.

Colonel Michael Wheeler takes the reader from Kant by way of Joshua Chamberlain and his troops' bayonet charge at Gettysburg's Little Round Top, to sorting "offense as defense" from "offense as aggression." He then leads us through the nuclear dimension, to defending against nuclear ballistic

missiles. This is solid, basic ethics, offering more than the "preliminaries" promised in his title.

Next, Major Kuenning deftly argues that the ethical aspect of U.S. involvement in small wars often becomes a strategic issue, because our declared national objectives, as well as other institutional factors, can lead to a style of warfare that is inappropriate and appears to give adversaries a moral advantage. The examples are rich, and the author offers clear recommendations. Left for another treatment (perhaps yours?) is the hinted-at, tempting, exploration of strategic leverage.

The final paper makes an attempt to illuminate the propriety of placing women in combat roles through formal, set-logic parsing of the problem. I found this the least satisfying essay in the book. Some weak assertions are too prominent, and I hope more persuasive points exist to support placing women in combat roles.

Officers who care about their role in the profession of arms will find this book valuable. Some essays could be referred to day-to-day, while others will stimulate debate. Clear thinking on tough issues is a great strength in the military profession. This book is a light, fresh workout for those muscles.

BRADLEY C. HOSMER
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U.S. Air Force, Retired
Alexandria, Virginia

Stein, Janice Gross and Lebow, Richard Ned. *We All Lost the Cold War*. Princeton, N.J.: Princeton Univ. Press, 1994. 542pp. \$24.95

In this book the authors analyze two prominent nuclear-alert episodes of coercive diplomacy: the 1962 Cuban

missile crisis and the Soviet threat to intervene in the Yom Kippur War of 1973. Political scientists Stein and Lebow challenge the conventional wisdom that purports to explain the resolution of each crisis as one side's threat and the other's capitulation. This is valuable insight, because leaders on both sides learned invalid lessons from conventional thinking.

Nikita Khrushchev, who was frustrated by the power of the United States, tried to sneak weapons into Cuba and hoped that the United States would accept them as a *fait accompli*. Bellicose arguments for an air strike convinced President John F. Kennedy that even conventional warfare could become uncontrollable; he substituted a naval blockade. Deceiving even themselves into believing that in the end Khrushchev had simply yielded to escalating pressure, American officials soon after tried, disastrously, to coerce North Vietnam.

In fact, interviews with officials of the Bush administration after the Gulf war indicate that "the president and at least some of his advisors saw many parallels between the two confrontations and that the president hoped to replicate Kennedy's success." In their first chapter, the authors state that "President George Bush modeled his unsuccessful attempt to coerce Saddam Hussein to withdraw the Iraqi army from Kuwait on Kennedy's success in compelling Nikita Khrushchev to withdraw Soviet missiles from Cuba."

Interviews with former Soviet officials for this book offer an interesting check on U.S. estimates. Taking a commendably broad view, Lebow and Stein analyze Soviet motives, American and Soviet micromanagement of confrontations, and political influences on strategic decisions. Applying accepted psychological models of decision making, they notice, for example, that Khrushchev exaggerated his weapons'

military value and suppressed consideration of potential U.S. reactions to their deployment. His behavior is evidence of wishful thinking that impairs judgment.

It was learning and reassurance that resolved the crisis. For example, the blockade against Soviet ships awoke Khrushchev to the reality that Kennedy would not acquiesce, while Kennedy agreed that the Soviet deployment was strategically defensive but politically unacceptable. Despite several uncooperative military commanders in both the Soviet and American military, each leader did his best to reassure the other that he was not escalating the situation.

Cold War tactics for deterrence also take their share of criticism from the authors. The Soviets and Americans avoided trade-offs, a significant point since deterrence depends upon one's adversary facing trade-offs squarely. U.S. officials, convinced that national security depended upon the universal applicability of deterrence, attributed any lapse or irrelevance of deterrence to their failure to communicate resolve, which therefore required increasing the American threat posture, which in turn aroused domestic and bureaucratic opinion and made it harder to back down. Officials in both crises shunned intelligence assessments that might show that deterrence was failing.

In 1973 both superpowers' intelligence analyses and political decisions lagged far behind battlefield events. Soviet officials threatened to intervene in Egypt, hoping or gambling that there were no trade-offs between maintaining their position in Washington and attempting to advance it in the Mideast. Suspecting that Soviet President Leonid Brezhnev was bluffing, Secretary of State Henry Kissinger instigated military alerts without having any strategy actually to block Soviet intervention if deterrence failed. He and other authorities micromanaged escalation but did not

grasp important military aspects, in particular the exposure of the Sixth Fleet to a hair-trigger confrontation. Deterrence was not really tested, since Israel had halted its advance before the Soviet threat and thus never forced Moscow's hand.

The authors stumble in presuming that the Soviet Union would not have intervened in 1973 anyway, regardless of the U.S. alert. But they adequately support their fundamental conclusion: that evidence from both sides of the Cold War's most intense confrontations contradicts major assumptions and beliefs behind deterrence strategy.

Strategists, diplomats, historians, and force planners definitely should read this fascinating book. Since deterrence is the rationale for many aspects of the U.S. military as they exist today, open-eyed recognition of its costs and of its very limited practicality should force us to reappraise the relative utility of many of our weapons, doctrines, command organizations, and deployment patterns.

MICHAEL C. POTTER
San Diego, California

Gardner, Lloyd. *Pay Any Price: Lyndon Johnson and the Wars for Vietnam*. Chicago: Ivan R. Dee, 1995. 610pp. \$35

In the wake of the furor created by Robert McNamara's memoir, historian Lloyd Gardner has published a riveting book that attempts to explain Lyndon Baines Johnson and the escalation of American involvement in Vietnam. Relying heavily on the recently declassified manuscript collections and other holdings of the Johnson Library in Austin, Texas, Gardner examines the Vietnam tragedy from Johnson's perspective, focusing not on the president's personality but on his ideas and contexts. The result

is a major contribution to the historiography of the Vietnam War.

According to Gardner, President John F. Kennedy's assassination burdened Johnson with obligations, none of which was more onerous than those arising from the deceased president's knowledge of American complicity in the coup that deposed Ngo Dinh Diem. Johnson sought to overcome that burden by picturing himself as the trustee of the legacy of the three previous presidents of the United States. It was the shadow of Kennedy, however, that loomed largest.

Convinced that he needed access to Kennedy's Eastern establishment to pass his Great Society programs, Johnson retained all of Kennedy's key advisors, including war hawks Secretary of Defense McNamara, Secretary of State Dean Rusk, and National Security Advisor McGeorge Bundy. Fearful of being judged against Kennedy's standard of leadership during the Cuban missile crisis, Johnson sought to centralize the decision-making process in the White House. Consequently, he reacted with characteristic vigor in August 1964 in his response to the Gulf of Tonkin incident.

Bombing North Vietnamese bases not only quieted domestic political conservatives but also demonstrated the president's resolve to honor all of Kennedy's international commitments. Columnist Joseph Alsop most accurately summarized the comparison with Kennedy when he wrote, "For Lyndon Johnson, Vietnam is what the second Cuban crisis was for John F. Kennedy. If Johnson ducks the challenge we shall learn by experience about what it would have been like if Kennedy had ducked the challenge in October 1962." By the time Johnson realized that Vietnam was not Cuba, the forces he had unleashed had gained momentum.

Gardner demonstrates convincingly that Johnson moved inexorably toward war as early as 1963. In January 1964,

Johnson outlined the two wars that would dominate his administration: on one hand he had what he termed a "brazen Communist attempt to conquer Asia"; on the other, he declared an unconditional war on poverty in America. It was the fatal coupling of these two wars that doomed the Johnson presidency.

Rationalizing his decision to escalate in Vietnam, Johnson reasoned that the conflict in Southeast Asia and the war on poverty were joined symbolically. Defeating the enemy in Vietnam had become essential to the confidence Johnson had in passing his domestic legislation. However, the connection produced a fateful and fearful symmetry born of Johnson's New Deal conviction about the power of the federal government to promote economic development as an antidote to regional and class struggles, at home and abroad.

Though his closest advisers, save Rusk, later turned against the war, Johnson remained convinced of the righteousness of his cause. For the president, Vietnam was always a "test of freedom." Under Johnson, however, the United States repeatedly asserted its right to intervene in South Vietnamese internal affairs to prevent negotiations with the enemy, ostensibly under the claim that it was protecting South Vietnam's right to self-determination.

Tet, states Gardner, finally convinced Johnson that a return to the 1966 strategy of attrition would no longer work. Regardless of its military outcome, Tet demonstrated that the United States could not win the war, with 500,000 Americans in Vietnam. What the president needed was some sort of dramatic action, ultimately manifested in the announcement of a temporary bombing halt and Johnson's withdrawal from the presidential race. From the time of his 31 March address until he left office, Johnson attempted to end the war that had destroyed his presidency.

In the final analysis, Gardner has written the most comprehensive account of Johnson's descent into the quagmire of Vietnam. Examining the war from the perspective of executive decision making, the author provides a fresh interpretation that the Vietnam War undermined the American credo that this country could not have liberty and prosperity at home without defeating the communist threat abroad.

COLE C. KINGSEED
Colonel, U.S. Army

Cole, Charles F. *Korea Remembered: Enough of a War*. New Mexico: Yucca Tree Press, 1995. 306pp. \$17.95

The *Sumner-Gearing* class destroyers formed the backbone of the U.S. destroyer forces in the years immediately following World War II. Designed early in the war as successors to the workhorse *Fletcher* class, the *Sumner-Gearings* sported an array of six five-inch/38-caliber dual-purpose guns in three mounts, a powerful anti-aircraft battery, and a formidable antisubmarine warfare system. It was the five-inch guns, however, that were so useful bombarding the North Koreans and their Chinese allies during 1950–1953.

In *Korea Remembered*, Cole chronicles the adventures of one *Sumner-Gearing* class ship, USS *Ozborn* (DD 846), as seen through the eyes of a newly commissioned junior officer, himself. Cole begins with how he entered the Navy through the Naval Reserve Officer Training Corps and how he managed to reach his ship before it left California for the western Pacific, seeing action with the carrier Task Force 77 and the Formosa Patrol (Task Force 72). Following the intervention of the People's Republic of China in North Korea, the *Ozborn*

supported the Seventh Fleet and participated in the occupation of Wonsan Harbor, where it suffered its first hit by enemy fire. Despite the excitement of action with the enemy, undoubtedly the *Ozborn's* most fulfilling incident of her 1950–1951 cruise was the rescue of an aviator, Ensign Ralph M. Tvede, off the coast of North Korea.

Perhaps the most interesting aspect of this book is Cole's description of the bonding of men at war, extending from the commanding officer to encompass the entire crew. The Korean conflict, small by World War II standards, was "enough of a war" to those who fought it.

Cole left *Ozborn* in early 1952 to train with the Underwater Demolition Teams (predecessors of the Navy Seals) in the Atlantic Fleet. It was a totally different experience for him. Most of his time was spent on land or swimming offshore on "field exercises." The teams were small, ten or twelve men, and the bonding was quite different from that among the 250 men of a fully manned destroyer. Although he does not explicitly say so, it was never completely satisfying to the author.

Cole left the regular Navy for the Reserve in 1953 (later retiring as a commander) and returned to Cornell University, where he received his doctorate in marine biology. He taught at several universities, retiring from Ohio State in 1994.

The only criticism I have is the author's abrupt transition from destroyer duty to UDT, which took him away from the "enough of a war." On the whole, Cole's memoirs provide an excellent window into two branches of the Navy as they existed in the 1950s.

ROBERT C. WHITTEN
Cupertino, California

Cohen, Eliezer. *Israel's Best Defense: The First Full Story of the Israeli Air Force*. New York: Crown, 1993. 496pp. \$32.50

The author, having served with the visionaries responsible for the creation of the Israeli Air Force (IAF), spans four decades of Israeli combat aviation. The book begins in 1947 with a handful of civilian aircraft, homemade bombs, and machine gunners conducting daring operations that were instrumental in David Ben-Gurion's declaration of independence for the Jewish state in 1948. The Czechs, in an effort to lessen British influence in the region, and with support from Moscow, supplied ten Messerschmitt aircraft, which made up the new Israeli Air Force upon independence.

Prior to the 1956 Arab-Israeli war a massive buildup of Arab airpower began, with British Meteor and Vampire jets. The IAF had entered the jet age in June 1953, with fifteen Meteors, which Prime Minister Ben-Gurion promptly named after verses of Psalm 83. The author builds on the political pressure of the times and a desperate IAF looking for jets to counter the MiG-15, 17, and 21 fighters as well the Ilyushin bombers supplied to the Arabs by the Soviets during the four Arab-Israeli wars. The IAF found them in the French *Mystère IV*, the *Mirage*, and the U.S. *Phantom*. Cohen paints a fascinating portrait of how arms agreements were based on the political moods in the various formerly British and French territories. The taint of colonialism was further complicated by the start of the Cold War.

However, the author's description of his Arab adversaries during the four Arab-Israeli conflicts seems one-sided. It is disappointing not to gain the perspective on Arab failures and successes of a senior Israeli Air Force officer. What is interesting is Cohen's description of

the various planes in the Israeli inventory and their advantages and disadvantages compared to the MiG series. His description of IAF dogfights and missions places the reader in the cockpits of the top Israeli fighter pilots of the time.

After the 1956 Sinai campaign, the author takes up the founding of Israel's formal flight school. In the early 1960s training was intense, because of the variety of aircraft that a young Israeli pilot had to be familiar with. Cohen also mentions intelligence coups, among them the defection of an Iraqi pilot with a MiG-21 fighter prior to the 1967 war.

Cohen's account of the Six-Day War is fascinating. He discusses the controversial decision made by Chief of Staff Iytsak Rabin to initiate a preemptive strike (Operation *MOKED*) against the Arabs. Operation *MOKED*, devised in 1963, was based on the German *Luftwaffe's* World War II tactic in Operation *BARBAROSSA*, the invasion of the USSR, that decimated the Soviet air force while still on the ground. Cohen unfolds the plan from the gathering of aerial intelligence, to showing how runs would be conducted to maximize the destruction of the combined Arab forces.

In 1973, in response to the Phantom F-4E provided to the IAF by the United States, Egypt deployed an extensive network of Soviet SA-3 missile batteries along the Suez Canal and the Nile River valley. Egypt opened hostilities on 6 October 1973 with MiG-17 fighters and infantry penetrating the Bar-Lev Line. The Yom Kippur War ended two weeks later with Egypt in control of half the Sinai Peninsula. There were high casualties on both sides.

The final chapters cover the Israeli raid on Entebbe and the bombing of an Iraqi nuclear reactor. Cohen also elaborates on the development of the Israeli jet fighters, the *Kfir* and *Lavi*, as well as pilotless systems, like the *Yehuda* and *Baban*.

Cohen's book should be of interest to students of combat aviation. It comes full circle from the initial successes of 1948, 1956, and 1967 to the effects of the 1973 war and the resulting self-examination by the Israelis of their heavy reliance on the Air Force. It is a very good narrative and easy to follow. Sadly, it does not go into great detail on policy and decision making within the IAF but focuses on telling the slightly glorified story of Israel's air force.

YOUSSEF H. ABOUL-ENEIN
Lieutenant, MSC, U.S. Navy

Levine, Alan J. *The Pacific War: Japan versus the Allies*. New York: Praeger, 1995. 200pp. \$49.95

Levine, a historian whose specialty is Russian history and the author of a number of works on the Soviet Union and the Cold War, has turned his attention in this work to the war with Japan, with very mixed results.

The book is divided into chapters, with subheadings concerning major events of the war. The author has chosen to include the China-Burma-India theater in his definition of the Pacific War, thereby making his task more difficult. In his introduction Levine is critical of others who have written general histories, with the implication that his book would avoid their faults. His stated aim, to treat the war as a "particular war waged by a particular Japanese regime," is not unique. This truism aside, the key question is how successful the author has been in relating the major details of this complex war.

This book's strength lies in the first chapter, where Levine traces in a concise way the events that led to U.S. involvement in the Pacific War. Other interesting and informative sections deal with

American and Japanese home fronts. However, it is evident that once Levine begins to analyze the tactical side of the war he is more at ease; his discussions of naval actions and the segment on submarines are particularly good. Overall, unfortunately, the negatives outweigh the good aspects of this work.

The major fault of the book is its length. After discussing the generalities of the U.S., Chinese, and Japanese situations before and after the war, Levine has little space left to deal with the many campaigns. He criticizes others for concentrating too much on the tactical side of war; but surely, to a large extent, that was what the war was about. The Japanese were defeated by air, naval, and land actions in a number of theaters, and any book that minimizes those actions is basically flawed.

There are many examples of oversimplification. One is Chapter Seven, which deals with the crucial period of 1944–1945: it is only eleven pages long, and three of them are devoted to a single naval action, that of Leyte Gulf. To the Marianas campaigns—which the author admits were the key to breaking Japan's inner defenses—he devotes less than a page. He even repeats the ill founded myth that the great banzai attack on Saipan overran "a poorly run army unit." The desperate battle for Guam, which ultimately became the U.S. forward base in the Pacific, is dismissed in one sentence. The longest and most complex action of the Pacific War, the nineteen-month-long Luzon campaign, is given slightly over one page.

Levine accuses another author of having "a maniacal bias" toward General Douglas MacArthur. Yet Levine himself obviously has a bias for MacArthur (though he does not vindicate MacArthur's inaction that allowed his air force to be destroyed in December 1941). He avoids criticizing MacArthur for the lack of preparation on Bataan, his decision to

use the Eighth Army in the southern Philippines, and for forcing the Australians into unnecessary fighting in the East Indies in 1945.

Levine's *bête noire* is Lieutenant General Joseph W. Stilwell. His analysis of Stilwell's actions ignores the difficult political and military situation of the China-Burma-India theater, added to British and Chinese recalcitrance at the highest levels. The author has little to say about the 1944 Japanese offensive in China, precipitated by Chiang Kai-shek and Major General Claire L. Chennault's disregard of Stilwell's sound tactical advice. One can also debate the author's statement that the northern Burma campaign was a "mistake." He goes even farther afield when he claims erroneously that General William Slim was the only British officer who could get on with Stilwell.

The author is also gratuitous in his criticism of other military leaders. Two examples will suffice. Without explaining the difficulties involved in checking the Japanese tide of 1942, Levine pontificates that General Archibald Wavell's strategy was "disastrously bad" and even denounces (without details) his earlier Middle East policy. Later he devotes considerable ire to attacking the plans for the invasion of Japan. Levine simply assumes that naval and air action would have ended the war without an invasion. That proposition has been questioned by other authors and is still open to debate.

Measured by the objectives stated in the introduction and by the many errors of omission, this is a flawed book that adds little to the literature of the Pacific War.

HARRY A. GAILEY
San Jose State University

Crenshaw, Russell. *The Battle of Tassafaronga*. Baltimore, Md.: The Nautical

and Aviation Publishing Company of America, 1995. 214pp. \$29.95

This history and analysis of a night engagement in World War II is an interesting, well written addition to what has already been said about the desperate naval actions in the Solomon Islands. The new ground covered in this book is mainly a perceived failure by all the commands, from Commander in Chief, Pacific Ocean Area (CINCPAC) and the Commander, South Pacific Force and Area (COMSOPAC), to ensure that submarines were sufficiently acquainted with the new SG surface search radar and how to best use it, particularly during night engagements.

A series of major naval battles began in the vicinity of Guadalcanal in August 1942, when the Japanese first attempted to build up their forces on that island. But after Tassafaronga they gave up the effort and began to remove them. Like most naval engagements in the Solomons, Tassafaronga was fought at night, and it was more nearly a barroom shootout than a measured and deliberate Battle of Jutland. Gunfire at desperately close quarters invited confusion and threatened the loss of command on both sides. Uncertainty as to whether various targets were friendly led to unfortunate delays in opening fire. Russell Crenshaw fought in the battle of Tassafaronga as the gunnery officer of the destroyer USS *Gwin*. Having engaged in various research projects after his retirement, Crenshaw undertook the task of finding out "what really happened" in this night action.

What actually happened was that the battle was fought by the United States with insufficient regard for the hazards of night fighting and even less for the benefits of SG radar. The Americans, with that prize, could have opened fire accurately at a range exceeding the reach of Japanese detection and have

out maneuvered them to maintain the advantage. There was no need for the suicidal infighting that had distinguished earlier battles. Nevertheless, this battle, once started, soon degenerated into a melee.

The burden that was put upon the officer in tactical command (OTC), the commanding officers, and some others at that moment, particularly if the officer was a newcomer to this kind of mayhem, seems not to have been fully recognized. Indeed it seemed to take a little exposure to this hellish environment before an OTC or commanding officer could keep his wits about him. The deafening crash and blinding flashes of one's own guns, the reports of casualties, and other matters to do with the battle all crowded in on one's ability to make decisions promptly, in logical order, and wisely. At least a little disorientation in a novice was almost inevitable, and that night the American OTC was Rear Admiral Carleton Wright, a novice—a fact that must have been known to COMSOPAC, who himself was a novice.

Crenshaw suspects that both CINCPAC and COMSOPAC were remiss in not instituting a vigorous, ad hoc training plan for SG surface search radar, however modest. By such means, a satisfactory doctrine for night engagements might have been established. But it finally happened only after Tassafaronga.

This little book provides an informative and satisfying opportunity for this member of the Black Gang of one of COMSOPAC's other cruisers to learn more about what went on topside on one of those runs up the Slot.

CHARLES O. COOK, JR.
Captain, U.S. Navy, Retired
Bristol, Rhode Island

Rose, Lisle A. *The Ship That Held the Line: The USS Hornet and the First Year of the Pacific War*. Annapolis, Md.: Naval Institute Press, 1995. 309pp. \$34.95

The Ship That Held the Line describes the one-year career of USS *Hornet* (CV 8). Best known as the means of launching the Doolittle Raid against Japan in April 1942, *Hornet* survived barely six months thereafter before being lost in the battle of Santa Cruz.

Lisle Rose obviously cares a great deal about his subject. It is an interest that was inspired by Alexander Griffin's wartime offering *A Ship to Remember*. Building on that foundation, Rose succeeds in fleshing out the institutional personality of CV 8, and he is particularly good in describing living conditions aboard a wartime aircraft carrier. From its captain to the aviators to the engineering gang, the author provides a look at the various departments that made *Hornet* run. Oddly, though, we are not told the ship's commissioning date until nearly the end of the book; the carrier sank one year and one week after breaking out its pennant.

As well as he describes *Hornet*, however, it is obvious from the first chapter that Rose is unfamiliar with naval aviation itself. The text contains more than two dozen factual or technical errors, including erroneous phraseology and descriptions. For instance, in describing an arrested landing, the author gets it backwards by stating that an aviator "made a shaky catch of number five hook." Other examples abound, including the reference to nonexistent wing guns in SBDs and other aircraft. Nor is the author better versed in organizational matters. Throughout, he refers to "Air Group 8" when he means "Hornet Air Group." The first numbered air group was CVG 9, established in March 1942; the actual CVG 8 stood up in June 1943 and had no connection with *Hornet*. Similarly,

Scouting Squadron 8 is identified as "VSB-8"—a designation that never existed.

These and other glitches should not have occurred, especially by so prestigious a publisher as Naval Institute Press. That so many avoidable errors slipped past the author, reviewers, and editors indicates a lack of internal checks in that press's ambitious publishing program, which was a whopping ninety titles in 1995 alone.

Sadly, the book's illustrations also leave much to be desired. There are only nineteen photographs and one map, and some of the photos are generic, with no relation to CV 8. Amazingly, there are no pictures of either Captains Marc Mitscher or Charles Mason. Also, the captions of some of the *Hornet* shots contain errors. As further proof that the author simply does not know his subject, page 44 shows a TBD-1 Devastator identified as an SBD-3 Dauntless dive bomber.

On the credit side, Rose acknowledges *Hornet's* severe failings, particularly at Midway. And there is much to criticize—essentially, Admirals Frank Jack Fletcher and Raymond Spruance fought the battle with two and one-quarter carrier air groups against four enemy flattops. *Hornet* at Midway represents one of the least-appreciated command failures in American history. Vice Admiral Mitscher thought his career was over, but happily he had already been selected for rear admiral and performed superbly as CTF 58 in 1944–1945. If anything, Mitscher was too loyal to his subordinates, including an unsuitable air group commander and fighter skipper. Anyone acquainted with *Hornet* junior aviators appreciates the old axiom: Why let seniority lead when ability does so much better?

Rose justifies the book's title with the selection of a short period in October 1942 when *Hornet* launched ineffective strikes against Japanese bases in the

Solomons. He contends that by keeping the pressure on the enemy, "Horny Maru" held the line at a crucial phase of the Guadalcanal campaign. In truth, the strikes accomplished almost nothing. Partly due to poor weather, there was little air activity on either side, and combat had come to a near standstill. Navy squadrons claimed just twenty-one shootdowns in that two-week period.

Although the author finishes with a thoughtful and well written epilogue, even there his unfamiliarity with his subject trips him up. Rose states that in June 1944 off the Marianas only U.S. submarines sank Japanese carriers. In fact, carrier-based TBMs sank IJNS *Hiyo*.

Assuming that the first printing sells out, the Naval Institute Press should issue a corrected second edition. Surely, CV 8 deserves a better "obituary" than it has been given here.

BARRETT TILLMAN
Mesa, Arizona

Horner, David. *Inside the War Cabinet: Directing Australia's War Effort, 1939–45*. New South Wales: Allen and Unwin, 1996. A\$49.95 283pp.

The fifty-year rule is designed to allow historical figures to leave the world's stage before historians gain access to the papers, minutes, and logs they left behind. The Australian Archives have opened some of the papers necessary to write about the inner workings, discussions, and decisions of the Australian War Cabinet and its attendant Advisory War Council. *Inside the War Cabinet* looks at the work of these two bodies as shown by the recently opened archives. The author—an appropriate person to write the first history of these bodies and their interworkings—is David Horner,

a Fellow of Australian National University's Strategic and Defence Studies Centre, and an accomplished author.

Horner does not write a chronological history in the strict sense of the term: this is not a complete history. What he does is provide segments of the history of decision making at the highest level in Australia's World War II effort. The book does begin at the beginning, and it ends at the war's end; however, the account strings together incidents, specific problems, and even particular days. The reader gains a picture of how the political bodies functioned, the role of their players (both permanent civil service and political), and what influences, especially American and British, played upon their deliberations.

Horner delves into a variety of recently opened sources. The chief papers employed are those of a little-known but influential figure, Sir Frederick Shedden. While the political decision makers might change with elections and the military chiefs shift with changes of command, civil servants like Shedden maintained the steady and consistent continuity so necessary for the running of defense matters. The minutes kept, the papers reviewed, and the discussions are all here. In an appendix are samples of the papers the author used to reconstruct events; even biographies of these unknown civil servants are provided. The paper trail becomes the cement that holds the story together.

Besides the organizational treatment of the War Cabinet and Advisory War Council, there are many tidbits that show the role Australia played in the war: discussions of just what Australia would commit where, and how much control Britain and the United States would have over Australia. As the war progressed, Australia shifted its contribution from Europe to the Pacific War. As its involvement declined in Europe, so did its influence there. It would be the

same story in the Pacific; as MacArthur's forces built up and the tide of war moved to western New Guinea, the Australian role and leverage decreased. Horner shows the political leadership's debates over what role to play in these circumstances. Another interesting discussion concerns problems of intelligence and security, especially the leaks from Australia to Japan. At first the blame was laid at the Nationalist Chinese door, but later it was discovered that the Russians were supplying Japan with the contents of the Australian weekly intelligence review.

The student of the Second World War will find many other issues, such as the "Germany First" debate, deployments into Indonesia at the war's outbreak, the problem of manpower in a small population, MacArthur's role, and the role of women. Biographies of the women who served as stenographers during the war are supplied. Once a stenographer married it was grounds for severance; in the archive files one can detect the changes in stenographers from their individual styles of writing. *Inside the War Cabinet* has many such jewels between its covers.

David Horner has done a fine job of showing the roles, mechanisms, and personalities at work during this period of Australia's history, and of showing non-Australians how the war was viewed from the "down under" perspective.

PETER CHARLES UNSINGER
San Jose State University

Fanning, Richard W. *Peace and Disarmament: Naval Rivalry and Arms Control, 1922-1933*. Lexington, Ky.: Univ. of Kentucky Press, 1995. 224pp. \$35

In recent years, there has been a revival of interest in pre-nuclear arms control.

The interwar arms control experiments, both those confined exclusively to the naval powers of the period of the book and the more general conferences under the auspices of the League of Nations, offer fertile ground for enriching our understanding of arms control. These studies are a welcome counterpoint to the burgeoning literature that developed over the course of the Cold War and that focused predominantly on bilateral negotiations between the superpowers.

Fanning contributes to our understanding of the interwar arms control process, particularly the role played by peace groups in raising the consciousness of political leaders and public opinion to the importance of disarmament. Fanning is a historian, so his study follows the arms control process chronologically, from the Washington Naval Conference of 1921–1922 to a brief treatment of the failed London Naval Conference of 1935–1936. He is most interested in the period from 1927–1930, and especially the failure of the Geneva Conference of 1927, because it was this failure, he argues, that mobilized peace groups to action on behalf of disarmament.

In his introduction, Fanning tells the reader that he will focus on the cultural underpinnings of the disarmament movement, particularly the effects of public opinion on the policy-making process. He really focuses, however, on social groups and their access to political elites on the one hand, and their ability to mobilize public opinion on the other. He claims to employ a comparable-cases approach to assess the relative impact of pressure groups on the arms control process in the United States, Great Britain, and Japan. In Chapter Two, Fanning presents his theoretical framework, the domestic structure approach. It holds that the influence of different social groups on the foreign policy process varies with the political system's degree of openness or closure (how much access

social groups have to elites in the policy process) and with the system's weakness or strength in dealing with social groups (how easily the executive can reject alternative viewpoints). Fanning argues that "domestic structure has a great deal to do with the probable success or failure of various social groups vying for influence." With an open, weak system, U.S. policy makers should be highly susceptible to social group pressure. With an open, strong system, British elites should be able to co-opt and assimilate policies advocated by social groups. With a closed, strong system, social groups in Japan in the period should have few avenues of access and less opportunity for influence.

Domestic structure may in fact be critical to understanding the relative influence of social groups across cases, specifically the weakness of the Japanese disarmament movement relative to its American counterpart. However, this is not the same as arguing that social groups had a significant impact on the course of arms control. In this respect, Fanning's analysis is less than convincing. In the United States, where social group influence should be greatest, we see that in the mid-1920s there were also strategic and economic reasons that made disarmament attractive to political leaders. Moreover, the fortunes of arms control seemed to ebb and flow with the interests and determination of different presidents. Calvin Coolidge was cool toward arms control; Warren G. Harding and Herbert Hoover were more enthusiastic, particularly when there were domestic payoffs in dealing with Congress and directing domestic legislation. In the case of Japan, where one would expect little influence for peace groups, we see, in fact, that peace advocates indeed failed to exert much power at all, but again there were confounding factors, such as the civil war in China, which threatened Japanese economic

and political interests in Manchuria. In both cases, it is difficult to divine the impact of social groups. The Geneva conference is important for Fanning because its failure created a window of opportunity for peace groups in the United States to motivate elites and educate the public. They seem to have had moderate success, providing some impetus for the Kellogg-Briand Pact. But their influence at London in 1930 was modest. The treaty did not reflect the reductions and consultative pact that peace groups were championing.

Fanning sums up by saying that when arms control succeeded, it was due less to the influence of social groups than to the memory of war or the desire for economy. In the conclusion he reiterates a host of economic, technological, and domestic political factors to account for the early success of arms control and its failure in later years. As a historian, Fanning cannot be faulted for acknowledging the complexity of the process and for offering a rich explanation. But given this, it is perhaps misleading for him to claim to execute a comparable-case strategy with an eye toward discerning the causal impact of the social-group factor. Fanning's great contribution is to provide insight into how these peace groups function. This reviewer would have preferred a more focused analysis that explored more closely what Fanning only mentions in passing in his conclusion, namely, the reasons why peace groups could not translate their awareness of the importance of disarmament into international agreement. This would be of immense policy relevance.

EMILY O. GOLDMAN
University of California, Davis

Robinson, Charles M., III. *Shark of the Confederacy*. Annapolis, Md.: Naval Institute Press, 1995. 212pp. \$25

To a considerable extent, the story of the Confederacy at sea is that of the CSS *Alabama* and its famous commander, Raphael Semmes. In a period of twenty-two months, the English-built raider traveled some sixty-seven thousand nautical miles without ever touching a Confederate port and accounted for sixty-four of the two-hundred-odd Northern merchantmen destroyed by Confederate raiders.

The *Alabama's* first year at sea was so destructive that it precipitated the sale of many of the nearly five hundred American ships that changed flags in 1862 and 1863. Raphael Semmes, who was energetic, imaginative, and implacably hostile to the North, was probably the ablest commerce raider of the nineteenth century. He skillfully threw off pursuit, sometimes by spreading false information in his ports of call, sometimes by passing off his vessel as a Federal warship. Using captured ships to dispose of his prisoners, Semmes kept the *Alabama* in busy sea lanes, where fresh victims were to be found. Raphael Semmes was the only commander on either side of the U.S. Civil War to fight two battles at sea, and when he sank the *Hatteras* in January 1863 he became the only Confederate captain to defeat an enemy warship in single combat on the high seas.

In *Shark of the Confederacy*, Robinson has provided a short account of the Confederate raider's cruise and eventual defeat at the hands of the USS *Kearsarge*. He provides a good account of the intrigue that surrounded the *Alabama's* construction in the John Laird yards on the Mersey River. The Confederacy had already purchased one cruiser, the *Florida*, in England, and Federal authorities were properly suspicious of the sleek vessel known only as "No. 290." Thanks to

the skillful management of Confederate agent James Bulloch, and no small amount of luck, the Confederates were able to take possession of the *Alabama* just hours before it would have been seized by British authorities.

Although Robinson narrates the destructive cruise that followed in workmanlike fashion, there are curious contradictions. The author is an admirer of the Federal Secretary of the Navy, Gideon Welles, observing that Welles "is generally regarded as the greatest secretary of the navy in history." But it was Welles who directed the inept pursuit of the *Alabama*, leading Semmes to marvel that the U.S. Navy made no serious effort to impede his operations. Nor has the author examined all the implications of Semmes's relations with his crew. The sailors of the *Alabama* were, as Robinson points out, mercenaries, primarily British citizens, including many Irishmen. Yet his statement that Semmes "never had the real power to force the men into total submission" would come as a surprise to the raider's crewmen, who were constantly reminded by their captain that the *Alabama* was a commissioned cruiser, not a privateer. The crew was held under a tight rein indeed.

This book includes solid accounts of the *Alabama*'s two battles, the sinking of the *Hatteras*, and its own defeat off Cherbourg at the hands of the *Kearsarge*. With respect to the latter, Robinson correctly rejects Semmes's claim that the battle was decided by the *Kearsarge*'s protective chains, ascribing his defeat to the *Alabama*'s poor gunnery and defective powder.

The author is cursory, however, in his discussion of why Semmes chose to take on the *Kearsarge* in the first place. Far from not having any other choice, as Robinson suggests, Semmes could have either had his vessel laid up, as he had done earlier with the *Sumter*, or escaped the *Kearsarge* at night, as he had escaped the USS *San Jacinto* at

Martinique. Semmes's decision to fight grew out of his own combative temperament, a belief that the U.S. Navy might have lost its fighting edge, and a conviction that the Federal merchant marine had been so decimated by the Confederate cruisers that there was little game remaining on the high seas.

Shark of the Confederacy is a useful addition to the Civil War bookshelf, but many *Alabama* buffs will prefer Charles G. Summersell's *C.S.S. Alabama: Builder, Captain and Plans* (University of Alabama Press, 1985), an attractive book that includes the original blueprints of the *Alabama*. The illustrations in the Robinson volume, by way of contrast, are of such poor quality as to be at times unrecognizable.

JOHN M. TAYLOR
McLean, Virginia

Glete, Jan. *Navies and Nations: Wars, Navies and State Building in Europe and America, 1500-1860*, Vols. I and II. Stockholm: Almqvist & Wiksell International, 1993. (No price given)

The seventeenth century witnessed the emergence and consolidation of powerful nation-states in Europe, most notably France, England, and the United Provinces, but also Sweden, Norway-Denmark, and, late in the century, Russia. Their appearance initiated the sharp upsurge in the size of permanent national military forces that was to be, in general, a continuing feature of subsequent European development. Jan Glete's *Navies and Nations* explores this phenomenon, largely on the basis of comparative quantitative data, as it relates to naval developments in both major and minor Western powers between 1500 and 1850.

This study occupies a unique position in current naval literature, not least for its methodology. Glete has amassed sufficient quantitative data on the strengths and qualities of almost all the navies of this period to provide not only comparative tables of fleet strengths, vessel sizes, armaments, and manning levels throughout the study's text (which itself occupies some five hundred pages) but also to supply over two hundred pages of appendices, packed with further statistical analyses of most of the major fleets throughout the 350 years covered in this work. Some earlier limited statistical surveys, confined to the principal fleets of the seventeenth century, were assembled in the 1920s and 1930s in Europe, but nothing on this scale has ever been attempted. Glete's raw statistical data by itself is invaluable. It provides historians and analysts with an incomparable tool for future studies of Western naval development during the critical period of Europe's expansion toward global hegemony.

Glete, however, does not confine himself to basic comparisons but employs them to explore more significant issues of the role of military forces, in particular of navies, in the process of state-building. He puts forward the concept of a second military revolution: the emergence of self-perpetuating and expanding military bureaucracies whose existence both contributed substantially to solidifying the development of the European nation-state and served as the vehicle for expanding state monopolization of violence. Using his statistical data, he explores the long-term interactions between national policies, naval expansion, technological advances, and bureaucratic inertia. In particular, Glete demonstrates the overwhelming importance for the durability of navies of the aggregation of domestic interests behind policy, concluding that its impact generally outweighs that of external threats.

From 1500, warships were constructed and naval organizations were created to enforce state monopolization of violence at sea, which was essential to the process of state-building because it provided the power to control organizations, factions, or groups. Aggregation of interests behind this process was essential for its consistency and durability. Glete also notes that as naval organizations became institutionalized they tended to acquire hierarchical and authoritarian bureaucratic characteristics, gradually changing from instigators of radical technological innovation to conservative importers, a process broken only by the advent of industrialization.

Glete presents his analysis within a chronological framework derived almost entirely from secondary sources. His discussion of naval strategy and tactics is consequently unadventurous and, occasionally, erroneous. This, however, does not detract from the significance of his conclusions or from the importance of this extraordinary work.

PAUL E. FONTENOY
Beaufort, North Carolina

Sobel, Dava. *Longitude*. New York: Walker, 1995. 184pp. \$19

In 1714, when the annual pay of a senior post captain was but £300, the British parliament offered £20,000 for a practical solution to the longitude problem.

Finding their longitude had bedeviled mariners since the time of the Phoenicians. In 1707 Admiral Shovell lost two thousand men and his own life to shipwreck when he miscalculated his longitude on a fog-shrouded night off the Scilly Isles. Partly in response, Parliament established the Board of Longitude, with the best naval, astronomical, and scientific minds available,

to encourage and evaluate methods for finding longitude at sea.

Parliament's £20,000 prize was not an idle offer. In the eighteenth century the nation that solved the problem would obtain a significant commercial and military maritime advantage. Ships could sail more directly to their destinations, vice blindly following lines of latitude, and fewer ships would have unplanned encounters with the beach.

Astronomers favored the method of lunar distances to find longitude. It was a cumbersome technique involving observation of angular distances between heavenly bodies, followed by four hours of intense logarithms. Few mariners could do it with reliable accuracy. At the same time, it was well understood that longitude could be determined by measuring precisely the time difference between local noon and noon at a reference position—Greenwich, England, for example. To do this, a timepiece on board ship had to keep the time at Greenwich. Though this is a simple solution, it was considered impracticable because even the best timepieces could not keep sufficiently accurate time during long voyages. To win the longitude prize, a timepiece would have to gain or lose no more than three seconds per day on a voyage to the Caribbean. No timepiece of the day could come close; even Isaac Newton considered so accurate a clock to be beyond possibility.

Onto this stage stepped John Harrison, a self-taught clockmaker of high intelligence and persistence, and the focus of Dava Sobel's elegant book. Sobel, a former science reporter for the *New York Times*, offers clean and lucid explanations of the astronomical and horological matters while portraying Harrison's brilliance, the importance of the longitude problem, and the intrigues of the Board of Longitude.

In 1735 Harrison built the H-1, his first "sea clock," which weighed seventy-

five pounds and stood four feet high, wide, and deep. It was used on a short sea trial to Lisbon, and the captain was mightily impressed. However, Harrison was determined to build a better clock, and in 1741 he presented the H-2 to the Royal Society. Harrison was an extraordinary, self-driven perfectionist, and he began a twenty-year project to build an even better clock, the H-3. They all, however, failed to satisfy him. Each of his clocks was a marvel of design and imaginative technique to offset the effects of temperature and motion. Each clock attracted the attention of the scientific and horological communities. Nonetheless, they did not satisfy Harrison.

After the H-3, Harrison made an important technical change in his approach. He abandoned the pendulum-based clock and turned his attention to the escapement-regulated watch. Such watches had been constructed by others, most notably John Jefferys, who made one for Harrison in 1755. Jefferys's watch captivated Harrison, who set out to perfect it for oceanic navigation. He developed near-frictionless bearings using diamonds and rubies, and a winding mechanism that allowed the watch to be wound without interrupting its timekeeping. In 1759 Harrison presented his H-4 watch to the Board of Longitude. In 1761 trials were conducted on voyages to the West Indies with resounding success. The H-4 lost only five seconds in eighty-one days at sea.

Harrison's design was adopted by other watchmakers, who reduced both size and manufacturing costs. The "chronometer" came into general use, and by 1815 there were five thousand in the Royal Navy.

Unfortunately, Harrison's brilliance was not matched by that of the members of the Board of Longitude. Sobel's descriptions of the machinations of the Board, the determination of the astronomers to find longitude in the heavens

rather than in a mechanical box, and the changing specifications for the £20,000 prize will sound all too familiar to today's observer of the naval research and development scene.

While the Board dealt out to Harrison a few thousand pounds in progress payments, they never gave him the full amount. His son William took up the campaign to have his father honorably rewarded and in 1772 met with King George III. After hearing William's story and seeing the H-4 and its simpler successor, the H-5, King George observed that "these people have been cruelly treated." To William, he said, "By God, Harrison, I will see you righted."

After tests showed the H-5 to be accurate to one-third of a second per day,

Parliament awarded John Harrison the difference between what the Board had given him and the full prize. The Board of Longitude never recanted.

Today we take for granted the accurate and easy measurement of time and position. Such measurements are at the core of modern military operations. The technical marvels of LORAN and the Global Positioning System depend on precise time, and they owe their debt to John Harrison, who, in Dava Sobel's words, was the "lone genius who solved the greatest scientific problem of his time."

FRANK C. MAHNCKE
Washington, D.C.

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Recent Books

Ballard, Robert D. with Malcolm McConnell. *Explorations: My Quest for Adventure and Discovery under the Sea*. New York: Hyperion, 1995. 407pp. \$24.95

Most people are probably familiar with at least some of the spectacular underwater photos and video taken in recent years by Robert Ballard and his team of the final resting places of famous lost ships, like the *Titanic* and the *Bismarck*. This book is an account of Ballard's career in undersea exploration. Stories of the searches for the lost ships are included, as are descriptions of undersea life and phenomena, as well as of some of the technical problems involved with deep sea exploration. The book includes dozens of color photographs that may whet some readers' appetites for one or more of Ballard's big picture books. The only slightly detracting aspect is the absence of a table of contents and an index.

Daws, Gavan. *Prisoners of the Japanese: POWs of World War II in the Pacific*. New York: William Morrow, 1994. 462pp. \$15

The harsh treatment of prisoners by the Japanese during World War II has been well documented in the accounts of those who survived, a handful of academic monographs, and popular films. Gavan Daws's work, however, differs from previous examinations of the subject by taking a two-tiered approach; in addition to the experiences of individual Allied prisoners of war, he also analyzes issues by groups, such as the survival rates of British prisoners of war versus their Dutch counterparts, or enlisted men and noncommissioned officers versus officers. In addition to the well known atrocity stories, there are some disturbing revelations regarding the conduct of groups of prisoners while in captivity. For example, Daws argues that the Americans were the only group of prisoners to kill one another, and that with few exceptions the officers of all Allied nations ensured their own privileges while ignoring the welfare of the men under their command. The real tragedy of the prisoners of war, he asserts, was in their treatment, or lack thereof, by their own governments upon their repatriation.

The journalistic style of Daws and the lack of any annotation in the text may lead some readers to discount his conclusions in this work, but the presentation belies almost ten years of research and personal interviews, as well as forty-four pages of notes and information on sources. This is a thought-provoking and insightful book of value to scholars, serving personnel, and casual readers.

Gibbons, William Conrad. *The U.S. Government and the Vietnam War, Part IV, July 1965–January 1968*. Princeton, N.J.: Princeton Univ. Press, 1995. 969pp. \$24.95

There are numerous policy histories of American involvement in the Vietnam War, beginning with *The Pentagon Papers*. However, no other even remotely approaches the quality of this series in comprehensiveness, source documentation, or ease of use. This is the penultimate volume of the series and covers the period from President Johnson's decision in July 1965 to send large-scale combat forces into Vietnam, until just before the January 1968 Tet Offensive. Previous volumes covered, in turn, 1945–1960, 1961–1964, and January–July 1965. The fifth and final volume will cover from the Tet offensive of 1968 through the “Great Spring Victory” in April 1975.

As in previous volumes, the author describes and analyzes major aspects of U.S. policy from the perspective of the participants, both executive and legislative. He draws on a wide variety of sources, including some recently declassified executive and legislative documents, papers of the participants, oral histories, and 135 interviews that he conducted.

Space does not permit further development here, but each volume in this series is a must for all libraries, as well as for any researcher or serious student of the policy decisions that led us into and eventually out of the Vietnam disaster. William Gibbons, author of all the volumes, is Research Professor at George Mason University. He has bequeathed us a major intellectual legacy.

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Winners of the Hugh G. Nott Prize for 1995

The President of the Naval War College has announced the winners of prizes for the finest articles (less those on historical subjects) appearing in the *Naval War College Review* in 1995:

- First Prize (\$500), Rear Admiral Yedidia Ya'ari, Israel Navy, for "The Littoral Arena: A Word of Caution" (Spring);
- Second Prize (\$300), Captain Bradd C. Hayes, U.S. Navy, for "Institutionalizing Innovation: Objective or Oxymoron?" (Autumn); and,
- Third Prize (\$200), Captain Wayne P. Hughes, Jr., U.S. Navy, for "The Power in Doctrine" (Summer).

This award is given in memory of the late Captain Hugh G. Nott, U.S. Navy, who made major contributions over a period of ten years to the professional life of the Naval War College.

Winners of the Edward S. Miller History Prize for 1995

Through the generosity of the distinguished historian Edward S. Miller, the President of the Naval War College has awarded prizes to authors of the finest articles on historical subjects appearing in the *Naval War College Review* in 1995.

- The winner (\$700) is Major George B. Eaton, U.S. Army, for "General Walter Krueger and Joint War Planning, 1922-1938" (Spring).
- The runner-up (\$300) is Captain Robert C. Rubel, U.S. Navy, for "Gettysburg and Midway: Historical Parallels in Operational Command" (Winter).

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