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# NAVAL WAR COLLEGE REVIEW

Winter 2001

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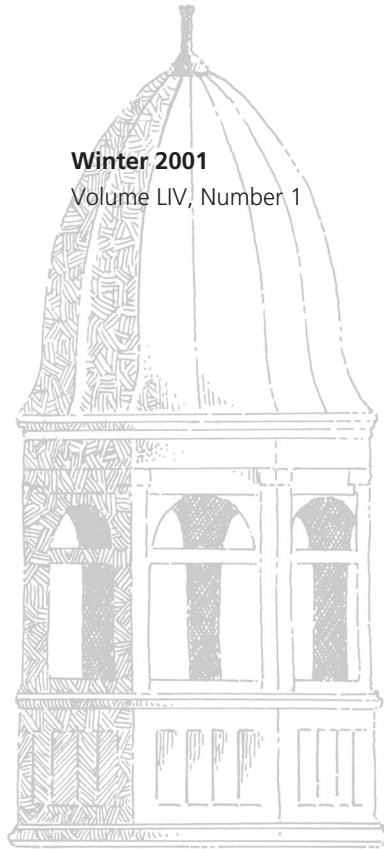


**Cover**

*Our cover offers a Western view of the Asia of the past, representing a political geography very different from what it later became. For analysis and informed opinion on the Asia of today and tomorrow, see a cluster of articles in this issue arising from the recent Asia-Pacific Forum at the Naval War College. Reproduced from R. Brookes, The General Gazetteer; or Compendious Dictionary, 8th ed. (Dublin: 1808). Courtesy of The General Libraries, The University of Texas at Austin.*

# NAVAL WAR COLLEGE REVIEW

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Volume LIV, Number 1



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686 Cushing Rd., Newport, RI 02841-1207  
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*Vice Admiral Cebrowski has commanded Fighter Squadron 41 and Carrier Air Wing 8, both embarked in USS Nimitz (CVN 68). He later commanded the assault ship USS Guam (LPH 9) and, during Operation DESERT STORM, the aircraft carrier USS Midway (CV 41). Following promotion to flag rank he became Commander, Carrier Group 6 and Commander, USS America Battle Group. In addition to combat deployments to Vietnam and the Persian Gulf, he has deployed in support of United Nations operations in Iraq, Somalia, and Bosnia. He has served with the U.S. Air Force; the staff of Commander in Chief, Atlantic Fleet; the staff of the Chief of Naval Operations, on four occasions; with the Joint Staff (as J6); and as Director, Navy Space, Information Warfare, and Command and Control (N6). Vice Admiral Cebrowski became the forty-seventh President of the Naval War College in July 1998.*

## PRESIDENT'S FORUM

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*This issue's President's Forum is based on remarks by Vice Admiral Cebrowski to the "Required Naval Capabilities" panel of the College's Current Strategy Forum, convened 13–15 June 2000 with the theme, "The Future of U.S. Naval Forces in the Pacific Region."*

I WILL START BY LOOKING at the Navy's competitive space broadly, and at concepts of how the future Navy will fight in it. Next I will examine some alternative mental models of Asia, and then focus on several specific capabilities and platforms.

First, the policy sector. In the national security "hierarchy of needs," homeland defense occupies the broad base. Above that is economic well-being, including the security of global systems and their operations. Finally, at the top are concerns about a favorable world order and the nation's values—where such issues as genocide and the exporting of democracy appear. As one moves up this hierarchy, the nation has more discretion whether or not to act; at the bottom, however, there is more pressure to spend. That is why people are willing to entertain spending, for example, sixty billion dollars for national missile defense. The U.S. Navy, of course, participates in homeland defense: the strategic SSBN deterrent is a major piece of that, but now there is talk about the Navy participating in such things as interception in the boost phase of ICBMs launched at the United States.

From its birth, however, the Navy has worked most steadily at the center of this pyramid, to help secure global stability and the nation's economic well-being. We are very closely coupled with the commerce of the world. What are the rules by which the Navy should play in this policy domain? There are at least three. First, we should cede no maritime areas that are of importance to the nation. That means we should grant no sanctuary. Warfare is very path dependent—great changes in outcomes arise from small changes in initial conditions. To grant sanctuary to a foe is to surrender the initiative, the ability to alter the initial

conditions. In other words, the enemy will have essentially the prime control over the outcome; this must not be allowed.

Second, we must ensure that the littoral is not a barrier. That implies—though I am in favor of being very “joint,” and of course I am keen on interoperability—that there are things the Navy–Marine Corps team simply must be able to do autonomously and quickly. The most obvious of these is to bring to bear combined-arms, sea-based, self-deployed forces.

Third, we must be able to do—if not all equally well—every kind of task that the nation expects. The traditional tasks are mastery of the seas, projecting and protecting long lines of communications, landing and supporting armies, rescuing armies and governments, conducting blockades and enforcing sanctions, and exerting forceful diplomacy. All of these, by virtue of the information age, are characterized today by rapid change and often instantaneous awareness. Thus we see, for example, increased emphasis on surveillance, information warfare, the landing of special operations forces and great attention to media coverage. What naval forces can—or cannot—do anywhere in the world is likely to be known everywhere in the world.

### COMPETITIVE ATTRIBUTES

What competitive attributes are required of our Navy if it is to be successful in doing these tasks? Consider the choice between maintaining forces forward versus “strategic response from home”; it is central to the design of navies and how they operate. There is a view in America today that favors bringing forces home, as well as a presumption that if a view is new it is also superior. Hence, some pundits embrace the idea that we should bring forces home rather than make difficult specific judgments whether that is the right thing to do, especially for particular locations in the Asia-Pacific region.

Our war games here at the College over the last two years have indicated very strongly that speed of response to a regional crisis is important. If it is, then having forces close to the scene of action matters a great deal, because they can alter initial conditions. Naval forces are meant to dominate the “front end” of a problem. To do that, they must have a large body of tacit knowledge—knowledge that cannot be conveyed on a network but can be gained only by immersion in an area, through experience, judgments, feedback, and assessment. Such background knowledge is a real powerhouse; this is why one hears recommendations to reinvigorate the Foreign Area Officer Program, for example, and why there are military exchanges and bilateral and multilateral exercises among militaries. It is also, of course, one of the key reasons why the Naval War College has its international students program—we learn from them, and they learn from us.

In building a national-security system, we speak of strategy, operations, and policy. At the strategic level, from a military perspective a nation generally has only three ways to secure its global interests: deploy forces forward, rely on strategic deployment from home, or have friends or allies who will look out for those interests. In fact, this nation generally takes a balanced approach to looking after its far-flung interests, using all three means. Sometimes there is no choice. Consider, for example, the Persian Gulf and Indian Ocean, where it is difficult and expensive to maintain forces forward but where our friends and allies—as good friends and allies as they might be—simply do not have the means to support all of the U.S. interests, and whose own interests sometimes diverge. Further, the opposite side of the planet is one of the most difficult places to surge meaningful forces from home. We know—we have done it.

Operationally, we deter enemies, and we reassure allies; if we fail to deter the enemies, we must seek to compel them with military force to adopt more appropriate behavior. As for policy, we frequently see our challenge as a process of balancing—between shaping the environment, preparing for the future, and responding to crisis.

What happens when we pull back our forward forces? We find that support from allies becomes tenuous, entailing an increased reliance on strategic deployment from home. This is difficult, and it is expensive; think of the hundreds of millions of dollars we spent to reposition forces in 1994 to respond to Iraq's movement of forces to the south, even though we already had significant forces in the theater. The support of allies becomes tenuous because we are essentially withdrawing from the theater; so our operational reassurance of allies goes down. Further, because our forces are no longer close to a potential enemy, their deterrent power diminishes, which means our reliance on "compellance" increases. Similarly, we are not shaping the environment as well as we had been, and so we must posture ourselves to respond to many more contingencies. That degrades our ability to prepare for the future—our planning horizon moves in. Next, our discretion goes down with regard to supporting values, as we have to focus more on homeland defense, which means spending goes up. Finally, the debate between "selective engagement" and "cooperative engagement" essentially goes away; we must adopt a posture that is not always congenial to our friends around the world, let alone to potential enemies.

The fact of the matter is that this would not be an America we want to have. It essentially describes the Roman Empire shortly before the fall. Remember what triggered that fall—withdrawing from forward areas of vital interests. Another interesting historical case occurred early in the twentieth century, when Sir John Fisher, as First Sea Lord of the Royal Navy, asked for fast battle cruisers with accurate gunnery to deploy around the world and secure the interests of the

empire. Instead, for political reasons, he got dreadnoughts—which were then stationed near home. The first competitive attribute of U.S. naval forces, then, is that they must be forward. If there were only one ship in the fleet, it could not be alongside a pier in San Diego.

The second competitive attribute the Navy must have is “full-spectrum” combat capability. To visualize strike warfare is easy, particularly if we assume that we can find the target and then put a weapon precisely on it. Indeed, at least in the United States, many now think that dropping a bomb using clever techniques is the sum and substance of warfare—which simply could not be farther from the truth. Weapon delivery is an element of warfare, a part of it, but only that. There are many reasons why the U.S. Navy and Marine Corps constitute a maneuver force. Counting the bombs or assessing the damage they do is really an input measure; we need to be more interested in output.

The third competitive attribute is that we must be a “full-service” navy. If we become very good at the “high end” and spend all our money there, enemies will threaten at the bottom, and we will have a difficult time. We need “low-end” capabilities to do those things that navies have traditionally been asked to do, which include working in the highly contested, dense, dynamic, dangerous, close-in littoral. We must truly own the littoral—to be able to get in, stay there, support ourselves, not be intimidated or pushed out, and perform every function of naval power. Monitoring refugee movements, controlling coastal shipping, and enforcing economic sanctions with ships best suited for the high seas has historically been shown to lead to failure. All the more, fighting in the narrow seas calls for unique capabilities. We must be thinking about measures of output and the full range of required capabilities. These are important considerations about what tomorrow’s U.S. Navy must have.

## NETWORK-CENTRIC OPERATIONS AND WARFARE

How will that force operate? Over the last year and a half we have developed the “Capstone Concept for the Navy after Next,” a concept based, not surprisingly, on network-centric operations and network-centric warfare. A theory of war identifies sources of power and their relationships, to include the value structures and how those sources of power couple with outcomes and political objectives. Network-centric warfare develops and enables information superiority, stresses operations in multiple domains including space and cyberspace, accepts the highly complex and chaotic environment, and assumes that there will be a great diversity of players (friends, foes, and neutrals or noncombatants). Network-centric warfare translates an information advantage into a competitive advantage; it derives its power from robust networking of well informed, geographically dispersed forces. Commentators are inclined to focus on the

technology aspect, but the important word is “warfare”—and warfare, of course, is a human undertaking, a behavioral matter.

The four primary supporting pillars of the Capstone Concept are information and knowledge superiority, assured access, speed of effects, and sea basing. Information and knowledge superiority is not an issue only of bits and bytes, or volume of information; it has to do with the relevance, timeliness, and accuracy of the information, and of course what one does with it. It is a two-sided game: each side satisfies (and tries to reduce) its own needs, while the other side attacks its opponent's ability to do so. One of our major failings these days is that no war plan, body of knowledge, or doctrine takes a holistic view of this. If we are going to fight first for information superiority—if the primary value-adding processes have to do with information—then surely leaders must focus on this, not leave it to junior staff officers or technologists. We hear that in the Kosovo campaign, Nato had very poor operational security, which is an element of information superiority. What judgments were made about operational security? Did a commander consciously trade it off? For what? What would be the logic of doing so? Information superiority should become the main thrust of joint doctrinal development.

One of the many elements of information superiority could be expeditionary sensors, a complex network of sensors ranging from space down to the sea floor. Being netted, they must be tactically agile and fully responsive to the on-scene commander. This is a matter of making information accessible, not managing information for someone else. We learned a long time ago that operators want to be able to create their own information domain, not have someone remote from the scene of action decide what they should know.

Another important element is space. The Navy has a proud history in space: we formed the original cadre for NASA; space-based sensing, space-based navigation, space-based communications, and space-based meteorology all have roots in the U.S. Navy. Many of those things have migrated elsewhere, but the Navy still has unique capabilities that should allow it to reenter that domain. We use all of these things in our operations, but in the future we should expect an enemy to do so as well. The Navy should capitalize on its advantages in proximity, mobility, endurance, and stealth to assist in controlling space by focusing on commercial and military optical imagers, radar imagers, weather and communications satellites, Global Positioning System downlinks, and terrestrial delivery and distribution systems.

A key concern of the information/knowledge-superiority pillar is mobile targets. For fixed targets, an information-update rate of days is acceptable. We do that very well, because we practice it a lot. But moving targets are the heart of the problem. The update rate has to be in minutes or seconds. Much work remains to be done. In Kosovo in 1999, 6 percent of the targets given to Carrier Air Wing

8 were fixed; the rest were moving. The solution to this problem lies in networking tactically responsive sensors.

The next pillar of the Capstone Concept is assured access—not just base structure but access to domains of competition, in peace and in war, to do whatever the nation needs done. That brings us to the collection of concepts called STREETFIGHTER, which addresses the requirement to assure access. Utility to the nation is a function of combat power multiplied by access. With no credible access potential, there is no utility in a force, no matter what its combat power may be. Access capability, in turn, is a function of several force and platform characteristics, the principal of which is survivability, for which new technologies are available.

One emerging technological area that captures my imagination is in naval architecture—new designs and materials that allow ships greater performance and sharply increased payload fraction, adaptability, and survivability. Increasingly, U.S. forces are characterized by tactical instability—an enemy with surprisingly small capabilities can hold at risk something very much larger. U.S. forces have unwisely caused combat power to grow while allowing survivability to remain constant or go down. The result is a risk-averse force. This is why one worries about sanctuaries for maritime prepositioning shipping and why tactical aircraft will not challenge defenses at low altitude. They are tactically unstable. That is not how the United States should go to war.

Another threat to assured access is the antiship cruise missile. It is not new to us; we have known this phenomenon since Okinawa, when more ships were sunk or damaged than we have in the U.S. Navy today. Hundreds of missiles have been fired at ships over the intervening years, and we have a lot of information on the results. Tankers do very well, but their only mission is to survive and move. Surface combatants have proven to be quite brittle. It matters little how big the ship or how much firepower it has. In general, below twenty thousand tons the survival curve goes flat. That means as we dress up a ship with combat power, all we do is put more combat power at risk. Saying that we can substitute quality for quantity simply does not hold water any more.

Initially, few countries had antiship cruise missiles, but now seventy-five states have cruise missiles of some eighty different types, in large inventories. This exacerbates the issue of tactical instability, and clearly the force must change to come to grips with it. There are in general two types of cruise missiles: subsonic missiles tend to have longer range, rely on stealth, and have more maneuverability; supersonic missiles confront defenders with the time-compression phenomenon. Also, there is a new hybrid weapon, which flies at subsonic speeds, quite stealthily, for long distances until it gets close to the target, when the

slow-speed airframe falls away, and a hypersonic terminal missile appears—a quarter-ton warhead moving at Mach 3. This is a growing concern.

How can we redress this tactical instability? Many things can be done today. For example, ships can be made to draw less water; the less hull below the waterline, the less subject the ship is to underwater blast damage. Composite materials can be used for fragmentation protection. Ships can be made far more maneuverable, with looser or more open interior designs. Densely packed, extensively integrated ships incur enormous vulnerabilities. Modular adaptivity for specific missions can be designed in. We can increase speeds greatly—well in excess of forty knots—which enables the ship to convert a direct hit to a near miss. Also, numbers by themselves are helpful; numbers do indeed count. The U.S. Pacific Fleet does not have overwhelming size with respect to other navies in the region. Are there ways to increase the numbers? to increase the strength? to have a more robust, tactically stable force? Undoubtedly, yes.

The third pillar of network-centric warfare is “speed of effects.” It used to be that nations mobilized their citizenries into mass armies. The whole concept of mass is now defunct for the purposes of foreign wars; even the nation that gave us modern conscription no longer does it. Yet much of our thinking in the military has to do with the annihilation of armies. We, of course, have been pursuing precision weapons, and we do a good job with them. But we are finding that physical destruction in itself is not always closely coupled with success in attaining political objectives. All the students of warfare know that battles are won and lost in the minds of the commanders. It is in the domains of belief and reason, not in the physical domain, that decisions are made. When we look at history, we see that most of the reasons for which forces have abandoned a strategy had to do with elements of maneuver, very few with attrition. The quest, then, must be for precision effects, not precision weapons.

The fourth supporting pillar of network-centric warfare is sea basing—not just logistics but basing broadly from the sea, so that forces are self-contained and self-sustained. This concept sharply increases the survivability of all elements of the force, especially traditional land-based forces.

#### **THE ASIA-PACIFIC REGION: MENTAL MODELS**

The task now is to put these future naval capabilities into the context of the Asia-Pacific region. As Professor Stephen Rosen notes, the current military conventional wisdom with regard to Asia is that nuclear weapons do not matter; offense dominates defense, and we can do whatever needs to be done; the allies are great, and they will always be there, at least to provide bases; and though it is a long way to Asia, we know how to get there, and it is not difficult. However, the reality is quite different.



All the potential enemies and even some of the friends in the theater have nuclear weapons, or could have them, and that fact raises questions everywhere from policy to tactics. The balance between offense and defense is shifting; the offense is good, but only when one can fight from a sanctuary. Also, there are some adverse trends with regard to basing structure, and the reason it is so easy to deploy to and operate in Asia now is that nations there allow it to be easy. When their interests are at great risk, they may not.

Another mental model is based on Asian geography. Asia is all islands, even where there are land borders. The terrain across those borders is treacherous. There is no road structure; instead there are cultural barriers, social barriers, religious barriers, legal barriers, and—most notably—the barrier of vast distances. Asia is a domain of real and virtual islands, ideally suited for navies, air forces, missiles, information operations, and special operations forces. It is in these areas that Asian nations are increasing their spending for research and procurement. Internally, however, armies are generally favored in Asia—not for foreign wars but for such things as nation building at home, civil affairs, keeping the peace, and keeping governments in power. This indicates the military capabilities that must be pursued.

#### WHAT KINDS OF CAPABILITIES ARE REQUIRED?

Clearly, nuclear deterrence is important; all weapons of mass destruction matter a great deal. Defense against an attack using weapons of mass destruction is dominated by intelligence and surveillance. If we are going to do that well, we will have to ratchet up our intelligence and surveillance capability significantly.

In tomorrow's conflicts, maneuver and sensors will dominate, not attrition. To exploit their potential, the U.S. Navy is going to need, first of all, numbers. It will need the STREETFIGHTER capabilities that I described, the expeditionary sensor program, and sea-based tactical air assets.

Defense of allies matters, in Asia no less than elsewhere. If that means ensuring that our friends and allies can stay in the battle and reassuring them that we will be there too, then we are talking about projecting defense in a broad way—which means more than just theater ballistic missile defense. But cruise missile defense is a tough problem, and in addition we will have to be able to counter the emerging threats in information operations and information warfare, while still being able to resist air attack, submarine warfare, and incursions by special operations forces.

Finally, actually being there is vital, more valuable than simply being able to *get* there. Forward presence is so profoundly important that alternative ways of keeping the forces forward need to be found. The U.S. Navy needs to revisit its thinking about our interdeployment training cycle, and we have to look at new

ways of incorporating the strengths of our allies. It is a matter of speed, speed of response, in a theater dominated by vast distances.

These are complex requirements, and many things will be required to fulfill them. First, we should pursue with great vigor the concept of network-centric operations and warfare, with its emphasis on information (or knowledge) superiority, assured access, speed of effects, and sea-basing. In addition, our “Capstone Concept for the Navy after Next” points to a set of programs and initiatives that would be quite disruptive to an enemy—unmanned vehicles; the whole STREETFIGHTER approach; cruise missiles that will cost no more than sophisticated gunnery; submarines that can be bought in great numbers; high-speed amphibious ships and armed lighters; numerous, inexpensive expeditionary sensors; and command and control systems that facilitate destruction of moving targets.

The rebalanced fleet of the future will require these kinds of characteristics. If we produce them, the U.S. Navy can expect to operate effectively not just in Asia and the Pacific but around the world.



ARTHUR K. CEBROWSKI

*Vice Admiral, U.S. Navy  
President, Naval War College*

*Dr. Rosen is the Beton Michael Kaneb Professor of National Security and Military Affairs at Harvard University and the director of the Olin Institute for Security Studies, also at Harvard. He was the civilian assistant to the director for Net Assessment in the Office of the Secretary of Defense, the director of Political-Military Affairs on the staff of the National Security Council, and a professor in the Strategy Department of the Naval War College. This article is adapted from a paper presented to the Asia-Pacific Forum held at the Naval War College in June 2000.*

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## STRATEGIC TRADITIONS FOR THE ASIA-PACIFIC REGION

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*Stephen Peter Rosen*

**W**hat are strategic traditions? Why should we be concerned with them when we think about American strategic behavior in the Asia-Pacific region? Why should we not concentrate on the material factors, the “hard” data that will determine what nations will do?

Traditions are usually thought of as past patterns of behavior that affect, in some way, current and future behavior. Traditions may be familiar and comfortable, and for a social and political conservative, they are to be observed because they embody the collective experience and wisdom of a society. But in the field of military studies, tradition has both positive and negative implications. Tradition may reflect the habits of the last war, vividly imprinted on the minds of the men who waged it—valuable lessons learned, lessons paid for with blood. Tradition may also be habits of the last war that make it difficult to see and react to change.

A strategic tradition can also be thought of as a variation of “strategic culture,” the cognitive lens through which we view the world, the lens that focuses our attention on the policy options that are worth taking seriously, and away from the frivolous options, the “nonstarters.” Strategic culture also tells us what we should expect in terms of the reactions of other players, and what the most important forms of interaction are. Because it is often difficult to get good information on these issues in a timely way, strategic culture helps us make decisions under conditions of uncertainty. Academics may recommend that under conditions of uncertainty one ought to wait until the necessary information has been collected, but policy makers often do not have that luxury, and at such times strategic culture or tradition is an invaluable decision aid.

Why do people have the strategic cultures or traditions that they do? Their cultures emerge from the intense emotional experiences through which they have passed, experiences that created vivid and enduring memories that readily spring to mind. Munich, Pearl Harbor, the Cuban missile crisis, and the war in Vietnam were such experiences. When future, or even present, conditions are difficult to discern, people make decisions based on what they see, and what they see is influenced by their memories of what has happened in the past. Sometimes these are personal memories; sometimes they are organizational or national memories. For example, when confronted with Ho Chi Minh, about whose ultimate intentions there

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*A strategic tradition can also be thought of as a variation of “strategic culture,” the cognitive lens through which we view the world.*

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was some doubt, Americans tended to observe that he was an ideological dictator.

He was, but memory then added statements about what ideological dictators were likely to do and what this nation needed to do in anticipation: “We know what ideological dictators are like, because we faced them in the past, and we know that we need to stop them with military power.” That was not objective reality, but it was the way Americans decided what reality meant in terms of what they had to do. These sets of interpreted memories can be thought of as part of our culture, our tradition.

When a nation is confronted with complex, ambiguous situations that are difficult to understand, its cultural perspective may affect how it reacts. Peter Schwartz is an expert in helping business executives realize, by means of discussions and interviews, what their assumptions are about how the world works and what factors drive developments in the marketplace. It is important for executives to understand how they look at the world, because they may not fully realize what is driving their decisions and what factors they may be paying too little attention to.

Iain Johnston analyzes the same kind of issues with regard to the Chinese national security elite, not by means of direct discussions and interviews but by reading the texts that members of the elite study and discuss. This is a useful technique—though not without problems, since what people read and study does not always reflect the ideas inside their heads. It is a particularly problematic technique when the books that people read say contradictory things or include passages that can be interpreted in contradictory ways. The technique works better for people who are told explicitly how they should read the relevant texts and are punished if they deviate from the correct interpretation. The cadres of the communist parties of the world constitute such groups, as do, to a lesser extent, the officer corps of military organizations that have officially approved

doctrines and training materials. Members of hierarchical, disciplined organizations are especially likely to have meaningful, shared strategic traditions.

That said, what can we say about the American perspective on Asia and the Pacific? There are all kinds of Americans; they have had different experiences and have read different books. It is next to impossible to point to a particular American tradition that says anything useful or specific about the shared mental perspectives of nearly three hundred million rather individualistic people. Let us, instead, talk about four smaller groups of people, about whom we may be able to say something a bit more specific, because they share experiences and belong to disciplined organizations. Then we will suggest how and why objective reality may cause problems for people who have these mental images of Asia and the Pacific.

What are the strategic traditions and perspectives of the U.S. Navy, Marine Corps, Army, and Air Force with regard to this region? What have these services experienced there over the last fifty years? How might those experiences have created memories that affect their outlooks? It may be objected that services do not have genuinely national strategic perspectives, that they concern themselves with military operations, not the general relationship of political goals to military means. Yet services do have strategic perspectives that relate military means to military goals, and their views on what a future war would be like and how it would be fought often have a powerful impact on higher-level policy. For these reasons, service perspectives matter.

When speaking of the Pacific, it is natural to begin with the U.S. Navy. Let us simplify matters: what would senior naval officers say if asked how they thought about the Pacific? The response of a representative officer might be as follows:

*The Pacific belongs to us. The most important experiences my organization has lived through over the last fifty years demonstrated over and over again that we can dominate the Pacific and so enable the United States to project power and influence to the periphery of the Asian landmass. After the defeat of Japan and withdrawal of the British, we were the only major naval power left in the region. As the Japanese navy revived, it did so under our tutelage, in cooperation with us, and in ways that did not challenge us. The United States was able to fight a major war in Korea utilizing our unchallenged command of the sea for aircraft carrier operations, amphibious landings, and logistical support of ground and air forces in Korea and Japan. We were able to use carrier aviation in the Vietnam War unopposed by naval forces or significant land-based antiship weapons systems. We had a problem with air-to-air combat in Vietnam, but specialized training, the Top Gun program, fixed that.*

*The Soviets were a problem, but we dominated the strategic antisubmarine-warfare world, and they never really learned how to do blue-water naval operations: the Soviets had severe problems up to the end of the Cold War with at-sea replenishment, for example. They never mastered even the rudiments of carrier aviation. The Backfire bombers could have been a problem, particularly if they had used nuclear antiship weapons, but we never really believed, in our heart of hearts, that the Soviets would go nuclear at sea early in a war. If we had believed that, we would have had to acknowledge that we had a big problem for which we had no solution.*

*The Chinese navy is not in the same league with the Soviets, let alone us. The one or two advanced destroyers and antiship missile systems they have do not fundamentally change that picture. When we sent two carrier battle groups to the waters near Taiwan in 1996, we showed everybody that we still rule the Pacific and can influence events on the Asian periphery.*

*Today and for the future, we can operate in the Pacific by means of a network of bases and ports on foreign soil. This way of conducting operations began with the island-hopping campaign across the Central Pacific in 1943–45 against Japan. It*

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*That was not objective reality, but it was the way Americans decided what reality meant in terms of what they had to do.*

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*continued through the Cold War with bases in Japan itself, Okinawa, the Philippines, and elsewhere. We have had some problems with the Philippines*

*and in Okinawa, but we can manage them. In any case, other people, like the Singaporeans or the Indians, would open their doors to us if and when a serious Chinese naval force emerged.*

What about the Marine Corps? A senior officer from that service might give this kind of response:

*We have fought many times in the Pacific-Asia theater, and it has been a deadly place for us. From the Boxer Rebellion to Tarawa and Iwo Jima, from the Chosin reservoir to Khe Sanh and Hue, a lot of Marines have died there. As amphibious forces, as straight-leg infantry, as urban warriors, we have taken very heavy casualties in Asia. We do not take this part of the world lightly, and we do not assume that we would be able to execute our missions there easily, even with all the high-tech weapons in the world—and which we, as Marines, get only the leftovers. We think very hard about what to do there, militarily, and we are not sure what the answer is. Why else would you think that we are engaged in the most serious set of military experiments of any of the services to explore the future?*

An Army officer might reply to our question in this way:

*We cannot trust American politicians when they talk about war in Asia. They keep saying that the Army will not fight ground wars in Asia. But if you look back, after World War II we never fought in Europe; all we did was fight ground wars in Asia. First we excluded Korea from our defense perimeter in 1950, then Lyndon Johnson said he would not send American boys to Vietnam to fight battles that Asian boys should fight, and look what happened. Ground wars in Asia are like other dirty, nasty things: they happen.*

*Asia is a big headache for the Army. When we fight in Asia, we compromise and degrade our core skills in the conduct of high-intensity, combined-arms maneuver warfare. Sure, we used a lot of helicopters in Vietnam, but that was still nothing like going up against the Soviets. What we would like is a big, friendly Asian land power on our side so we do not have to send hundreds of thousands of our soldiers into battle. General "Vinegar Joe" Stilwell had it right, in the Second World War: train the Nationalist Chinese and let them fight the Japanese. We did it right in Korea by building up the South Korean army so we could go home. If Creighton Abrams had been in charge earlier in Vietnam, Vietnamization would have started earlier, and we would all have been better off.*

And the Air Force:

*We have air supremacy in Asia, and air supremacy is good. Strategic bombardment works, it can win wars, and it has. Look at Japan in 1945: eighty Japanese cities on the target list, eighty Japanese cities destroyed, and the war was over with no need to invade Japan. Nukes were nice but not essential. In Korea, airpower was the war winner. After the Army and Marine Corps had fixed the Chinese, we could plaster them and their supply lines, human waves or not.*

*The problem in Vietnam was that bastard Robert McNamara. When he became secretary of defense, he crippled us with an incremental, politically micromanaged air campaign. When Richard Nixon authorized LINEBACKER II, we showed what we could do with a real air campaign. We got the North Vietnamese back to the negotiating table with the Christmas bombing of 1972. It was the Strategic Air Command that deserved the Nobel Peace Prize, not Henry Kissinger.*

*Like the Navy, we can operate in this region by means of a network of bases on foreign soil. Air-to-air refueling means we can use fighters with ranges that work very nicely in the European theater as bombers in Asia. That is a good thing, because it means that fighters can remain the dominant platforms in our service.*

Putting words into the mouths of service officers is presumptuous. Drawing out implications from the remarks we put into their mouths is even more



presumptuous. Nevertheless, there seem to be common elements implicit in what the services had to say.

- Nuclear weapons have not mattered very much in practice in the Asia-Pacific region. We can still bomb and fight in Asia the way we would in the “pre-nuke” environment, except for strategic sanctuaries in China and the Soviet Union or Russia, since our wartime enemies have been small, nonnuclear powers.
- Offensive forces, not defensive systems, have been dominant in this region.
- We have had, and will have, allies who give us bases and help when we need them.
- Finally, getting to Asia from the United States is not a problem for warfighters, however large a problem it is for the logisticians. We do not have to worry about military opposition as we move our supplies across the Pacific.

The exercise becomes interesting at this point. Will future conditions in the region be consistent with what our traditions tell us we can expect? There is

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*The services’ views on what a future war would be like and how it would be fought often have powerful impact on higher-level policy. . . . Service perspectives matter.*

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good reason to think not. First and foremost, the assumption of the irrelevance of nuclear weapons for warfighting will clearly

be called into question. All of the potentially hostile nations with whom we may have military problems are nuclear powers or nearly so: China, North Korea, Pakistan, India, Russia, a unified Korea in the future, maybe Taiwan. How would we use American military power against targets in the homelands of nuclear powers? Would we attack the naval vessels of nuclear powers in wars about issues less weighty than saving the world from military domination? Nuclear weapons will matter a great deal; they create large areas that are off limits to American offensive military power.

American ports and air bases on foreign soil will be increasingly vulnerable to precision, nonnuclear attack. How will host nations that do not have nuclear weapons with which to deter attacks against them feel about this? How will we operate in the region if theater ballistic missile defense turns out not to be the answer to our prayers? Defensive systems to protect and reassure our allies may become the dominating factor, for American political purposes.

The availability of American allies is by no means assured. If there is a military crisis involving China, Taiwan, and the United States, and if Japan does not help, many Americans will ask why we are doing so much to help Japan. Trends are already visible in Japanese politics that advocate security policies that are less

closely tied to the United States. There could be significant anti-American sentiments in a unified Korea, since there would be no North Korean threat to justify our presence. It will be many decades before India offers us bases, if it ever does.

It is hard to see how we will use significant amounts of conventional ground forces in Asia. This has been said before. In the past, however, we went to war to deal with what American political leaders perceived to be military aggression across international boundaries. We would fight to help Taiwan for that reason, but that would not involve ground forces. We really do not want to go to war with China on the mainland of Asia. North Korea will not last forever. For what will we use ground forces in this theater?

Over time, China will probably be able to make it harder for the United States to intervene militarily in political crises near China. The question will not be whether Chinese military forces are better or worse than ours but whether they could increase the risks of American operations near them in diplomatic crises. Even getting to Asia will not be as simple as it used to be, because the Chinese will have information warfare techniques that can slow us down; they could “hack” into civilian air traffic control networks, for example, as James Mulvenon of the RAND Corporation has pointed out. Other forms of attack on our trans-Pacific logistics train are not too difficult to imagine, including the use of biological agents.

What, then, is the point? We have drawn an overly simple picture for the purpose of suggesting that the experiences of the American military over the last fifty years have, in different ways, given the services collectively a perspective on this theater that may make it difficult for them to perceive the emergence of a probable future. If so, there may be subtle lags in this nation’s adjustment to the future. Of course, things could work out differently. China could become completely democratic and peaceful, or it could fall apart. Asia could become like Europe—rich, democratic, and peaceful. It may be that we suffer from the habits of thought acquired during the Cold War: we have been thinking here about this region as a theater of war, but perhaps it will not be a theater of war at all, actual or potential, for decades. If that is the case, however, the United States will have an even larger process of adjustment to manage. But if interstate war remains possible in this region, the American military’s strategic traditions may not be good guides to action.



## STRATEGIC TRENDS

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### Asia at a Crossroads

*Paul Dibb*

**T**he areas of maximum danger and instability in the world today are in Asia, followed by the Middle East and parts of the former Soviet Union. The strategic situation in Asia is more uncertain and potentially threatening than anywhere in Europe. Unlike in Europe, it is possible to envisage war in Asia involving the major powers: remnants of Cold War ideological confrontation still exist across the Taiwan Straits and on the Korean Peninsula; India and Pakistan have nuclear weapons and ballistic missiles, and these two countries are more confrontational than at any time since the early 1970s; in Southeast Asia, Indonesia—which is the world’s fourth-largest country—faces a highly uncertain future that could lead to its breakup. The Asia-Pacific region spends more on defense (about \$150 billion a year) than any other part of the world except the United States and Nato Europe. China and Japan are amongst the top four or five global military spenders. Asia also has more nuclear powers than any other region of the world.

*Professor Dibb is head of the Strategic and Defense Studies Centre in the Research School of Pacific and Asian Studies, The Australian National University. He was previously Deputy Secretary for Strategic Policy and Intelligence in the Australian Department of Defense and director of the Joint Intelligence Organisation. Previously he had been head of the National Assessments Staff for the National Intelligence Committee. An earlier version of this article was delivered as a paper to the June 2000 Current Strategy Forum at the Naval War College.*

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Asia’s security is at a crossroads: the region could go in the direction of peace and cooperation, or it could slide into confrontation and military conflict. There are positive tendencies, including the resurgence of economic growth and the spread of democracy, which would encourage an optimistic view. But there are a number of negative tendencies that must be of serious concern. There are deep-seated historical, territorial, ideological, and religious differences in Asia. Also, the region has no history of successful multilateral security cooperation or

arms control. Such multilateral institutions as the Association of Southeast Asian Nations and the ASEAN Regional Forum have shown themselves to be ineffective when confronted with major crises.

In judging the strategic future of Asia, we should learn from previous failures of assessment and refrain from overconfident, straight-line extrapolations. After the fall of South Vietnam in 1975, there was great fear that communism would spread quickly to the rest of Southeast Asia and that the dominoes would fall. That did not occur. In the 1980s, we were told that the coming Japanese economic superpower would soon outstrip the United States; instead, Japan has recorded barely one-third of the economic growth of the United States since 1990. Less than five years ago, it was being forecast that the so-called “Asian economic miracle” would inevitably give the region a larger economy than the United States and Europe; that view was destroyed by the Asian economic crisis. There have also been predictions that China will be the new economic giant and that its gross national product will be bigger than that of the United States by 2010. But by most measures, China’s economy is only a fraction of that of the United States.<sup>1</sup>

This article assesses the strategic environment in the Asia-Pacific region over the next five years, which is the period of most relevance to policy. It analyses the geopolitics of the region, the strategic outlook and balance of power, and the risk of military conflict in such places as the Taiwan Straits, the Korean Peninsula, and the Indian subcontinent. It also examines the prospects for Indonesia’s security and what that might mean for Southeast Asia as a whole. The article concludes by analysing, from the viewpoint of a prudent defense planner, America’s policies toward the region and by assessing whether they need improvement.

## THE GEOPOLITICS AND MILITARY GEOGRAPHY OF ASIA

There is a fashionable view that geography and geopolitics are no longer relevant in the post–Cold War era. That is demonstrably untrue in Asia, where there is a fierce sense of national sovereignty, enormous variations in culture and civilisation, and a struggle for power and influence among the region’s great powers. There are more than two dozen outstanding territorial conflicts in this part of the world; some of them—such as those between China and Taiwan, between the two Koreas, and between India and Pakistan—are potentially very dangerous. Whilst it is the case that globalisation and the information revolution are having an increasing impact on Asia, the assertion of old-fashioned nationalism and state sovereignty undermines the argument of those who assert that the importance of the state is declining.

The strategic environment of Asia is characterized by the presence of three great continental powers: China, India, and Russia. An arc of maritime powers, many of which are allies or friends of the United States, flanks them. Except for

Japan, most of these countries are middle-sized or small powers: South Korea, Taiwan, the ten ASEAN countries, Australia and New Zealand, and the small island nations of the South Pacific. Almost half of the world's maritime trade passes through the confined straits and archipelagic waters of Southeast Asia and the South China Sea. The United States has traditionally been the dominant naval power in this part of the world. Neither China nor India will have a true blue-water navy over the next five years—although they will both seek to extend their naval influence, and therefore their strategic ambitions will overlap in Southeast Asia. This is an area of great strategic significance for the United States and its allies—especially Japan, which transports nearly all of its oil imports through the area's chokepoints. China too is becoming more dependent upon sea lines of communication as its trade increases, and China will need to import more oil and gas to meet its energy requirements.

The political makeup of Asia is highly varied, and this adds to the geopolitical complexity of the region. Unlike Europe, where a broad swathe of democracies now occupies most of the continent, Asia has four of the world's five remaining



communist countries: China, North Korea, Vietnam, and Laos. Whilst there has been an encouraging rise of democracy in recent years in South Korea, Taiwan, Thailand, and the Philippines, authoritarian regimes are firmly in power in Pakistan and Burma, and the governments in Malaysia and Singapore practice forms of “soft authoritarianism.” As for Indonesia, it remains to be seen whether democracy will survive there. In any case, the trend toward democracy in the region, if it continues, does not necessarily imply easier relationships with the United States, as the New Zealand case demonstrates. The highly questionable proposition—which has become an article of faith in

some quarters in Washington—that democracies do not go to war with democracies may be disproved one of these days in Asia. In any case, deep-seated historical, cultural, religious, and territorial differences in Asia suggest that, irrespective of the development of democratic institutions, the dangers of armed conflict remain. Late in 1999 there was a risk that military conflict would erupt (over East Timor) between Australia and a newly democratic Indonesia.

As the “revolution in military affairs” spreads to Asia and introduces longer-range and more accurate weapons supported by good surveillance information, the geography of Asia will be compressed. The introduction of long-range cruise missiles and the development of ballistic missiles will make smaller countries much more vulnerable if deterrence fails. The risk then will be either of an escalating proliferation of ballistic missiles, or of the acquisition from the United

States of a protective ballistic missile defense, which in turn may lead to the multiplication of offensive missile systems. The ballistic missile proliferation challenge for the United States and its allies will be more acute in Asia than anywhere else.

The ready availability of advanced conventional weapons not only compresses but alters the geography of the region. For instance, the proliferation of supersonic antiship cruise missiles will make it more dangerous for the United States and its allies to operate militarily in the littoral environment of many states of the region. Thus although the long lead-times in acquiring major military platforms are likely to keep the overall orders of battle of regional countries from changing much over the next five years, capabilities in many instances can change quickly through the acquisition of quite limited numbers of relatively cheap, long-range, and accurate tactical missiles.

The structures and doctrines of many of the region's armed forces are also changing. In particular, there is less emphasis on land forces and greater attention to developing small but capable navies and air forces. There is also a trend toward the development of amphibious troops for the protection of offshore territories and assets. Fielding modern air forces and navies is becoming increasingly expensive; the cost of acquiring and operating military platforms approximately doubles with each new generation. But newer platforms are in many instances able to deliver more lethality and firepower. The ready availability of satellite photography with a resolution of one meter or less, together with accurate Global Positioning System information, will mean that even small powers can have credible deterrent forces.

Nonetheless, the gap between the military technology of the United States and that of potential peer competitors will, if anything, widen over the next five years. The central question for America's Asia-Pacific allies will be whether they will be able to keep up with U.S. military forces in terms of basic interoperability of communications and weapons systems.

### **THE BALANCE OF POWER IN ASIA**

The Asia-Pacific region has entered a particularly complex strategic situation; a new balance of power may be evolving. The Asian economic crisis, tension between China and the United States over Taiwan, North Korea's nuclear and ballistic missile programs, the risk of war between India and Pakistan, and the possibility of Indonesian disintegration have all arisen suddenly, and they serve to underline the basic insecurity of the region. But whether Asia remains a peaceful region will largely depend upon the struggle for power and influence between the major powers: China, Japan, India, Russia, and the United States. It is not in the interests of the United States or of its allies to see the region dominated by any one Asian power or by a concert of them.

China is a rising power that sees itself as the natural leader in Asia. It perceives its aspirations in this regard as being thwarted by the American military presence in the region and the U.S. alliance network. China is acquiring, with assistance from Russia, modern military equipment that will enable it to prevail militarily in the South China Sea against any regional power, if it so wishes. Were China to succeed in asserting sovereignty over the South China Sea, it would be able to penetrate deeply into Southeast Asia and influence events there. Thus there are serious questions surrounding the rise of China to power. Will China be a responsible and cooperative member of the international community, abiding by the community's rules of nonaggression? Or will China become an expansionist power, as have other rising powers in the past?

World history has been marked by the rise of ambitious new powers seeking to displace weaker powers. China is many decades away from being a peer competitor of the dominant world power, the United States; already, however, the main danger to the region is the risk that the next military confrontation will be between the United States and China. David Shambaugh stated in early 2000

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*In judging the strategic future of Asia, we should learn from previous failures of assessment and refrain from overconfident, straight-line extrapolations.*

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that growing "strategic competition" is likely to characterize Sino-American relations for most of the coming decade, whatever American administration came to office in 2001.<sup>2</sup> The greatest danger is over Taiwan: war

between the United States and China in the Taiwan Straits might well draw in America's allies, including Australia. Washington would expect its other allies, particularly Japan and South Korea, to support it, and such expectations could seriously damage its alliances in the region.

Short of such cataclysmic events, the main danger is that pressure might increase for individual nations to side with either China or the United States in their respective struggles for influence, thereby dividing the region. Some countries, such as the Philippines and Vietnam, would probably climb on the U.S. bandwagon. Others, such as Malaysia and Thailand, might incline toward China. Indonesia has traditionally been hostile to China, but President Abdurrahman Wahid has talked recently about a triangular relationship with China and India that would offset Indonesia's former close relationship with the United States. The future course of Indonesia's relations with China will be followed with the utmost scrutiny, not least by Australia. The purchase by Indonesia of arms from China, for instance, would raise alarm.

There is the further issue that China does not accept the rationale for the U.S. forward military presence in Asia. It explicitly calls for the abrogation of all alliances, arguing that they are not conducive to peace and security in the

post–Cold War world; Chinese officials have openly called for the removal of U.S. forces from the region. Before his visit to Australia last year, President Jiang Zemin proclaimed that alliances were “obsolete.” However, China must accept that the United States is not going to withdraw from Asia and that America’s alliances are not going to disappear. China needs to understand that Asia without the United States would be an especially dangerous place, vulnerable to conflict between China and Japan.

As China’s influence in Asia grows, India—which wants to be accepted as a major power—will seek to compete with China. Until recently, India’s poor economic performance, its preoccupation with Pakistan, and earlier its alliance with the former Soviet Union served to limit its interest elsewhere in Asia. But the Indian economy now seems set on a path of reform and is growing strongly.



The military balance on the subcontinent now firmly favors India, and with each year that passes its superior economic performance will improve its military advantage. India, therefore, will be able to lift its strategic horizons. Southeast Asia is a natural area for its future focus; India has long-established ties to that region and has territories, including the Andaman and Nicobar Islands, in close proximity. Already India is seeking to strengthen its old relationship with Vietnam, as well as with Japan. The United States could become a useful partner for India in its upcoming competition with China.

Japan is by far the most important power economically in Asia; its economy accounts for 60 percent of Asia’s gross national products. Nonetheless, China—whose economy is less than a fifth the size of that of Japan—has a higher political profile in the region. Japan spends more on defense than any other Asian country, and it has the most modern navy (both surface combatants and submarines) and air force in the Asia-Pacific. Japan, however, continues to be unwilling to use its military forces except in the most modest of United Nations peacekeeping operations. Japan’s resulting inability to provide leadership in Asia commensurate with its economic power is a worry. Partly, this has to do with lingering memories of Japan’s aggression in the Second World War. It also stems from Japan’s preoccupation with its domestic problems; its economy has been virtually stagnant for a decade. Moreover, as was demonstrated during the Asian economic crisis three years ago, the United States is not willing to allow Japan to become the financial leader in the region. Still, it is important that Japan take on more of a leadership role in order to offset the growth in China’s influence. When it does, Japan will face a challenging strategic environment,



marked by the rise of China's power and by the prospect of a unified Korea—over seventy million people who see Japan as a traditional enemy.

The most crucial strategic relationship in the region will continue to be the alliance between the United States and Japan. This relationship has recently been reaffirmed and reinterpreted to provide for greater logistical support to U.S. forces operating in the area. It remains to be seen, however, whether in fact Japan would support American military operations on the Korean Peninsula or across the Taiwan Straits. For the rest of the region, including China, the United States–Japan alliance provides an essential assurance that Japan will not dangerously rearm. Japan could double its conventional military forces within five years, or produce nuclear weapons. Neither will occur as long as Japan continues to have confidence in the United States and in its military presence in Northeast Asia. Even so, there are already signs that for the first time in over fifty years Japan is beginning to develop its own strategic concepts and dedicated force-structure elements, such as military satellites and a defense intelligence organization. The Japanese are also beginning to worry about the durability of the U.S. commitment in Northeast Asia and about America's tendency to go over Japan's head in dealing with China. What must be prevented at all costs is an erosion of Japan's confidence in the United States and a consequent military confrontation (or strategic accommodation) between Japan and China.

Russia, which is the other major power, is unlikely to be a significant player in Asia for the foreseeable future, even though it possesses important military assets in Northeast Asia. It will remain preoccupied with its internal political and economic affairs and the situation along its borders, especially in Siberia and the former Soviet Central Asian republics. Russia's ability to supply advanced conventional weapons to China and India is, however, a matter of concern. Arms exports are one of the few competitive products of the ailing Russian economy. Russia has the capacity to upset the regional military balance, and it is already doing this through its arms shipments to China.

#### POTENTIAL FLASHPOINTS AND TROUBLESPOTS

The most dangerous part of Asia at present is, as we have noted, the Taiwan Straits. There seems to be in the domestic politics of Taiwan an inevitable dynamic that leads the island to assert its international status as an independent state and to challenge the "one China policy." The situation is exacerbated by growing tensions between the United States and China over this issue, as well as by unease in Washington over China's nuclear weapons program, and in Beijing over the U.S. desire to deploy national and theater ballistic missile defenses. Dispute over these issues brings with it real risks of miscalculation. China lacks the conventional military capability to mount an amphibious invasion of Taiwan,

and this will remain the case for at least the next five years.<sup>3</sup> But there are other options open to China, including a naval blockade and the use of ballistic missiles. War across the Taiwan Straits would inevitably bring in the United States, and then (as already mentioned) involve enormously difficult choices for U.S. allies in the Asia-Pacific region—hence the strong desire by those allies to see the current tensions between China and the United States over Taiwan resolved by peaceful means.

The situation on the Korean Peninsula remains fraught with danger, as it has been for almost fifty years. The possibility of a North Korean attack is ever-present, despite the recent lessening of tensions. Even so, the outbreak of war is unlikely. Unlike in the early 1950s, North Korea could not now count on military support from China and Russia; it would face the bleak prospect of total defeat by the United States and South Korea. Still, miscalculation by the North Korean regime cannot be discounted, nor can a sudden collapse of the North,

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*U.S. credibility is based not only on its military presence but also on its long historical ties to the region, extending back a hundred years.*

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which would present the South with the horrendous costs of creating a unified nation.<sup>4</sup> The most likely scenario for the next five years is a continuation of a man-

ageable degree of tension. Developments in relations between the two states since June 2000 suggest that there may now be some prospect of direct peace negotiations between them. Should war break out, however, the United States would naturally expect its allies quickly to provide tangible and useful military contributions. If Japan were to refuse to do so, it would put at risk its relationship with the United States.

India and Pakistan have been in confrontation with each other since their creation as separate states in 1947. The possession of nuclear weapons by both these countries and their development of ballistic missiles have produced a dangerous situation. Their religious and territorial differences, as well as the fact that the military balance between them is moving in favor of India, may result in a highly volatile scenario in which the use of nuclear weapons is a real possibility. There is a serious lack of early-warning technologies and of nuclear weapon command and control arrangements in both countries. If the world ever experiences exchanges of nuclear weapons, the first may well be between India and Pakistan.

In Southeast Asia, the most crucial question is the future of Indonesia. Indonesia is in the middle of a dangerous political transition; the central issue is whether Indonesia will remain a cohesive nation-state or disintegrate. There is a better than even chance that Indonesia will muddle through and retain its basic territorial integrity, although the provinces of Aceh and Irian Jaya (West Papua) are high-risk regions. Were Indonesia to disintegrate, the implications

for neighboring countries—especially Singapore and Malaysia, as well as Papua New Guinea and Australia—would be serious. These nations would be faced with an unstable and violent neighbor. Relations between Indonesia and Australia have already become strained over the East Timor issue; friction between the two is now higher than it has been for many decades. There are those at senior levels in the Indonesian armed forces (the TNI) and foreign ministry who believe that Australia's next step will be to destabilize West Papua.<sup>5</sup>

The most optimistic scenario leads over the next two to three years to a stable, democratically elected central government in Jakarta. But transition from an authoritarian military regime to democracy is always dangerous. The Indonesian defense minister, Juwono Sudarsono, has said that the shift will be gradual, that it could take ten to fifteen years.<sup>6</sup> There is no doubt that the creation of a rules-based civil society will take a very considerable amount of time. Those in the United States who want to push Indonesia quickly in this direction need to learn more patience.

The reaction from the TNI to any attempt at creating independent states in Aceh or Irian Jaya would be intense and might well put an end to democracy in Indonesia. The focus of the external powers, as well as of such major international institutions as the International Monetary Fund, must be on helping Indonesia to recover economically and build a democratic society. This will be no easy task. As a 1998 World Bank report commented, "Indonesia is in a deep crisis. No country in recent history, let alone one the size of Indonesia, has ever suffered such a dramatic reversal of fortune."<sup>7</sup> The Indonesian economy remains very vulnerable to another economic crisis, just when the political situation in Jakarta has become so volatile. A combination of religious fervor and strident nationalism in a failed Indonesian democracy would be of great concern to Indonesia's neighbors, especially if aggressive foreign policies were the outcome. A more extreme Islamic stance in Indonesia, when similar sentiments are emerging in Malaysia and the southern Philippines, would be deeply disturbing. A unified, secular, and democratic Indonesia is in the region's interest.

Another dangerous part of Southeast Asia is the South China Sea, where there are overlapping territorial claims between China (which claims all the islands and reefs), Taiwan, Vietnam, Malaysia, Brunei, the Philippines, and Indonesia. The United States is not a principal party to these territorial disputes, but it must make it clear to China that it will not tolerate Chinese territorial hegemony over the South China Sea. Regular demonstrations of the naval capabilities of the United States and its allies would be useful reminders to China that its proper course of action is negotiation with the countries of Southeast Asia.

The South Pacific has traditionally been the most stable part of the Asia-Pacific region, but it now comprises a number of failed states. Papua New

Guinea, which shares a common border with Indonesia, has a fragile economy, high levels of corruption and violence, and an active secessionist movement on Bougainville. If Bougainville secedes, New Britain, New Ireland, and regions adjoining Indonesian Irian Jaya may also separate. The peoples of Papua New Guinea and Irian Jaya share a Melanesian origin and a dislike of Indonesia. In the event of conflict between Indonesia and its Irian Jaya province, the Papua New Guineans—who have a security treaty with Australia—would side with their Melanesian brothers.

Several of the other South Pacific islands are scarcely viable economically and have regimes noted for corruption. In the Solomon Islands there is an active insurrection between the peoples of Guadalcanal and Malaita, which has led to the overthrow of the elected government. Fiji has experienced its third coup since 1987, and ethnic tension between the indigenous Fijians and the Indian community has resulted in widespread violence and disenfranchisement of the Indians; George Speight's coup was no more than the act of an armed thug. Harsh diplomatic and economic sanctions have been applied by Australia and New Zealand.

New Zealand, which is Australia's oldest ally, is no longer a member of the ANZUS alliance and has so reduced its defense capabilities that it is capable of little more than peacekeeping operations. As a result, Australia, which confronts an arc of instability stretching from Indonesia and Papua New Guinea to the Solomon Islands and Fiji, will increasingly see New Zealand as more of a liability than a useful defense partner.

### UNCERTAIN U.S. POLICIES

American political power and military presence is the key to maintaining a peaceful balance of power in Asia over the next five years.<sup>8</sup> Only the United States has the power, credibility, and distance (both geographical and cultural) from the region to maintain the regional balance. Other contenders for this role would not be acceptable locally: China is feared as a potentially dominant—and perhaps expansionist—power; great suspicion still surrounds any ambitions for regional leadership that Japan might have; India is seen as essentially peripheral to East Asian affairs; and Russia is a weak and distracted power.

U.S. credibility is based not only on its military presence but also on its long historical ties to the region, extending back a hundred years. Most countries in the region, apart from China, agree that the departure of the United States would leave the region open to fierce contention between China and Japan or India, possibly leading to war. But the United States is distracted these days by domestic events and Europe. It is also much more severely stretched than in earlier decades; it must react to crises across the globe with a military little more than half the size it was in the Cold War.

For that reason, there must now be some doubt whether the United States can fulfil its much-vaunted East Asian strategy, based on a capacity to handle two regional conflicts “almost simultaneously.”<sup>9</sup> Inability by the United States to cope with a major crisis in, for example, the Korean Peninsula at the same time as it was fighting a regional adversary elsewhere, perhaps in the Middle East, would be disastrous for its alliance system. The United States is the only nation with the power to enforce security across the region. No reasonable ally, however, can expect Washington to be a perfect arbiter and enforcer of security, and indeed, there is a growing perception that the United States tends to carry out its military duties only after armed conflict has broken out.

This uncertainty over the speed of a U.S. response has consequences for countries in Asia that expect the United States to maintain regional peace and security. Many in Asia believe that the United States will not necessarily be on the spot (except in Korea) at the moment when conflict breaks out. It may—depending on the degree of strategic interest and the nature of domestic reaction—turn up quickly, and it might ultimately restore the status quo ante, but this will be of little comfort for nations whose territory has been threatened in the meantime. Moreover, the manner in which the United States intervenes will be strongly shaped by domestic considerations: it will seek to respond to an armed conflict in the most domestically acceptable way—in other words, with airpower. But in some of the more likely regional scenarios, ground forces would be essential.

Strategic inconsistency was evident in the U.S. response to the Asian economic crisis. Asia’s multilateral institutions—APEC (Asia-Pacific Economic Cooperation), ASEAN, and the ASEAN Regional Forum—failed to play any role in addressing the crisis, underscoring how heavily regional economic and strategic stability relies on the policies and initiatives of the United States. This means that Asia’s welfare depends critically on the depth of strategic understanding in Washington. But it appears that U.S. policy makers still weigh strategic significance in Cold War terms: South Korea received quick and substantial economic assistance, because it faced a communist North armed with nuclear weapons; Indonesia did not, because, the Cold War being over, the world’s fourth-largest country is no longer important to the United States as a bastion against communism in Southeast Asia. Instead, Washington let the IMF impose dangerously destabilizing measures on Jakarta. Apparently, human rights rather than geopolitics dominate the United States–Indonesia relationship today. While human rights have an undeniably important place in international diplomacy, they should not dominate relations with an Indonesia struggling to maintain its social and political cohesion. For the sake of the stability of the

whole of Southeast Asia, the United States needs to focus more on the critical importance of Indonesian unity and cohesion.

The United States does not appear to have developed a new standard by which to measure the strategic significance of countries such as Indonesia. A decade after the end of the Cold War, it is time for Washington to develop a more refined process for deciding the policy response to crises in Asia—some of which will determine the future of the region. Washington should cease allocating economic and political support on the basis of Cold War strategic values and devise new tenets for its strategic engagement policy in Asia.

There is also growing unease in the region about America's longer-term commitment to keeping about a hundred thousand troops deployed in Northeast Asia, which has been the position of U.S. administrations for the last decade. Adding to the sense of uncertainty is open discussion in the United States about how emerging military technologies, particularly in long-range precision strike, could lessen the need for forward operating bases. The total number of U.S. troops in South Korea and Japan and at sea with the Seventh Fleet is in any case now much closer to ninety thousand; the figure of a hundred thousand is becoming increasingly less credible. Thought also needs to be given to the im-

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*Allies need to do more about training good minds who are expert on Asia and who are not afraid of challenging conventional intelligence wisdoms.*

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impact on the American presence of a future unified Korea, both in Korea itself and in Japan. This is not to argue that there are no imaginable political circum-

stances in which there could be a phased reduction of American forces in Northeast Asia. But the implications for confidence within the region of a sudden and large-scale reduction suggest that any drawdown would need to be planned in advance, in consultation with allies.

There is no unifying enemy like the Soviet Union to keep the United States and its European allies together, yet the Nato alliance has adjusted, by rejuvenating its charter and expanding its membership. Will the United States and its allies in the Asia-Pacific region similarly devise a new common security concept? Or will there be a gradual weakening of the bilateral alliances with Australia, Japan, and South Korea? The alliance in the Asia-Pacific should no longer be threat based but rather should emphasize shared interests in the maintenance of regional stability.<sup>10</sup>

There seems to be growing interest in the United States in multilateral security. Admiral Dennis C. Blair, the commander in chief of the U.S. Pacific Command, has promoted the concept of "security communities." The idea here is to encourage "collective efforts into resolving regional points of friction; contribute armed forces and other aid to peacekeeping and humanitarian operations to

support diplomatic solutions; and plan, train, and exercise . . . armed forces together for these operations.”<sup>11</sup> According to Admiral Blair, these security communities may be alliance-treaty signatories, participants in nonmilitary organizations like the ASEAN Regional Forum, or simply groups of nations joined by geographic considerations or common concerns. The communities would be committed to policy coordination—including combined military cooperation on specific regional security issues—to advance peaceful development over time without major conflict.<sup>12</sup> The problem with this idea is that it risks diluting the primacy of strong bilateral security alliances in the region, and that it may be seen as being aimed, eventually, at the creation of a multilateral security enterprise in Asia.

Asia has not had a good track record with multilateralism. The Southeast Asia Treaty Organization, which was created in 1954 and dissolved in 1977, was not an effective organization. Unlike Nato, it never had standing forces that could be committed in the event of conflict. The ASEAN Regional Forum started off in the early 1990s with much fanfare and with the aim of progressing steadily from military confidence-building measures to preventive diplomacy and, eventually, conflict resolution. But in the eight years of its existence it has not progressed much beyond discussing basic confidence-building measures.<sup>13</sup> Many of the military forces in Asia are highly secretive, declining to publish even the most basic information about their capabilities. They resist arms-control ideas and transparency measures, even those of kinds common in Europe. It is difficult therefore to be optimistic about the outlook for multilateral security cooperation in Asia. American ideas in this regard need to be better thought through, and they need to avoid any appearance of being aimed at containing China.

#### GUIDELINES FOR U.S. POLICY MAKERS

Strategic developments in Asia are not likely to pose fundamental challenges to American military power and influence over the next five years, as long as the United States retains a credible forward military presence and is not found wanting in a major military crisis involving its allies. However, the United States and its allies need to do more together, given the unpredictability of the strategic situation in Asia and the speed with which adverse events could unfold.

There is no doubt about the fundamental economic strength of the United States and its allies in the region, or of the military superiority of the U.S. alliance system. The concern is the cohesion of America’s alliances in an era when there is no common threat but doubts exist about the political will of leaders to use force if confronted with military adventurism in Asia. Any perception of wavering or ambiguity in the U.S. military commitment to the region could lead to rapid destabilization. America’s allies need to do much more to provide for their

own security, to develop military forces that can deal with crises in their immediate neighborhoods and that can also make useful contributions to U.S. operations farther afield.

With these guidelines in mind, let us proceed to some specific policy recommendations. First, United States security planners and their allied opposite numbers need to *prepare for less benign strategic futures* in Asia, not relying on comfortable predictions that the region will experience prolonged stability and peace. These alternative futures obviously embrace such scenarios as war between the United States and China over the Taiwan Straits, and conflict on the Korean Peninsula. But planners should also examine what the United States should do in the event of nuclear war between India and Pakistan; of Chinese use of military force in the South China Sea against a friendly ASEAN country; and of the emergence in Indonesia of a strongly nationalist regime that antagonizes its neighbors.

There is a clear implication here for *allied intelligence services*: the size of the task in the Asia-Pacific region suggests more (rather than less) in the way of intelligence cooperation. But the sheer outpouring of data from overhead collection systems threatens to overwhelm our analytical capabilities. Allies need to do more about training good minds who are expert on Asia and who are not afraid of challenging conventional intelligence wisdoms.

From a defense planning perspective, it is important to understand that in the Asia-Pacific region potential military operations *will be essentially maritime* in nature. Apart from the Korean Peninsula, U.S. military forces are not likely to be involved in large-scale ground-force operations. The dominant geopolitical change in the new security environment has been the virtual elimination for military

planning purposes of allied continental commitments; the emerging struggle for power in Asia will focus on political fault lines that are maritime rather than continental in aspect. The development of China's military power and the response to

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*The United States does not appear to have developed a new standard by which to measure the strategic significance of countries such as Indonesia.*

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of India and Japan are likely to put pressure on the chain of America's friends and allies in the long littoral extending between South Korea and Taiwan in the north to the ASEAN countries and Australia in the south.

The new *technological challenge* in this maritime environment is the growing threat from high-speed, precise cruise missiles—both air and sea launched—and long-range ballistic missiles that can threaten fixed forward operating bases.<sup>14</sup> These technological changes mean that the U.S. and allied forces operating in the complex littoral and archipelagic waters of the region will be more vulnerable than they have been; maritime battlefields in the



Asia-Pacific will become more lethal. For America's allies who want to operate in joint task forces, there will be force-structure implications in the cost of platforms, like air-warfare-capable destroyers, that can operate in high-threat environments.

While no peer competitor to the United States will emerge over the next five years, the *political challenge* is that alliance relationships in the Asia-Pacific region will be less predictable, and less committed to allied war-fighting, than they were in the Cold War. America's key allies in the region (Japan, South Korea, and Australia) would be most reluctant, for example, to commit forces in a U.S.-led coalition war with China over Taiwan. Also, America's aversion to casualties suggests that the United States will be most unlikely to commit forces on the ground in Southeast Asia—as was demonstrated in East Timor.

The United States will continue to hold the balance of power in Asia over the next five years, but its policies will come under increasing scrutiny by its friends and others. It is important in this context *that American policy not demonize China* as the next “evil empire.” Neither Japan, South Korea, nor Australia would be willing parties to such an ill considered approach. Of course, America's allies must make it clear to China which side they are on and that they will not tolerate Chinese interference in alliance relationships. However, the United States needs to develop much more thoughtful policies toward China, including in such areas as ballistic missile defense.<sup>15</sup>

The commitment of the United States to forward basing in Northeast Asia and to the maintenance of a nominal hundred thousand troops needs careful handling over the next five years. The new administration will most likely review the question of U.S. forces based overseas. At least until the Korean question is settled, *it would be unwise to announce any hasty withdrawals*. Care also needs to be taken following any U.S. withdrawal from South Korea with any subsequent effects on the American military presence in Japan and on inclinations in Tokyo to build up its own capabilities. While Japan should be encouraged to improve its defense forces over the coming years in order to become a more useful security partner of the United States, this should be done gradually and with due regard for the sensitivities of other countries in the region.<sup>16</sup>

Given the greatly reduced size of the U.S. Pacific Fleet since the end of the Cold War, and the much broader range of potential contingencies in which it could be involved, the *United States should expect more of its allies*. Japan and Australia in particular could significantly supplement the Pacific Fleet's surface ships, submarines, and maritime patrol aircraft.<sup>17</sup> While these platforms will not generally be of the same combat capability as those of the United States, they should be adequate for littoral operations in mid-intensity

conflicts. Some, like the conventional submarines of Japan and Australia, have operational advantages not possessed by those of the United States.

In general, the United States needs to develop *more coherence and predictability* in its Asia-Pacific security strategy. This applies especially to its policies toward China, as mentioned, but the United States also needs to give greater attention to Southeast Asia and, especially, Indonesia. The central importance of Southeast Asia to the maritime trade of the entire Asia-Pacific, the fact that the ten ASEAN countries have a combined population of over 500 million, and the key role of Indonesia all point to the need for Washington to give greater attention to this part of the world. For instance, Australia cannot be left essentially on its own, with only episodic U.S. interest and involvement, to help Indonesia emerge from its current acute political and economic difficulties.<sup>18</sup> As we have seen, the future of that country will profoundly affect peace and stability in Southeast Asia. Its potential to interfere with freedom of passage in the Malacca, Sunda, and Lombok Straits should be a matter of concern to defense planners in the United States as well as Australia.

Finally, the United States needs to take *great care in developing multilateral security ideas*, such as “security communities.” While the intention may be to prepare for peacekeeping and humanitarian relief operations, there is a growing unease that well tried bilateral alliances will be eroded in the process. There is already a view in the region that America’s key alliances are nowhere near as important to it as they were in the Cold War, that vital American national security interests are no longer clearly defined, and that Washington involves itself unpredictably in some overseas episodes and not in others. In these circumstances, there is a risk that the alliance framework in the Asia-Pacific will begin to fray.

In light of the uncertain strategic future facing the region outlined in this article, the United States and its allies need to do more together to shape the regional security environment to their advantage. With better coordination they are well placed to do so—but they need to develop habits of franker strategic dialogue about contentious issues. The United States should listen more carefully to its allies and friends who are in the region and who well understand the nuances of strategic developments there.

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#### NOTES

1. According to the International Institute for Strategic Studies, China’s economy is about the same size as that of Canada.
2. David Shambaugh, “Sino-American Strategic Relations: From Partners to Competitors,” *Survival*, Spring 2000, pp. 97–115.
3. For a somewhat contrasting view, see Jianxiang Bi, “Managing Taiwan Operations

- in the Twenty-first Century: Issues and Options,” *Naval War College Review*, Autumn 1999, pp. 30–58. Dr. Bi agrees that Chinese capabilities for a cross-Strait assault are inadequate but senses that Beijing might feel itself obliged to make the attempt notwithstanding.
4. One estimate puts the cost to South Korea of reunification at one-third of its annual budget over a decade or more.
  5. Indonesia’s foreign minister, Alwi Shihab, is quoted as saying that “Indonesia’s foreign policy places Australia as an external factor that endangers its national integrity, especially in Papua.” *Sydney Morning Herald*, 31 May 2000, p. 11.
  6. Associated Press, 11 April 2000.
  7. *Indonesia in Crisis: A Macroeconomic Update* (Washington, D.C.: World Bank, 1998), p. 1.
  8. This section draws on Paul Dibb, “The Strategic Environment in the Asia-Pacific Region,” in *America’s Asian Alliances*, ed. Robert D. Blackwill and Paul Dibb (Cambridge, Mass.: MIT Press, 2000), pp. 1–17.
  9. This is defined as the ability “to deter and defeat nearly simultaneous large-scale, cross-border aggression in two distant theaters in overlapping time frames, preferably in concert with regional allies.” William S. Cohen, *Annual Report to the President and the Congress* (Washington, D.C.: Department of Defense, 2000), p. 7.
  10. See Paul Dibb, *Will America’s Alliances in the Asia-Pacific Region Endure?* Working Paper no. 345 (Canberra: Strategic and Defense Studies Centre, May 2000).
  11. See House International Relations Committee Subcommittee on Asia and the Pacific, statement of Admiral Dennis C. Blair, U.S. Navy, Commander in Chief, U.S. Pacific Command, *On U.S. Security Concerns in Asia*, Washington, D.C., 8 March 2000, p. 12.
  12. Ibid.
  13. For a balanced discussion of the strengths and weaknesses of the ASEAN Regional Forum, see Khoo How San, ed., *The Future of the ARF* (Singapore: Institute of Defense and Strategic Studies, 1999).
  14. See *Mobile Targets from under the Sea*, MIT Security Studies Conference Series (Cambridge, Mass.: Massachusetts Institute of Technology Security Studies Program, 2000), pp. 6–16.
  15. For a comprehensive discussion of this topic see Zalmay M. Khalilzad et al., *The United States and a Rising China* (Santa Monica, Calif.: RAND, 1999).
  16. See Robert D. Blackwill, “An Action Agenda to Strengthen America’s Alliances in the Asia-Pacific Region,” in Blackwill and Dibb, eds., p. 130.
  17. Between them, Japan and Australia have twenty-two submarines (the U.S. Pacific Fleet [PACFLT] has thirty nuclear attack submarines); sixty-six destroyers and frigates (PACFLT has fifty-three major surface combatants); and 109 P-3 maritime patrol aircraft (PACFLT has seventy-seven). International Institute for Strategic Studies, *The Military Balance 1999–2000* (London: Oxford Univ. Press for the IISS, 1999).
  18. Blackwill, p. 123.

## THE MARITIME BASIS OF AMERICAN SECURITY IN EAST ASIA

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*James E. Auer and Robyn Lim*

American policy toward East Asia must be based on an understanding of how the region's strategic geography bears on the interests of the United States as the dominant maritime power. The western Pacific has resumed its role as the focus of world economic growth, but it is not "all economics now." East Asia is the one part of the world where great-power war remains thinkable. That is because it is the only region where the Cold War left a residue of unresolved great-power strategic tensions.

Hanging off the eastern edge of Eurasia, the Korean Peninsula (half-island) continues in its historical role as the focus of great-power rivalry—albeit on the basis of new configurations of interest. Tension between the United States and China is growing in relation to the island of Taiwan, a flourishing democracy located in a key position on the "first island chain," running down the East Asian littoral. Farther offshore, China and other regional states contest the ownership of the scattered reefs and archipelagoes of the East and South China Seas.

These strategic tensions on the East Asian littoral must engage the interests of

the dominant maritime power and all those who rely on its protection. The United States has obligations to protect the maritime security of Japan, the world's second-largest economy. That is a matter of great convenience to both parties, as well as to the wider region, since the U.S.-Japan security treaty provides Japan with maritime protection in ways that do not disturb Japan's neighbors. Freedom of the seas is also an essential interest of the United States in its strategic capacity as the global offshore balancer.

*Dr. Auer, who served for twenty years as a naval officer and five years as a civilian employee in the Defense Department, is director of the Center for U.S.-Japan Studies and Cooperation at Vanderbilt University's Institute for Public Policy Studies. Dr. Lim, a former strategic analyst in the Australian government's Office of National Assessment, is now a professor of international relations at Nanzan University in Nagoya, Japan. Professor Lim is grateful for a Pache grant from Nanzan University, Nagoya, Japan.*

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## THE UNITED STATES AS GLOBAL OFFSHORE BALANCER . . .

In May 1940, with most of Western Europe's coastline in Hitler's hands and Britain threatened with invasion, the United States inherited the British role as the global offshore balancer. No longer could America enjoy the "free security" provided for so long, *de facto*, by the Royal Navy. Since then strategic circumstances have changed, but strategic interests are remarkably enduring. The United States, having become the offshore balancer, must take a close interest in what is happening strategically on the opposite shores of its great ocean moat. Unless America can maintain a balance of power at both ends of Eurasia and ensure freedom of the seas, it cannot wage war much beyond its own southern and northern borders.<sup>1</sup>

Long before it became the global offshore balancer, America had a vital interest in the balance of power in the western Pacific. The United States became a Pacific power when it acquired Hawaii and the Philippines in 1898. Its need to see a balance of power struck across the Pacific Ocean was understood by President Theodore Roosevelt, who was much influenced by Alfred Thayer Mahan. Roosevelt knew that the Philippines was the nation's Achilles' heel: it was too close to Japan and too far from Hawaii. In 1905, he brokered the Treaty of Portsmouth, which concluded the Russo-Japanese War after the parties had fought to exhaustion. The equilibrium struck at Portsmouth did not last, because Japan had continental ambitions that clashed with America's interest in the "Open Door" to China. Soon, the U.S. Navy was gaming conflict with Japan. The Pacific War was not inevitable, but it had its roots in America's refusal to grant Japan a free hand in East Asia.

Ever since Portsmouth, the balance of power in East Asia has been up for grabs. Throughout last century's global strategic contests—the two world wars and the Cold War—the East Asian balance remained unsettled. The collapse of Soviet power brought equilibrium to Western Europe but not to the East Asian littoral. For reasons of history, culture, and domestic politics, the United States has been facing the wrong way strategically since it won the Cold War—toward Europe rather than the western Pacific. Still fighting the last war, America risks forgetting to deter the next.

The United States, because it is the offshore balancer, cannot tolerate a bid for hegemony over Eurasia or any of its critical parts. China, not Russia, is the current chief aspirant. To concede hegemony to China would mean that the United States would have little influence over what happens in East Asia and would be forced to operate there on terms set by Beijing. History's lesson is that a maritime power cannot concede dominance over vital seas to any rising power with a continent-sized base on the opposite shore. To do so invites strangulation and ultimately invasion. In its long history as the offshore balancer, the United

Kingdom stood at greatest risk of invasion—in 1588 and 1940—when a state dominant on the continent developed sufficient maritime power to threaten the British in their island redoubt.

### . . . AN OCEAN AWAY FROM THE EAST ASIAN LITTORAL

The Pacific is the widest of the world's oceans, larger than the Indian and Atlantic Oceans combined. Located as it is in the Western Hemisphere, the United States cannot hope to maintain a balance of power across the vast reaches of the Pacific unless it has access to bases on or just off the East Asian littoral. That is why America's alliance with Japan rests on a congruence of strategic interests: in return for providing the United States with bases—which also provide access for a range of regional contingencies—Japan is afforded maritime and nuclear protection. Japan is an industrialized but resource-poor archipelago barely off the littoral, dependent on long sea routes for vital energy imports from the Persian Gulf. The uncontested exercise of hostile maritime power by any littoral state would rapidly bring Japan to heel, without need for invasion.

The United States, in the interests of its own security and that of Japan, cannot grant China a free hand in East Asia. It simply cannot afford to accept that in East Asia its “ability to ensure regional stability through forward presence and the deployment of naval power may be nearing an end.”<sup>2</sup>

### WHY TAIWAN MATTERS

Taiwan is the current locus of great-power strategic tension, as Berlin was during the Cold War. The preservation of Berlin's independence was a strategic interest of the United States, one that justified the risk of war with Moscow. Force-balances matter. By providing military capacity adequate to protect the Western Europeans from Soviet attack, and demonstrating the will to fight if necessary, the United States ensured that it did not have to go to war with the Soviet Union. America's possession of nuclear weapons played a critical role in deterring Soviet assertions (based on proximity) of hegemony over Eurasia—the 1948 Berlin airlift providing an early test.

For similar reasons, preservation of Taiwan's de facto independence is an American interest that justifies risking war with China. China sees Taiwan as a renegade province that it has the right to bring to heel, by force if necessary. No one in the current leadership in Beijing wants to go down in history as having lost Taiwan, which all see slipping away. But if China were to succeed in taking Taiwan by force or threat, it would be well on the way to hegemony over East Asia. Japan would lose confidence in U.S. protection and might opt to go it alone, developing long-range maritime power and a nuclear capability. That would be likely to destabilize the region, as others became afraid of Japan and

started to arm against it. Only by maintaining adequate force levels in the western Pacific, and demonstrating the will to use them if necessary, can the United States deter Chinese assertions of regional hegemony made on the basis of proximity. No doubt, this would have been readily comprehended by the geostrategist Nicholas Spykman, that great Yale Dutchman, who died in 1942.

### MUDDLED THINKING AND ITS CONSEQUENCES

Strategic geography is enjoying an overdue revival in the United States, but the United States has not produced another Spykman. Recent analysts of East Asia's strategic geography are muddled in their approaches. Zbigniew Brzezinski, for example, is mistaken when he says that America should focus on moving the pieces around the Eurasian chessboard.<sup>3</sup> To the contrary, as the offshore balancer the United States must concentrate on controlling the waves on either side of the board.

Brzezinski's flawed logic helped underpin the misguided eastward expansion of Nato. It gave reassurance where none was needed, and on a basis unnecessarily antagonistic to Russia. It also played into the hands of Beijing, by distracting America's attention from the more pressing strategic problems of East Asia. Brzezinski's mistaken assumption that America must seek geostrategic consensus with China in order to gain a political foothold on the Asian mainland also helped generate President William Clinton's bizarre notion of "strategic partnership" with China.

That notion received support from the dominant school in American political science, which has fostered concepts of "bipolarity" between the United States and China, leading to supposedly shared interests.<sup>4</sup> Because they thought that bipolarity was inherently stable, the "structuralists" thought the Cold War would go on for ever. They did not see that in the late 1970s the Soviets were out to win. Unlike, however, the political scientists and his own predecessors, President Ronald Reagan did correctly perceive Soviet intentions. Reagan also understood the importance of forthrightly confronting the enemy. That goal informed his strategic programs, including the Strategic Defense Initiative.

Current imaginings of U.S.-China bipolarity are as misguided as the bipolarity concept was during the Cold War. Their anti-Soviet alliance of convenience having dissolved, the United States and China now represent opposed poles of strategic interest in the western Pacific. True, they have some common interests on the Korean Peninsula—for example, that there should be no war and that neither Korea should acquire nuclear weapons. However, after the Koreans are reunited, China and the United States will have even fewer shared interests in the western Pacific. China already advocates the withdrawal of U.S. forces from the Korean Peninsula, as a first step to seeing them removed from the entire western Pacific.

Nor do East Asia's strategic tensions arise from so-called "security dilemmas"—those analytical *dei ex machina*—as the arms control fraternity believes.<sup>5</sup> The advocates of arms control treat China and Japan as equally likely to cause problems. What they fail to see is that China has strategic ambitions, while Japan has strategic anxieties.<sup>6</sup> Japan is already starting to feel Chinese strategic pressure on its energy lifeline from the Gulf. Strategic tensions arise from collisions of interest, not from simple misunderstanding, accident, and so on; they are not amenable to resolution by confidence-building measures, preventative diplomacy, or other arms control panaceas. *Deterrence* prevents war. Why must these essential lessons of strategic history be constantly relearned?

### MARITIME POWER AND GEOSTRATEGIC ASYMMETRIES

Today's Sino-U.S. tensions represent the latest round of the historic competition between maritime and continental powers. Currently, China has little ability to project power beyond its frontiers. Still, its strategic geography means that China does not have to become a "peer competitor" of the United States in order to collide with its vital interests.

The United States can remain an Asian Pacific power only as long as it can project maritime force across the vast reaches of the Pacific Ocean. It no longer has bases in the Philippines. Because China, in contrast, enjoys the advantages of proximity, it does not need to develop maritime power commensurate with that of the United States in order to make the South China Sea a Chinese lake. Uncontested exercise of maritime power in the South China Sea would allow Beijing to plant its foot on Japan's resource jugular; then, calculating that Japan could feel compelled to comply, China might insist that Japan evict the United States from its bases there.

It is also important to read history with an eye to geostrategic asymmetries. Throughout the last century's great strategic contests, the dominant land powers did not seek hegemony at sea, because it was not a prerequisite for hegemony on land. What they sought was sufficient maritime power to deter the offshore balancer from playing its traditional role—which was to prevent a continental power from achieving hegemony over Europe/Eurasia.

Drawing analogies between Germany in the years leading up to the First World War and China now, Robert Ross notes that Admiral Alfred von Tirpitz's "risk fleet" was bound to fail, because Germany could never have developed sufficient naval capabilities to threaten British maritime supremacy.<sup>7</sup> But that misses the point. The "risk fleet's" purpose was not to challenge the Royal Navy all around the globe; rather, Germany sought to challenge the British navy specifically in the North Sea, in order to prevent Britain from being able to play its traditional role of offshore balancer in Europe. That was all Germany needed



to do to win. Commanding the central geographical position in Europe, Germany had advanced military and technological capabilities. Had the “risk

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*The United States, having become the offshore balancer, must take a close interest in what is happening strategically on the opposite shores of its great ocean moat.*

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fleet” been able to preoccupy the Royal Navy in the North Sea, Germany would have succeeded in gaining hegemony over Europe. With the resources of Europe at its command, Germany would have eventu-

ally developed sufficient maritime power to invade the British Isles. Britain’s accelerated dreadnought-construction program registered that it perceived the threat.

For similar reasons, after the fall of France in 1940 the United States had no choice but to inherit the British role as offshore balancer. Although isolationism remained powerful in the United States, President Franklin D. Roosevelt understood the threat posed by Hitler’s overthrow of the balance of power in Europe. So he pushed through an accelerated program to build a two-ocean navy.

In the Cold War, geostrategic asymmetries meant that the USSR did not need to match the American navy in order to win. The Soviet Union already commanded the dominant position in Eurasia. That was a consequence of the way the Second World War had ended;<sup>8</sup> when the fighting stopped, the Red Army had been dangerously close to hegemony over Europe.<sup>9</sup> In the 1970s, Moscow was so encouraged by its achievement of strategic nuclear parity and by the U.S. post-Vietnam strategic paralysis that it thought it could win the Cold War. Admiral Sergei Gorshkov, Russia’s answer to Mahan, began to develop a Soviet blue-water capability—the Soviet version of the kaiser’s “risk fleet.”

The Soviet Union, given its commanding position in Eurasia, did not need to develop maritime power equal to America’s in order to challenge the United States for first place in the world hierarchy. Rather, it sought sufficient power at sea to deter the United States from playing the role of offshore balancer; that was all that Moscow needed in order to win. Like Admiral Tirpitz before him, Admiral Gorshkov did not set out to challenge the dominant global maritime power all over the world; had the Soviet Union developed sufficient maritime power to make the United States unable to keep the sea lanes open to Western Europe, Moscow would have won the Cold War.<sup>10</sup> That was why Admiral Gorshkov’s push for a blue-water navy represented a threat the United States could not afford to ignore. President Reagan’s maritime strategy registered Washington’s understanding of the point—just as the British had met the German challenge before the First World War with the dreadnought program, and President Franklin Roosevelt had responded to the fall of France with the two-ocean navy.

We have probably seen the end of the grand strategic competitions for superiority over Eurasia that propelled the United States into the box seat.

America, called upon in two world wars and the Cold War to redress the balance of power in Europe, achieved definitive success in the Cold War. In the latter it defeated the Soviet Union, while Britain, France, Germany, and Japan all depended on the United States for their ultimate security.

But strategic history has not ended. Like the ambitions of Admirals von Tirpitz and Gorshkov, China's ambition to develop a blue-water navy does not signal an intention to develop maritime power in order to challenge the dominant maritime power all over the globe. Rather, China—which occupies the central geographic position on the mainland—seeks to develop sufficient maritime power to deter the United States from playing the role of offshore balancer in East Asia. Through purchases of sophisticated Russian equipment, China is seeking to develop “asymmetrical capabilities” intended to deter U.S. aircraft carriers from intervening in a Taiwan crisis.

History may not repeat itself, but some patterns are too obvious to ignore. If China thinks it can enact another Pearl Harbor by attacking or even sinking a U.S. carrier, Beijing ought to reflect on the consequences for Japan of the events of 7 December 1941.

#### **CHINA: A RISING CONTINENTAL POWER WITH BLUE-WATER AMBITION**

China does not represent a threat anything like that once posed by the Soviet Union, when the USSR possessed huge military power and stretched across Eurasia, threatening U.S. allies at both ends of that landmass. Nor has China suddenly become powerful. Still, it is enjoying a strategic latitude unprecedented in modern times, because of the collapse of the Soviet Union, the withdrawal of Soviet forward-deployed forces from Mongolia, and the ending of the Soviet alliance with Vietnam. Pointing strategically eastward and southward, China is pressing on its maritime frontiers in the East and South China Seas. China is unwilling to consider the rights and interests of others; it is focused on its own sense of entitlement and historical grievance. The parallels with Japan in the 1930s are striking.

China wants and needs no allies, because its strategic needs are regional and concentrated. It requires only a regional military capability, supported by a credible minimum nuclear deterrent as a shield against nuclear blackmail. In contrast, because the United States is the offshore balancer, it needs large resources of maritime power, nuclear weapons, bases, and allies. These requirements arise from strategic necessity, not hubris, although China does not see it that way.

China's vast territorial claims, turned on and off at will, in the South China Sea are fueled by a drive for power and resources. China is pressing on the vital

Malacca Straits, which link the Indian and Pacific Oceans, from both directions. At the western entrance to the Strait, China has a strategic foothold in the Coco Islands, owned by friendless Burma. At the eastern entrance to the Strait, China's claims extend as far south as the Natuna Islands, which guard the approaches to Java, heartland of the Indonesian Archipelago.<sup>11</sup>

Since the end of the Cold War, Southeast Asia's other great archipelago, the Philippines, has been a weak link in the offshore island chain. By requiring in 1991 that the United States leave its naval base at Subic Bay, the Philippines stretched U.S. strategic mobility; it also did much to embolden China. A year later, the Chinese rubber-stamp parliament reasserted China's extensive claims in the East and South China Seas—including, by implication, the right to use force against U.S. allies. Central to China's new assertiveness were the ideas of the then-commander of the People's Liberation Army Navy, Admiral Liu Huaqing, China's answer to Mahan.<sup>12</sup> In 1995, China's grab of Mischief Reef in the Spratly archipelago came to light. China has since proceeded to fortify the reef, claiming that it is merely building fishermen's shacks. Mischief Reef, which is also claimed by the Philippines, is well within the Philippines' two-hundred-mile exclusive economic zone. It is unlikely that China would have seized the reef had the U.S. Navy still been in Subic.

The Philippines, which has virtually no navy of its own, has long sought to entangle America in its claims in the South China Sea.<sup>13</sup> However, the United States has no obligation to support Philippine claims in the Spratlys; it has no interest in the ownership of these scattered reefs and archipelagoes. But it does have a vital interest in maritime passage through the South China Sea—both on its own account as the offshore balancer, and because of its commitments to Japan's resource security. The United States also has an essential interest in deterring China from making threats against its allies. America's mutual security treaties with Japan and the Philippines tie it to issues of strategic contention in both the East and South China Seas.

In 1995–96, a tepid American response to China's reassertions of its territorial claims in the South China Sea encouraged China to go farther: it probed toward the uninhabited Senkaku/Diaoyu Islands in the East China Sea. Japan has long claimed these islands, whereas China became interested in them only in the 1970s, when there seemed a prospect of oil deposits nearby. After the Second World War, the United States administered the Senkakus as part of Okinawa and developed a bombing range there. It handed over their administration to Japan when Okinawa was returned in 1972, thus continuing to include the Senkakus, *de jure*, within the scope of the U.S.-Japan security treaty. Nonetheless, the Clinton administration, for fear of offending China, refused to acknowledge publicly that the Senkakus come within the treaty's ambit. That further

emboldened China; it is not surprising that China's probes around the Senkakus and Okinawa increased. China has even become bold enough to send surveillance vessels through the Tsugaru Strait, in the heart of the Japanese archipelago.<sup>14</sup>

In 1996, China "ratified" the 1982 UN Convention on the Law of the Sea as if it were an archipelagic state, which it was not entitled to do. Further, it drew archipelagic baselines around the Paracel Islands, which it took from Vietnam by force in 1974, to prevent their falling into the hands of North Vietnam, China's supposed ally at the time—a nice example of *realpolitik*. In 1988, Chinese and Vietnamese forces clashed in the Spratlys.

For China, taking the Paracels was a pushover; the more distant Spratlys are not. China, having learned lessons from the demise of the Soviet Union, is developing its military capabilities at a modest pace that does not outrun economic growth. But China no doubt intends, once it has developed longer-range maritime capabilities (including sophisticated Russian military technology), to pick off the other claimants one by one.

The Clinton administration persisted in seeing these sources of strategic contention in the East and South China Seas as legal issues, whereas in fact they are strategic issues with legal faces. If the United States continues to ignore its equity in these islands, it is only a matter of time before China makes an archipelagic claim to the whole of the Spratlys.

## WOBBLES TO THE SOUTH

China sees time as a strategic asset, in the way that the Soviet Union saw space (distance, that is, not *kosmos*) as a strategic asset. Beijing seeks to convince the Southeast Asians that time is on its side. "Remember Saigon," the Chinese say; "the Americans are unreliable and may leave, but China will be here for ever." Thus the Southeast Asians are urged to accommodate Beijing now, lest the price of future accommodation be made higher.

The Southeast Asians have not been completely supine, and some seek to keep America actively engaged in their region. Thailand conducts annual military exercises (COBRA GOLD) with the United States, and Singapore joined in recently. Singapore, the region's geostrategic pivot because of its vital position in the Malacca Straits, is building a berth at Changi Naval Base to accommodate U.S. aircraft carriers. It also bases much of its air force in Australia, a U.S. ally. Both Malaysia and Singapore participate in the Five Power Defence Arrangements, which provide an umbrella under which they can cooperate with each other and with Western powers.<sup>15</sup> Under the auspices of the FPDA, Royal Australian Air Force F/A-18 aircraft regularly deploy to Butterworth in northern Malaysia; also, Australian maritime surveillance aircraft operating from Butterworth conduct missions over the Indian Ocean and the South China Sea.

Even the Philippine senate, which voted in 1991 to evict the U.S. Navy from Subic Bay, caught a whiff of realpolitik when China started to build its base on Mischief Reef; in 1999, the senate approved a new Visiting Forces Agreement that will allow U.S. ship visits.

In general, however, confronted with a rising China, the Southeast Asians are wobbly. The U.S. Navy, for instance, will not be returning to Subic Bay as a base; Philippine miscalculation has done much to let China into the South China Sea. China enjoys the advantages of centrality, as its history as the Middle Kingdom shows. It also has size, demographic weight, and nuclear weapons. Unlike Japan and Australia, the Southeast Asians do not enjoy the benefits of extended nuclear deterrence. They know that China, as a permanent member of the UN Security Council, could veto any reaction under the Charter to an aggression by China itself.

Rising tension between China and America worries the Southeast Asians, and they dread being forced to choose sides. They are unsure of how much they could depend on external support, were they to stand up to China, or what might result, such as a militarily stronger Japan. Except for Singapore, they have been forced by the recession to reduce their military spending, while China's has gone on unabated. Most states of the Association of Southeast Asian Nations are fragmented societies, and the economic downturn has exposed many fissures within them. The economic power of China's diaspora worries them, and many fear its fifth-column potential.

Even the five founding members of ASEAN have been squabbling, undermining any notion that the association could act as a bulwark of regional stability.<sup>16</sup> Indonesia, the *primus inter pares* in Southeast Asia, remains in post-Suharto turmoil and could break up; growing secessionist pressures in its outer islands reflect weakness at the center. For all these reasons, the Southeast Asians have been unable to combine in defense of their interests in the South China Sea. They continue to pursue conflicting territorial claims there. That has allowed China to divide and rule, even in the ASEAN Regional Forum (ARF). China also uses the ARF as a forum for alliance busting: it argues that because the Cold War is over, the region no longer needs America's alliance system or its forward-based forces.<sup>17</sup>

#### ASEAN AND TAIWAN: SEE NO EVIL

The Southeast Asians know that China is steadily building up its missiles opposite Taiwan and that China has implicitly threatened Taiwan with nuclear weapons. Yet they profess to see no connection between their own security and the balance of power in the Taiwan Strait. During the Taiwan Strait crisis of 1996, China sought to intimidate Taiwan as it held its first direct presidential elections. It lobbed nuclear-capable missiles within a few miles of Taiwan's ports, some of

them landing close to Japan's outer islands.<sup>18</sup> The United States responded by dispatching two aircraft carrier battle groups, led respectively by the USS *Nimitz* (CVN 68) and *Independence* (CV 62), to the vicinity of the Taiwan Strait. However, ASEAN was mute, except for mild complaint from Singapore.

In the wake of Taiwan's presidential elections in March 2000, which saw the ruling Kuomintang replaced by the Democratic Progressive Party, led by Chen Shui-bian, the reaction of ASEAN has, again, been silence. Ignoring China's bluster and threats against Taiwan before the elections—which proved counterproductive in any case—Singapore's senior minister, Lee Kuan Yew, even implied that Taiwan was at fault for “provoking” China and declared that reunification is inevitable.<sup>19</sup>

Lee should look over his shoulder. If China has the right to reintegrate Taiwan by force, does not Malaysia have the right to reintegrate Singapore by the same means? Lee seems unable to comprehend that the United States, in the interests of its own security and that of Japan, cannot afford to let China take Taiwan by force. If that happened, who in East Asia would feel safe? The fates of Taiwan and Singapore, those wealthy ethnically Chinese islands off East Asia's edge, are inextricably linked, but Lee cannot seem to see it. Thus Southeast Asia's senior statesman plays into the hands of Beijing, which flatters Singapore as a model of a market economy with party control. Also, of course, the democratic transition in Taiwan, the first in the long history of the Chinese people, is an affront to authoritarian Singapore.

No one expects ASEAN to stand up and shout at Beijing, but by professing to see no stake in Taiwan's continued *de facto* independence, it emboldens China. Still, its timidity is no reason for the United States to give up on it. Indeed, the United States cannot afford to do so, in the interests either of its own maritime security or of Japan's need for maritime protection.

#### JAPAN'S NEED FOR MARITIME PROTECTION

Commodore Matthew C. Perry, U.S. Navy, demonstrated in 1853 the vulnerabilities of an archipelagic state when he trained the guns of his “black ships” on the decayed Tokyo forts—even though trade, not conquest, was his purpose. Archipelagic states are especially susceptible to the exercise of hostile maritime power because of the ease with which such power can be brought to bear against their capitals. Japan took the point. If it wished to avoid the fate of China, which the European powers were carving up into zones of influence, Japan could no longer seek security in self-imposed isolation. After 1868, the Meiji Restoration rapidly brought Japan into the global system, as a third center of economic and military power, after Europe and the United States.

Because Japan is an island nation, its ambitions on the continent after 1905 were discretionary; they did not arise from strategic necessity. After the Russo-Japanese War, which ended in that year, Japan had all it needed—it had blocked the Russian threat via Korea and Manchuria; it enjoyed access to the resources of Manchuria; and it had an alliance with Great Britain, the dominant maritime power. By pursuing nonetheless its ambitions in China, Japan succeeded only in undermining its security. As it advanced down the China coast, Japan increasingly came into collision with the two key East Asian interests of a great industrial and maritime power having a continent-sized base in the Western Hemisphere: America's stake in the Open Door to China and in the security of the Philippines led it to refuse to concede hegemony over East Asia to Japan.

The 1941–45 Pacific War demonstrated in spades Japan's vulnerability to hostile maritime power, a fact that the atomic bombings have tended to obscure. Japan was strangled by a combination of the U.S. Navy's fast carriers, fleet train, amphibious assault forces, and submarines, and Army Air Force long-range bombers flying from island bases seized by assault from the sea.<sup>20</sup> While much of the Japanese army was still thrashing about in China, to no strategic purpose, American maritime power took Japan by the front door.

Prostrate, postwar Japan was vulnerable to the combined forces of the great land powers of East Asia, the Soviet Union and China, who became allies in 1950. Indeed, their alliance was specifically pointed at Japan. As early as 1942, Spykman had foreseen the need for the United States to protect postwar Japan against the Soviet Union, whose Pacific face had long given it opportunities and ambition. The need to defend Japan was one of America's main reasons for entering the Korean War; the United States could not afford to let the only industrialized country in Asia fall to the Sino-Soviet bloc. Japan, assured of American maritime protection as long as it agreed to provide bases for the United States, was freed to concentrate on economic recovery. In turn, that helped the rest of noncommunist East Asia to recover.

### JAPAN'S ROLE IN WINNING THE COLD WAR

During the Cold War, Japan was neither an economic threat to the United States nor a free rider, as so many now seem to think. To the contrary, Japan played an important role in bringing down the overextended Soviet empire.

Japan's geostrategic location made it a vital link in a global chain of maritime power that depended critically on nuclear weapons to counter overwhelming Soviet proximate power in Europe. In order to bring countervailing pressure to bear on the vulnerable eastern flank of the Soviet Union, the United States needed a combination of East Asian allies, maritime power, and nuclear weapons. Although

the Cold War had its roots in Europe, over time the East Asian dimension of this global strategic contest progressively grew in importance.

In the 1980s, Japan's navy developed significant maritime capability, in conjunction with President Reagan's maritime strategy, and the Soviets perceived that Japan was willing to fight if necessary. The U.S. maritime strategy published in 1986 was a logical response to the global strategic challenge laid down by the

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Soviet Union in the late 1970s.<sup>21</sup> In 1979, the fall of the shah of Iran created an "arc of crisis" in the Persian Gulf. British withdrawal from "East of Suez" brought the Soviet navy hot-foot into the Indian Ocean, not least

from Vladivostok. Moscow also concocted arms control schemes in the Indian Ocean. Deeply attractive to India, Moscow's ally, these regimes aimed at hobbling U.S. access to the Indian Ocean island of Diego Garcia, which was critical to U.S. ability to reinforce the Gulf.<sup>22</sup>

The 1979 Soviet invasion of Afghanistan and Moscow's support for Cuban surrogates in Africa reflected the Kremlin's belief that the "correlation of forces" was moving decisively in its favor. The Soviet Union also tried to intimidate Japan by stationing a division of troops in the illegally occupied Japanese "Northern Territories" south of the Kurile Islands, visibly threatening Hokkaido. In addition, two Soviet aircraft carriers were based at Vladivostok, just across the Sea of Japan.

The maritime strategy envisaged Western navies taking the war to the enemy in both the North Atlantic and the North Pacific. Comparative advantage at sea enabled the United States to exploit the key geostrategic problem of its continental adversary—Soviet vulnerability to war at both ends of its eight-thousand-mile east-west axis. Combined with China's enmity to the Soviet Union (their alliance, though never formally abrogated, was far from close), the maritime strategy posed an immense strategic complication for Moscow. It dispersed Soviet forces and made credible the threat that war in the West would also mean war in the East.

To the east, an integral part of the maritime strategy was the development of an effective, high-technology air defense and antisubmarine network around the Japanese archipelago. Fully armed Japanese naval aircraft, alternating on a daily basis with U.S. Navy antisubmarine aircraft, patrolled throughout the Sea of Japan, upon which lie Vladivostok and other Soviet Pacific Fleet bases. That convinced Soviet naval commanders that Japan was prepared to fight alongside the United States if necessary. Officially, the Japanese government's position was



that it could not participate in collective self-defense; Japan's actions sent a different message.

The strategic geography of the Japanese archipelago greatly facilitated the maritime strategy, because Japan could control all the Soviet navy's exits from its Sea of Japan bases. By controlling the sea lanes through that sea, the United States and Japan made it impossible for the Soviets to feel confident that they could, in wartime, support their bases at Petropavlovsk and Cam Ranh Bay in Vietnam;<sup>23</sup> all the critical supplies had to come out of Vladivostok. The two Soviet aircraft carriers stationed there were also much less capable than the USS *Midway* (CV 41), based at Yokosuka. In addition, Japan played its part in ensuring that the global nuclear balance did not tilt in Moscow's favor. The U.S. and Japanese navies exploited Soviet geostrategic problems by threatening the Soviet strategic ballistic missile submarine (SSBN) fleet in its "bastion" in the Sea of Okhotsk.<sup>24</sup> (At the other end of Eurasia, its equivalent was the Barents Sea.)

Japan's strategic geography also facilitated political management of Japan's contribution to the maritime strategy. Japan's defense of the sea lanes out to a thousand nautical miles sounded modest and did not arouse undue opposition at home. The Soviet Union undermined its own objectives by minatory behavior that produced a palpable sense of threat in the Japanese public. America's de facto alliance with China also helped, because Beijing did not oppose the extension of Japan's maritime capabilities. That helped mute opposition in Japan, where the socialists had long sung Beijing's tune. But the critics were not so easily silenced in relation to nuclear weapons, a vital adjunct to American maritime power.

#### NUCLEAR WEAPONS AND MARITIME POWER: THE COLD WAR

Nuclear weapons are not popular anywhere, least of all in Japan, as a consequence of the 1945 bombings of Hiroshima and Nagasaki. Notwithstanding, nuclear weapons were vital during the Cold War for the United States, because it was a distant power that needed to counter Soviet assertions of hegemony, made on the basis of proximity, over Eurasia. In 1952, the original U.S.-Japan security treaty gave the United States carte blanche, including the rights to store nuclear weapons in Japan and to launch them without consultation. A revision of the treaty in 1960, at Japan's behest, obliged the United States to consult Japan about any changes to be made in the equipment of U.S. forces in Japan.

Nuclear weapons were removed from Okinawa when it reverted to Japanese control in 1972. In 1969, Japan announced its three nonnuclear principles—not to possess or manufacture nuclear weapons or to allow them in Japanese territory—its prime minister Eisaku Sato (1966–72) even winning a Nobel Peace Prize for his efforts in establishing those principles. Japan's nonnuclear status preserved

domestic harmony and also furthered its aspirations to be recognized as a great power. Japan's diplomats pursued the objective of nuclear disarmament, seeing it as Japan's main claim to permanent membership in the UN Security Council.<sup>25</sup>

Nonetheless, and sotto voce, Japan continued to rely on extended deterrence. That seemed even more necessary when China exploded its first nuclear weapon in 1964. So when nuclear-capable American ships entered Japanese ports, Japan did not ask, and the United States did not declare, whether such weapons actually were aboard the warships. How could it have been otherwise in an alliance critically dependent on nuclear weapons and maritime power?

If Japan had really believed that nuclear weapons were irrelevant to its security or represented unacceptable dangers, it could have opted out of the U.S. alliance at any time after 1971.<sup>26</sup> It did not do so because the last thing the Japanese really wanted was to be left alone to cope with China, Russia, and North Korea as best they could.

Japan's strategic geography also facilitated political management of nuclear issues. As long as the United States had submarines capable of targeting the Soviet maritime provinces, Japan felt no need to have nuclear weapons stationed on its territory. Thus Japan avoided the political problems associated with intermediate-range nuclear force deployments in Western Europe. There Moscow's exploitation of antinuclear sentiment, especially in Germany, came close to splitting Nato. In 1992, President George Bush's removal of tactical nuclear weapons further eased the political management of nuclear issues in Japan. Still, with the end of the Cold War, nuclear weapons lost none of their salience for Japan's security.

#### THE CONTINUED RELEVANCE OF NUCLEAR WEAPONS TO EAST ASIAN SECURITY

Even in changed strategic circumstances, some fundamentals of Asia-Pacific security have not altered. Because it is the offshore balancer, the United States still needs large resources of maritime power and nuclear weapons in order to maintain a balance of power in the western Pacific. American nuclear weapons and maritime power were critical in preventing the Soviet Union from winning the Cold War on the basis of its assertions of domination over Eurasia. America's nuclear and maritime capabilities remain no less important in deterring China's designs for hegemony over East Asia. The United States must retain adequate reserves of nuclear weapons, resisting the clamor of those who say that nuclear weapons have no utility now that the Cold War is over. Nuclear weapons, like the old concept of the "fleet in being," work all the time as deterrents, simply because they exist.

Because Japan cannot rely on its three nonnuclear principles for its strategic security, the United States must also continue to supply a credible nuclear umbrella over Japan. India having tested nuclear weapons in 1998, Japan is now the only Asian great power without them. East Asia's strategic future will turn on whether the United States, Japan, and China all continue to believe that the United States will underwrite Japan's nuclear and maritime security.

Japan cannot remain unconcerned when China rattles its nuclear-capable missile arsenal in efforts to intimidate the Taiwanese into submission. Farther north, North Korea's nuclear weapons program no doubt continues, as does its missile program. As the arms controllers tend to forget, the strategic value of any weapon depends on who owns it. Although North Korea appears somewhat less odious after the 15 June 2000 Korean summit, its enigmatic (if not irrational) behavior, which includes the willingness to see millions of its own subjects starve in order to preserve itself in power, remains largely unchanged.

North Korea's missiles and nuclear ambiguity have been very useful in blackmailing the United States and others into large-scale aid to North Korea, in order to prop up that failed state, an orphan of the Cold War.<sup>27</sup> Indeed, the North Koreans seemed to have drawn appropriate conclusions from the Gulf War—that those who wish to defy the United States should first seek nuclear weapons and the means of delivery. If the process of Korean reunification is indeed in train, as now seems possible, Japan will worry that a reunited state might inherit the North Korean nuclear weapons program. Given the history and geography of the peninsula, it would not be surprising if a reunified Korea responded to the nuclear attraction. Would Japan then be content to continue to rely on the U.S. nuclear umbrella?

The United States must be more attentive to Japan's legitimate security needs.<sup>28</sup> Pursuing arms control and nonproliferation as objectives in themselves, as the Clinton administration did, obscures the equations of power in East Asia. In a region where the balance of power remains unsettled, states seek security because they must. Japan is no exception, whatever the continuing strength of its domestic pacifism.<sup>29</sup>

#### TOWARD AN ALLIANCE THAT IS READY TO FIGHT AT SEA

Many of the strategic lessons of the Cold War either were not understood in both Japan and the United States or were rapidly forgotten. Since then, the U.S.-Japan alliance has been allowed to drift because of lack of consistent attention at the top in both countries. It now urgently needs an overhaul.

The Japanese government ducked its responsibilities to explain to its public the role that Japan played in maritime strategy. As a result, Japan was unprepared to respond adequately to the 1990–91 Gulf War. Iraq's invasion of Kuwait

and the threat posed to Saudi Arabia represented palpable menaces to Japan, given its need for resource security. But because the threat was distant, few in Japan seemed to perceive it. Japan dithered, threw money at the problem, and eventually sent four minesweepers to the Strait of Hormuz—after the war was over.<sup>30</sup> It got little thanks, even from Kuwait. Had the war gone on longer or American casualties been higher, the U.S.-Japan alliance could have ruptured.<sup>31</sup>

Reading the lessons of the Gulf War, the United States moved to shore up its alliance with Japan. It also recognized the economic importance of East Asia and the critical fact that the power balance there remained unsettled. For those reasons, it kept force reductions in the region to a minimum. At the other end of Eurasia, the restoration of equilibrium as a consequence of the collapse of Soviet power made it possible for Western Europe to absorb dramatic U.S. force reductions without compromising security. That was not the case in East Asia; accordingly, the United States reaffirmed its intention to maintain a hundred thousand forward-deployed troops in East Asia, the same number as in Europe.

Thus it was that the United States encouraged Japan to pursue a more outward-looking security policy and to develop the resources needed to sustain it. New U.S.-Japan defense guidelines now allow a modest amount of Japanese rear-echelon support in emergencies in “areas surrounding Japan”—which means Korea and Taiwan. Japan has also agreed to cooperate with the United States in the development of theater missile defenses, including the Aegis ship-based system, though China rails against it.

But these changes represent only modest improvements. The Gulf War showed the need to readjust the offensive and defensive roles that the United States and Japan, respectively, would need to play in any regional contingency. The alliance remains exposed to a contingency in Korea or the Taiwan Strait. If Americans start taking casualties and Japan does not do enough to help, political support in the United States for the alliance could rapidly evaporate.

The critical thing Japan needs to do is to move away from the illogical notion that while it has the right to collective self-defense, its (American-written) constitution does not permit the exercise of that right.<sup>32</sup> That notion means, at least in theory, that if Japanese ships were patrolling with the U.S. Navy and only the American ships were attacked, Japanese ships could not fight in their defense. That absurd interpretation cannot be allowed to persist. It flies in the face of everything we have learned about deterrence—that status-quo powers who look as if they are willing to fight rarely need to do so.

The current situation is even more absurd in that Japan has a navy second only to that of the United States itself, albeit one without power-projection capabilities. Japan has not only a real navy but a unique maritime potential in East Asia. Oddly, this has escaped attention. A recent analysis of East Asia’s strategic

geography quoted Mahan: “History has conclusively demonstrated the inability of a state with even a single continental frontier to compete in naval development with one that is insular, although of smaller population and resources.”<sup>33</sup> But the quotation was made in relation to China, not Japan.

Japan, unlike Asia’s other great powers, does not suffer from the immense strategic distraction of potential enemies on land frontiers. It is allied with the dominant maritime power, as it was in the years from 1902 to 1922. The difference is that this time Japan is not using its alliance as a shield while it pursues ambition on the continent. Also, this time Japan is working in concert with the great maritime and industrial power based in the Western Hemisphere, not against it.

Together, the United States and Japan are providing security for almost the entire western Pacific while spending, respectively, only 3 and 1 percent of gross national product on defense. They must think, however, and act more strategically, which is always hard for democracies when they do not face palpable threats. For reasons that have been laid out in this article, both the United States and Japan have vital national interests at stake in the preservation of Taiwan’s de facto independence. In a future Taiwan crisis, it should be possible for an American president to ask that Japanese warships accompany an American task force sailing from Yokosuka, and for a Japanese prime minister to assent. If such complementarity were to become operationally credible, it would not launch Japan on the road to revived militarism. To the contrary, it would credibly strengthen deterrence under a U.S.-Japan umbrella, to the benefit of the entire Asia-Pacific community.

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#### NOTES

1. Colin S. Gray, *The Leverage of Sea Power: The Strategic Advantage of Navies in War* (New York: Free Press, 1992), p. 276.
2. Douglas Porch, “The Taiwan Strait Crisis of 1996: Strategic Implications for the United States Navy,” *Naval War College Review*, Summer 1999, p. 16.
3. Zbigniew Brzezinski, *The Grand Chessboard: American Primacy and Its Geostrategic Imperatives* (New York: Basic Books, 1997).
4. Despite global unipolarity, East Asia is held to be bipolar, divided into continental and maritime regions. Bipolarity is held to be stable. Robert S. Ross, “The Geography of the Peace: East Asia in the Twenty-first Century,” *International Security*, Spring 1999, p. 82.
5. Thomas J. Christensen, “China, the U.S.-Japan Alliance, and the Security Dilemma in East Asia,” *International Security*, Spring 1999, pp. 49–80.
6. The same arguments are currently being recycled in relation to ballistic missile defenses. BMD opponents represent the 1972 Anti-Ballistic Missile (ABM) treaty as a cornerstone of strategic stability. Its abrogation, they say, would cause security dilemmas and an “arms race.” Only if one accepts the mad logic of mutually assured destruction (MAD)—the virtue of self-imposed vulnerability—can one believe that the ABM treaty is a cornerstone of

stability. The Soviets never accepted the logic of MAD, as shown, for example, by the aggressive way in which they pursued their antisatellite programs, even during the period of high détente. But they did seize the opportunity to hobble Western technology. Currently, in opposing national and theater missile defense, Russia and China seek to keep Western technology hobbled, because they know they cannot compete with it. To China, the prospect of American and Japanese technological cooperation is especially unwelcome. But if nuclear competition is to be the name of the game in East Asia, as seems likely, the United States should set the terms, not allow China to do so.

7. Ross, p. 107.
8. In 1942, Spykman foresaw that “a Russian state from the Urals to the North Sea can be no great improvement over a German state from the North Sea to the Urals.” Nicholas John Spykman, *America’s Strategy in World Politics: The United States and the Balance of Power* (New York: Harcourt Brace, 1942), p. 460.
9. That is why the governments of Western Europe, many of them quite left-wing at the time, clamored for American protection. Ironically, the time that the Europeans were most afraid was the period of the U.S. nuclear monopoly (1945–49). But that does not mean, as many now claim, that nuclear weapons were irrelevant to the correlation of forces at the beginning of the Cold War. On the contrary, U.S. possession of nuclear weapons, and its demonstrated will to use them if necessary, gave its allies the confidence to stand up to Moscow.
10. The strategic geography of the Cold War largely replicated that of World War II—that is, conflict in Europe was largely continental, though dependent on maritime reinforcements. In the Pacific, in both cases the conflict was largely maritime.
11. In December 1995, it was the realization that China’s territorial claims might include the Natuna Islands, which guard the eastern approaches to Java, that drove Indonesia into unprecedented strategic alignment with Australia. That alignment did not survive the 1999 East Timor crisis, which saw a sharp deterioration in the Indonesia-Australia relationship as a consequence of Australia’s UN-authorized military intervention in East Timor.
12. That decision was made over the objections of the Chinese foreign ministry. Michael Studeman [Lt., USN], “Calculating China’s Advances in the South China Sea: Identifying the Triggers of ‘Expansionism,’” *Naval War College Review*, Spring 1998, pp. 79–80.
13. The purpose, no doubt, of the Philippine practice of tearing up Chinese reef markers.
14. *Japan Times*, 19 May 2000. The strait is an international waterway, but the point is China’s astonishing display of maritime hubris, given that Japan has a real navy and China does not.
15. Members are Britain, Australia, New Zealand, Malaysia, and Singapore. The FPDA was set up after the British withdrawal from East of Suez, in order to ameliorate tensions between Malaysia and Singapore after the latter was expelled from Malaysia in 1965. It seeks to create a framework in which the Southeast Asian parties can cooperate in their external defense. Its most important element is the Integrated Air Defence System, which has always been commanded by an Australian wing commander. Britain’s interest these days seems to be confined to arms sales.
16. ASEAN was founded in 1967 by Indonesia, Thailand, Malaysia, Singapore, and the Philippines.
17. Those who promote multilateral solutions for East Asia seem unaware of how the Soviet Union used the Conference on Security and Cooperation in Europe—a child of détente, now known as the Organization for Security and Cooperation in Europe—to promote alliance busting in Nato. While conceding nothing in relation to the Warsaw Pact, Moscow gained opportunities to divide and rule in Nato—by playing on tensions between Greece and Turkey, fueling German and Danish nuclear fears, and so on.
18. Japan’s most outlying island in the long chain off Okinawa, Yonagunijima, is within sight of Taiwan.
19. “Lee: The Cruel Game,” *Far Eastern Economic Review*, 8 June 2000, p. 17.
20. Gray, p. 255.
21. On the Maritime Strategy, see Edward Rhodes, “. . . From the Sea’ and Back Again: Naval

- Power in the Second American Century,” *Naval War College Review*, Spring 1999, esp. n. 9.
22. That underlines the importance to Japan’s maritime interests of the chain of islands that links Japan with the Gulf. Distance is irrelevant: any threat to Diego Garcia, Singapore, or Taiwan represents a mortal threat to Japan.
  23. The Soviet Union acquired its base in Cam Ranh Bay as a reward for backing Vietnam in its 1978 invasion of Cambodia, China’s ally. By gaining access to Cam Ranh, Moscow sought to outflank both China and the United States in the South China Sea. China then attacked Vietnam, to make the point that Vietnam could not rely on the Soviet Union for its strategic security.
  24. Centralist political control—distrust of SSBN commanders at sea—also helped the development of that novel strategic art-form of tying up SSBNs at wharves in the Sea of Okhotsk and near Murmansk. The Politburo feared the *Hunt for Red October* scenario, wherein an SSBN commander sought to defect. Similar centralist fears now hobble China’s drive for “longer legs” in the Spratlys, since it fears that the pilots of its Su-27 Flankers—long-range air-superiority aircraft—might defect to Taiwan.
  25. That is an example of needing to be careful what one wishes for, lest one get it. Would Japan be safer if the great powers abandoned their nuclear arsenals? Given the history of arms control—that bad regimes lie and cheat—could China and Russia be trusted to comply? Without nuclear weapons as a vital adjunct to maritime power, could the United States continue to underwrite Japan’s strategic security?
  26. Japan could not have terminated the original treaty, but the 1960 revision gave both sides the option of terminating it after ten years, on one year’s notice.
  27. During the Cold War, the North Koreans were able to play off the Soviets against China, getting aid from both. Their current economic plight is also, of course, a consequence of disastrous policy mistakes and the callousness of a regime utterly indifferent to the welfare of its population.
  28. A good example of lack of sufficient attention to Japan’s security needs occurred after the unannounced launch of North Korea’s Taepodong-1 missile over the Japanese home islands in August 1998. What was important was not the supposed payload, a satellite, but the improvement in launch capabilities that had been revealed. The United States should have seen the parallel with its own experience with Sputnik in 1957, which showed that all of the United States was vulnerable to Soviet missile attack. Instead, the Clinton administration saw the North Korean missile launch through a nonproliferation lens. Because the United States was unresponsive to Japan’s security needs, Japan decided to acquire its own intelligence satellites.
  29. See Thomas U. Berger, “Alliance Politics and Japan’s Postwar Culture of Antimilitarism,” in *The U.S.-Japan Alliance: Past, Present and Future*, ed. Michael J. Green and Patrick M. Cronin (New York: Council on Foreign Relations, 1999), pp. 189–207.
  30. Ironically, at least one knowledgeable Japanese flag officer assessed that the minesweepers were at greater risk than if they had been sent earlier, because they arrived so late that the easy and safer jobs had all been done.
  31. For the Japanese response to the Persian Gulf War, see Peter J. Woolley and Mark S. Woolley, “The *Kata* of Japan’s Naval Forces,” *Naval War College Review*, Spring 1996, pp. 64–7, and Katsutoshi Kawano [Capt., JMSDF], “Japan’s Military Role: Alliance Recommendations for the Twenty-first Century,” *Naval War College Review*, Autumn 1998, esp. pp. 15f.
  32. The San Francisco Peace Treaty, which officially ended the Pacific War, recognized Japan’s right to collective self-defense, which the UN Charter also recognizes as a right of all member states. Prime Minister Nobusuke Kishi (1957–60) considered collective self-defense as part of Japan’s natural right to self-defense. However, his younger brother, Eisaku Sato, permitted the unelected Cabinet Legislative Office to proclaim as government policy that although Japan has the right to collective self-defense as a sovereign nation, Article 9 of its constitution forbids the exercise of that right.
  33. Ross, p. 106.

## NETWORK-CENTRIC WARFARE

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### What's the Point?

*Edward A. Smith, Jr.*

What is network-centric warfare? What's the point? Many attempts to answer these questions emphasize the "network" and the new technologies used to create more effective sensor and communications architectures. These architectures, it is argued, will enable us to create and exploit a common situational awareness, increase our speed of command, and "get inside the enemy's OODA [observe, orient, decide, and act] loop."<sup>1</sup> Yet such descriptions of technologies and capabilities can leave us asking the same questions: What is it? Just what does it bring to warfare? Why is it so critical to America's future military power that we must give up other capabilities to buy it?

These questions highlight the need for a warfare-centered working concept of network-centric operations. Such conceptual work can help us both recognize the potential in networking and discern its limits and limitations. It also can provide a fundamental understanding of the role of network-centric operations on the battlefield and across the spectrum from peace through war. An evolving working concept is, in short, the first step in designing a network-centric "navy after next."

*Dr. Smith holds an undergraduate degree from Ohio State University and a Ph.D. in international relations from The American University. Before retiring as a captain in the U.S. Navy, he served in combat in Vietnam; on the staffs of Cruiser-Destroyer Group 8 and the Commander in Chief, Atlantic Command and the Supreme Allied Commander Atlantic; in the Office of Naval Intelligence; and on the Chief of Naval Operations Executive Panel. He is now Senior Principal Technical Specialist in the Boeing Company's Washington Studies and Analysis Office.*

Using technology to multiply the impact of military forces seems almost axiomatic. The problem is in identifying which technological combinations hold the most potential. Information technology is one obvious force multiplier, but what we really face are three concurrent technological revolutions.<sup>2</sup>

The first is in *sensor technology*. The sensor revolution is twofold: one movement toward sensors able to achieve near-real-time surveillance over vast areas, and another toward smaller, cheaper, more numerous sensors that

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can be netted to detect, locate, identify, and track targets. Together, these trends can produce systems that will provide the quantity and quality of data needed to create a “situational awareness” that is “global in scope and precise in detail.”<sup>3</sup> The second revolution is in *information technology*. The information revolution will bring the geometric increase in computing power necessary to process, collate, and analyze this vast quantity of sensor data, and it will provide means to distribute information to any recipient or “shooter” anywhere in the world at near-real-time speeds. The third is in *weapons technology*. The weapons revolution is a matter of increasing numbers of precise munitions by reducing costs. It, like the sensor revolution, is twofold. Better streams of targeting data can permit a “dumbing down” of expensive guidance packages, while new designs, electronics, “lean” manufacturing, and mass production can decrease the cost for a given level of accuracy and capability.<sup>4</sup>

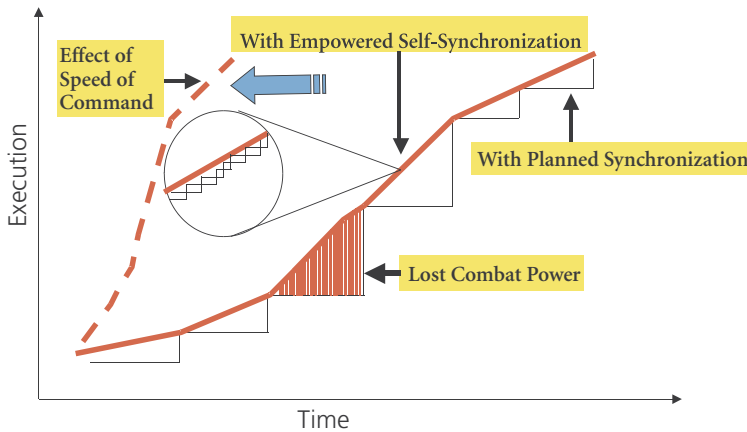
In the coming decade, these revolutions will interact and multiply each other’s impacts and create a kaleidoscope of potential synergies that will change the character of war as we know it.<sup>5</sup> These revolutions and this change in how we think about war have come to be embodied in the idea of network-centric operations.

#### NETWORK-CENTRIC OPERATIONS

The first step in creating a working concept for network-centric operations is identifying the key changes that grow from the triple technological revolution. One change, clearly, is the increased precision and speed that may now be possible in military operations. Speed and precision make it feasible to exploit specific battlefield opportunities and operate at a pace calculated to overwhelm an enemy’s capacity to respond. They also offer a highly agile force, able to change from one rapid, precise operation to another at will and able to compress complex targeting processes to fit the nearly real-time dimensions of the battlefield. These emerging possibilities signal changes in how we wage war.

The leading network-centric proponents explain the impact of network-centric warfare in this manner. In traditional military operations, a mission is assigned and planned, forces are generated, and operations are executed to concentrate power on an objective. This is a highly coordinated, “stepped” cycle: periods of relative inaction, during which forces are generated and actions coordinated (the flat part of the step) alternate with periods of action, when combat power is applied (the vertical part). However, if forces were networked to create near-real-time situational awareness (see figure 1), we could act continuously. We would no longer need to pause before deciding on further action; the information and coordination needed would already be there. Moreover, shared awareness would permit a flattened, decentralized command structure, with decisions made at the lowest practical level of command—a

**FIGURE 1**  
**SELF-SYNCHRONIZATION AND SPEED OF COMMAND**



"New Sciences and Warfare" Vice Adm. A. K. Cebrowski 21 September 1998

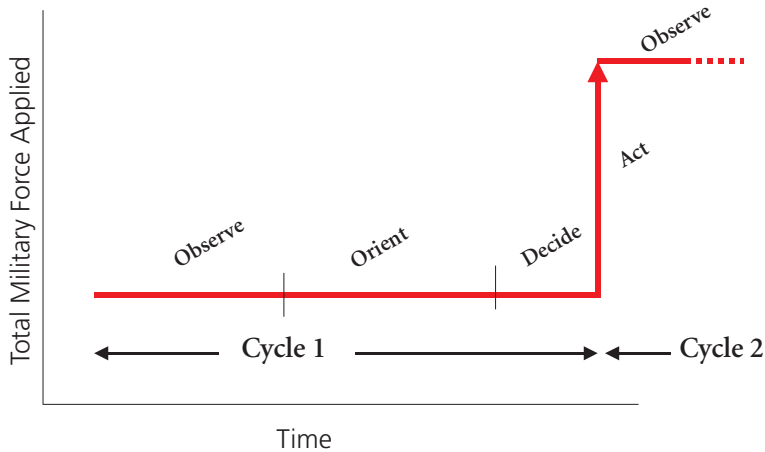
"self-synchronization" that would permit us to reclaim "lost combat power." Then, as we train and organize to optimize these capabilities, the pace of these semi-independent operations would accelerate further to permit a new "speed of command." This description makes clear that network-centric operations are really about optimizing combat power—that is, *combat efficiency*.

While equating accelerated, self-synchronized operations to increased combat

efficiency makes intuitive sense, it needs further explanation. One approach is to look at the above-mentioned "steps" in the context of the well known work of Colonel John Boyd, U.S. Air Force, but treating OODA loops as a succession of linear cycles overlaid on the steps.<sup>6</sup> Boyd's "observe," "orient," and "decide" phases then would equate to the flat part of a step, while the "act" phase would be the vertical. Plotted on axes of time ( $x$ ) versus cumulative application of military force ( $y$ ), the steps become OODA cycles, with each "act" adding to the total of the military force applied (see figure 2).

This construct of a *combat cycle* brings us to look not just at decision making but also at the parallel process of generating combat power. For example, the "observe" process includes both the decision to observe certain activities and the physical actions needed to acquire the intelligence, surveillance, and targeting data and then transmit it to the right people or systems. New sensor and information technologies can compress this process significantly, but there is a limit to how much. To optimize the impact of precision, we need more than sensor-based awareness; we need to identify specific vulnerabilities, and to do that we need to know the enemy. Such knowledge draws on sensor information—and will be subject to some time compression as a result—but it also depends on regional expertise and on intelligence databases developed long before the battle begins. Thus, the new sensors and information technology can shorten the cycle only to the degree that long-term collection and analysis are already available on the net.

**FIGURE 2**  
**OODA CYCLE**



a carrier can move only so fast, and flight deck operations can be hurried along only so much. “Efficiency” here is as much a function of how we organize, train, and equip our forces as it is of information flows. The same is true of the “act” phase. Once in the air, aircraft must proceed toward the target and then—at a time dependent on the speed and range of the weapons used and the distance they must travel—launch their ordnance.

To increase combat efficiency, therefore, we must accelerate both parts of the combat cycle, the OODA cycle and the process of generating combat power. A strike-sortie-generation demonstration conducted by USS *Nimitz* (CVN 68) in 1997 is a good example of how these two elements come together.<sup>8</sup> *Nimitz* used only a rudimentary network to aid targeting and decision making, but it then focused on optimizing the operations of the carrier and the air wing to make better use of the increased information that the network made available. For this demonstration, among other things, *Nimitz* added pilots to its air wing, introduced new high-speed cyclical operations, and relied on accompanying missile ships for air defense.<sup>9</sup> The result was a fourfold increase in sorties over a four-day period. Arming each aircraft with multiple precision weapons, each of which could reliably destroy an aim point, further multiplied the effect. The battle group thus established a faster, more efficient power-generation cycle, one that produced—when combined with networks’ ability to identify the “targets that count” in commensurate numbers—an order-of-magnitude increase in the group’s combat efficiency.

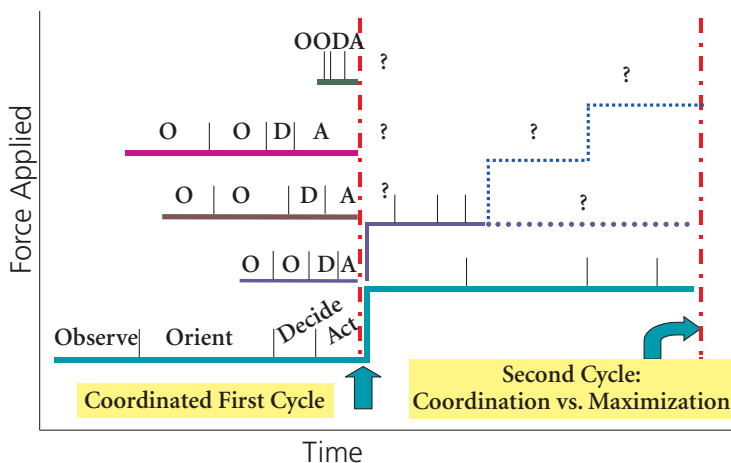
A similar limit emerges in the combined “orient and decide” phase.<sup>7</sup> Better awareness helps us avoid mistakes and use assets more efficiently, but we must still complete a set of physical actions to generate military power. We may have to move an aircraft carrier into range of the objective, plan and brief a mission, fuel and arm aircraft, and launch them. We may also have to deliver follow-on air strikes to achieve an objective. The pace of these actions is determined by the physical capabilities of systems and people; a

This is significant for several reasons. First, the *Nimitz* operation shows that using better equipment, organization, training, and information can shorten power-generation cycles and thus take advantage of network-centric speed and awareness. However, it also indicates that the time required for power generation varies with equipment, training, and organization; that in turn suggests that dissimilar military forces have power-generation cycles of radically different lengths. For example, the length of *Nimitz*'s cycle would differ from that of a squad of SEALs (Navy special operations forces) inserted from a submarine, a cruiser firing Tomahawk land-attack missiles, a squad of Marines in a firefight, or bombers operating from bases in the continental United States.

In a traditional battle, the commander manages the complex interaction among different combat cycles by so coordinating units that their respective "act" phases strike the enemy at the same time or in some prescribed sequence. The more diverse the forces, the greater the coordination problem.<sup>10</sup> The entire effort is held hostage to the speed of the slowest combat cycle, all other units being deliberately kept from achieving their optimum operational tempos so as to mass effects or be mutually supportive. This forgoes additional cycles that might have been applied by quicker-paced forces, and as a result, less power is applied overall (see figure 3). In short, by optimizing mass, we minimize efficiency.

Here is where agility becomes important. Precision and speed permit us to reduce cycle length and thereby increase the pace of operations, but they are insufficient by themselves to create a warfare revolution—or prevent it from backfiring. To deal with changes in the enemy threat or take advantage of emerging battlefield opportunities, we must be able *both* to conduct rapid,

**FIGURE 3  
COORDINATED ATTACK . . . THEN WHAT?**



semi-independent operations *and* to mass forces and effects as required. We must be able to change the mode, direction, and objectives of our actions, just as much as we need to bring speed and precision to targeting.

This agility and the speed and precision it exploits all derive from the amalgam of information, sensors, and communications that constitutes the "information backplane" of network-centric operations. The network permits us to

undertake more actions in a given time, to focus those actions better, and to act and react faster and with more certainty. Yet, these attributes—better, faster, more—still add up to little more than a more efficient form of attrition. How do we make the leap to a level of efficiency that would permit us to break enemies' wills rather than simply grind down their means of waging war?

### EFFECTS-BASED OPERATIONS

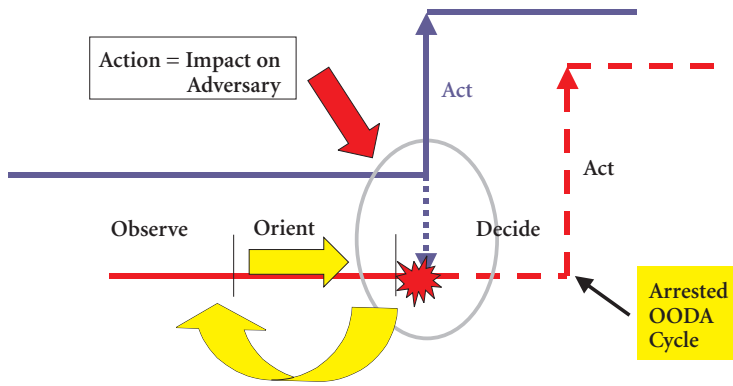
While increasing the number of aim points struck, the volume of fire generated, or the damage inflicted remains a critical, irreducible core of what military forces do, it is only the first step toward combat efficiency. The real payoff in network-centric operations is foreshortening combat by causing the enemy to yield long before his means to resist have been exhausted, or long before additional friendly forces might be expected to arrive in the crisis area. This efficiency revolves around the ability of network-centric forces to undertake precise *effects-based operations*, that is, outcome-oriented activity focused on enemy behavior. The objective of these operations is psychological rather than physical. Hence, they are focused on the enemy's decision-making process and ability to take action in some coherent manner—especially “getting inside his OODA loop” and inducing or exploiting chaos. The knowledge, precision, speed, and agility brought by network-centric operations constitute the price of admission into this realm.

#### *“Getting Inside OODA Loops”*

In our OODA-cycle diagram, any “act” or application of combat power can be seen in two ways. From the perspective of straightforward attrition, it is an effort that attacks, destroys, or in some way degrades the enemy capability to wage war or sustain it. Yet, that same “act” is also a stimulus that enemies “observe” and factor into their decision-making processes. The more significant the action, the greater effect it will have on decisions. This “effect” is a function not solely of how much we destroy but of what and how we attack. If the stimulus is significant enough, the effect may be to force enemies to reconsider their courses of action and, perhaps, begin their decision-making cycles all over again. That is to say, we would disrupt their OODA loops. A succession of such stimuli might not only disrupt a foe's OODA loop but even create a condition of “lockout,” in which the enemy can no longer react coherently (see figure 4).

The requirements for such effects-based operations are stringent. If we were concerned only with attrition, improvement in efficiency would require only increases in the size and frequency of our attacks—that is, the total quantity of power applied. Breaking the will, in contrast, requires putting the right forces on the right vulnerabilities at the right times so as to produce some particular effect.

**FIGURE 4**  
**INTERACTION BETWEEN OODA CYCLES**

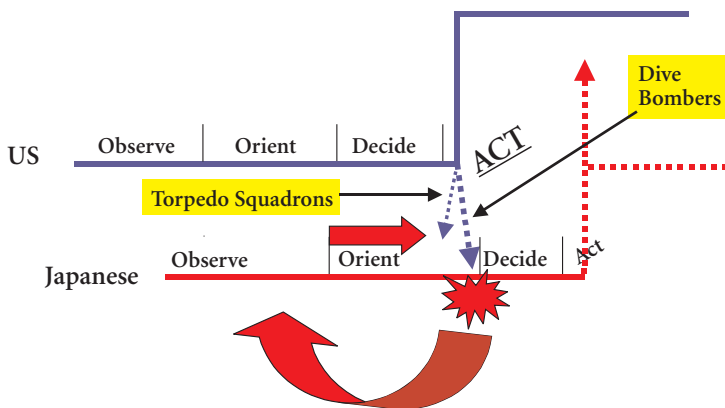


To make matters more difficult, this needs to be done not just to a single enemy OODA cycle, as in a one-on-one fighter engagement, but against the multiple and interacting OODA cycles of different enemy units and forces, which are operating simultaneously at the tactical, operational, and strategic levels of conflict.

A pointed, if serendipitous, example of such a disruption occurred in the battle of Midway in June 1942. Intelligence derived from the

breaking of Japanese codes enabled the Americans to anticipate the Japanese attack, detect enemy carriers before their own were found, and launch an attack first. When the Japanese commander received word of an American carrier in the area—just before he was attacked by carrier-based torpedo planes—he reconsidered a planned attack on Midway, reoriented his effort, and ordered his aircraft rearmed for fleet action. Then, as his planes were being rearmed and his combat air patrol aircraft were engaged in low-level intercepts of

**FIGURE 5**  
**MIDWAY**



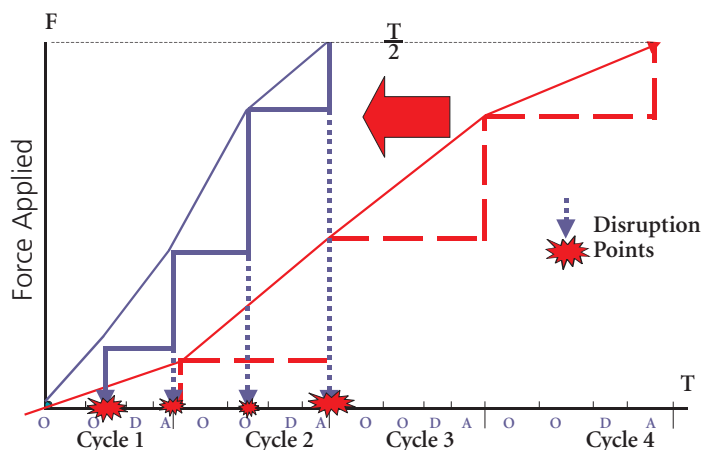
American torpedo planes, the dive-bomber element of the disjointed American attack (in figure 5, the second dotted arrow) struck, catching the Japanese carriers with their decks full of planes and bombs.<sup>11</sup> What happened in the next minutes ended the Japanese attack on Midway and was the turning point in the Pacific War. In effect, the sighting of one ship and a tactically ineffective torpedo-plane attack had collectively, and fortuitously, a

decisive impact on the enemy OODA cycle: they occurred at just the right time and forced the Japanese to begin anew. The challenge for network-centric operations is to repeat this effect reliably, predictably, and at will. How do we do that?

If we compare the Japanese and American combat cycles at the time of the torpedo attack, it becomes evident that the cycles were out of phase with each other. Had they been in phase, American and Japanese strikes would have passed each other in the air and struck empty decks on both sides, without the disastrous consequences for the Japanese—but possibly dire ones for the smaller force of American carriers. But thanks to its intelligence coup, the American side completed its observation, orientation, and decision phases in time for its air-strike “act” to hit the Japanese when they were most vulnerable and before they could initiate a fleet action. The American success rested partly on careful preparation—the intelligence, reconnaissance, and early launch of aircraft—and in part on the serendipity of the poorly (in terms of the plan) coordinated arrival of their strike elements over the target.

To emulate Midway, we must measure the enemy OODA cycle correctly and then coordinate our actions to occur at exactly the right times. This requires not only the “battlespace awareness” that in 1942 enabled the American fleet to launch its strikes first but also knowledge of the enemy necessary to identify and exploit critical junctures.<sup>12</sup> We must then be able to sustain controlled, high-tempo operations. There is a problem here: intelligence simply will not yield such knowledge of the enemy reliably, consistently, or at all levels.<sup>13</sup> How then might network-centric operations enable us to bring about another Midway?

**FIGURE 6**  
**COMPRESSION OF TIME**



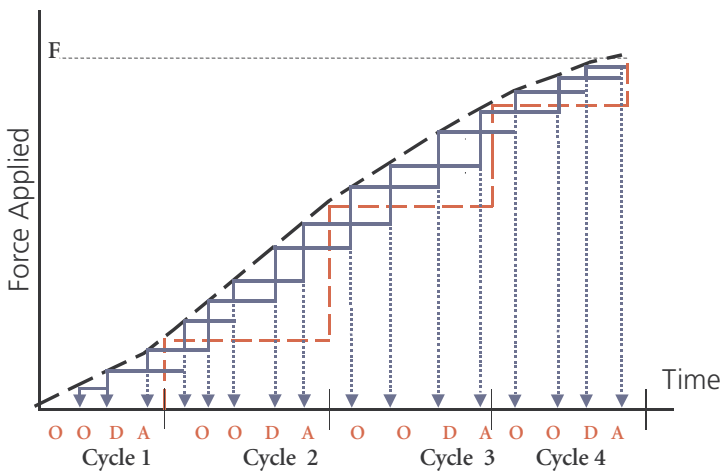
One solution is to multiply the number of opportunities to repeat the Midway serendipity. The more frequent the stimulus, the greater the chance a strike will occur at the right time to obtain the desired effect on the enemy decision-making process. Shortening the length of our overall combat cycle (see figure 6) would multiply the number of impacts on an adversary’s decision making over a given period and increase the likelihood of striking at the “right time” to disrupt the

adversary's cycle. But as we have noted, the power-generation side of the combat cycle can be compressed only so much.

Another approach would be to build on "self-synchronization" and "shared situational awareness" to launch smaller, more numerous operations, each of which could generate a stimulus sufficient to affect the adversary's OODA cycles.<sup>14</sup> The length of the individual unit combat cycles might remain the same, but they could be staggered, overlapped, so as to produce a rapid succession of stimuli. This approach has an obvious limitation: the more we diminish the size of our individual actions, the more vulnerable each will be to defeat in detail. However, with better awareness and better knowledge of the enemy, we can hope to anticipate enemy actions and optimize forces for disruptive effect or for mutual support (see figure 7).

Finally, we could multiply the number of cycles but also compress the time needed to execute each cycle. In essence, we would use our network-centric capability to liberate individual forces to operate at their respective optimum

**FIGURE 7**  
**MULTIPLE OVERLAPPING CYCLES**



combat cycles and by so doing increase the number of OODA cycles we execute. Ideally, the stimuli can be made numerous enough to overwhelm enemies with new developments, forcing them continually to revisit decisions, redirect efforts, and pause for observations, even to the point that they cannot ever take action.

This suggests an analogy very different from that of Midway. Instead of thrusting a rapier into the OODA cycle at precisely the critical time,

we could unleash something akin to a swarm of bees. Even if no single unit has a decisive impact, the overall effect might be to leave the victim swinging helplessly at attackers coming from all directions, unable to mount any coherent defense save retreat. In essence, we would provide so many stimuli that adversaries could no longer act coherently but must constantly recycle: "Does the act that just struck me invalidate the assumptions upon which my currently intended course of action rests? Does it demand a redirection of my effort? Will an



additional attack come, and will it force me into revisiting my plans yet again?" The result would be lockout.

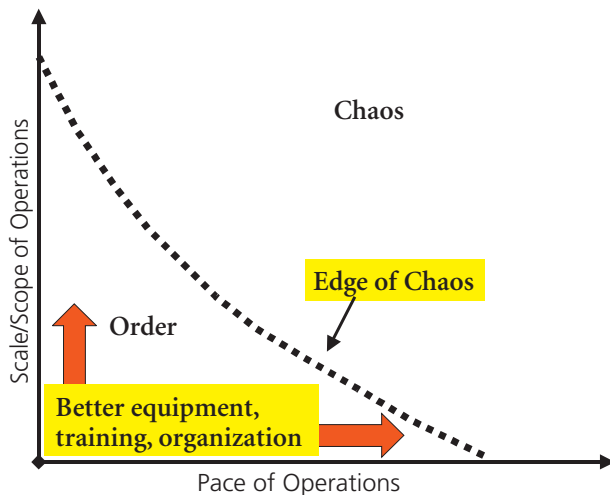
This "swarm" approach poses new challenges. How do we coordinate the swarm so as to achieve concrete military objectives beyond simply interfering—perhaps without success—in the enemy decision-making loop? How do we know when to mass forces or effects so as to avoid their being destroyed one by one? How do we assess the effectiveness of our efforts and then feed the results of these assessments into the next round of "orient," "decide," and "act" phases? Will enemies *know* they have been defeated and cease to resist, or simply continue to swat at the attacks until they can no longer do so—that is, continue a blind attrition war? To be effective, the "swarm" would need to work toward a unified set of military objectives, under a single commander's intent, whereas to achieve sufficiently brief cycle times, its individual elements must be largely self-contained and self-coordinated. In short, our forces would need to become self-synchronized and self-adaptive—but those are key capacities we hope to draw from network-centric operations.

### *Exploiting Chaos*

The principle of chaos in warfare is not new.<sup>15</sup> Clausewitz talks in terms of exploiting the fog and friction of war to drive the enemy into a rout—that is, into a state of chaos.<sup>16</sup> Recent writings on "chaos theory" have drawn a comparison between the concept of chaos in physical systems and its application to warfare.<sup>17</sup> The boundary region between chaos and order is particularly significant, because small inputs or changes in system parameters there can have very large impacts, even causing entire systems to collapse. In military operations, this would equate to creating situations in which relatively small applications of power at the right time have highly disproportionate and potentially decisive impacts. This is particularly significant for expeditionary warfare and forward presence, in that it suggests that a relatively small forward force might exploit chaos to offset what it lacks in numbers.

How do we define this boundary region in militarily useful ways? A simple approach is to define the edge of chaos in terms of the intensity of the operations, specifically the pace and the scale and scope of operations, which can be plotted along the  $x$  and  $y$  axes of a coordinate scale. We can understand intuitively that the more we increase the pace of our operations ( $x$ ), the more difficult they will be to manage. Similarly, the greater the scope and scale of our operations ( $y$ ), the more difficult they will be to control. By extension, we can surmise that at some point along the  $x$  axis lies an operation so rapid that we cannot coordinate it, and that somewhere on the  $y$  axis is an operation (such as a global thermonuclear war) of such size or scope that we lose control of our forces; beyond either of these points

**FIGURE 8**  
**DEFINING THE EDGE OF CHAOS**



we lapse into chaos ourselves (see figure 8). These two points represent transitions from order into chaos. Figuratively, then, a line drawn between these two points is the *edge of chaos*—it defines the limit of our control, and it contains all order-to-chaos transition points.

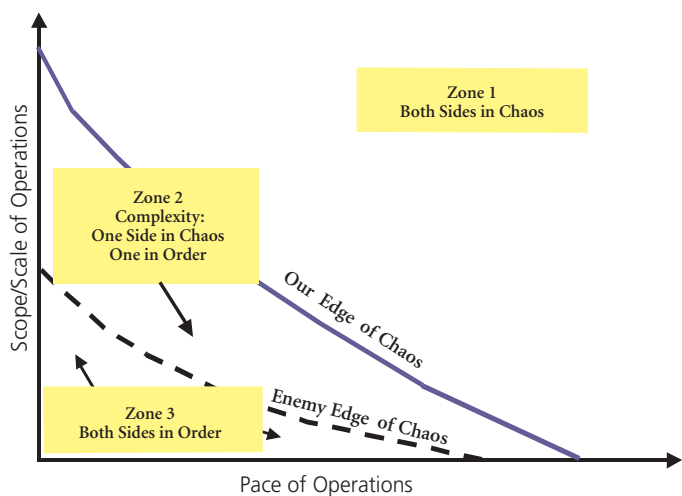
In this context, *chaos* encompasses all military operations that are so rapid or of such scale as to be uncontrollable and that are, therefore, unfocused and incoherent, such as a rout on

a battlefield—“every man for himself.”<sup>18</sup> The opposite is *order*—military operations whose scale, scope, and pace permit them to be controlled, coordinated, and focused on given objectives. Historically, when armies and navies have met in battle, at least one tactical objective has been to drive the enemy force from order into chaos. How can we identify and exploit this operational boundary?

One factor is that the edge of chaos is not fixed. It changes constantly. As the *Nimitz* demonstration underlined, a highly trained and organized force using sophisticated equipment can operate safely at a pace and scale of operations that would push a less well-trained and equipped force into chaos. Better equipment, training, and organization, then, enable us to drive our transition points farther out along the *x* and *y* axes and thereby define new edges of chaos. This also means that the edge of chaos varies from one force to the next, as each comprises different units, differently equipped, manned, trained, and organized. Opposing forces in any battle are therefore likely to have their own, quite different, edges of chaos. These two edges of chaos define three zones. Zone 1 (see figure 9) is the zone of chaos—all the combinations of scale, scope, and pace that neither side would be able to manage. Zone 2 defines a complex, asymmetric region in which the better equipped and trained force can coordinate operations but the other cannot. In Zone 3 is the realm in which both sides can operate comfortably—the zone of order.

By definition, neither side can operate successfully in Zone 1, and neither derives any advantage from operating in a way that permits its enemy an orderly and focused response (Zone 3).<sup>19</sup> In contrast, the boundary region, Zone 2, offers

**FIGURE 9**  
**OPERATIONS ON THE EDGE OF CHAOS**



Focusing precisely on vulnerabilities most likely to drive the enemy into chaos can accelerate this process.

### SELF-SYNCHRONIZATION AND ASYMMETRIC WARFARE

This all leads us to self-synchronized operations, of which a good historical example is the 1805 battle of Trafalgar, in which Admiral Horatio Nelson destroyed the combined French and Spanish fleets. The crux of the action was Nelson's bold movement to break through the French-Spanish battle line in two places and then concentrate his forces on bite-sized portions of it. The basis for success in so risky an undertaking was what could be described as a "cerebral network" among Nelson and his ship captains, his "band of brothers." That network had been formed by more than eight years of combat operations together; Nelson was confident that all of his subordinates would perceive a developing situation in the same way—that is, that they would have a shared situational awareness.<sup>21</sup> He was equally sure that his commanders not only understood his intent but would exploit aggressively any opening in the enemy line accordingly and carry out mutually supportive actions without further direction. For that reason, Nelson could limit his final directive before the battle to the inspiring, but otherwise not very helpful, reminder that "England expects every man to do his duty." Nothing more was needed. The commanders knew what to do.

This contrasted sharply with the situation of the opposing commander, Admiral Villeneuve. His force was larger and in many ways technologically superior, but it lacked any semblance of the cerebral networking Nelson had forged. The French ship captains and subordinate commanders had spent most of the

the disproportionate impacts predicted by chaos theory. It is a regime of inherent asymmetry, in which the less capable side can neither respond in kind nor fail to respond (and be pummeled into submission or confined to preplanned actions, unresponsive to the situation).<sup>20</sup> This can be carried another step. If one side is consistently able to operate beyond the other's edge of chaos, it can induce a state of despair in which further resistance is, or at least appears to be, futile.

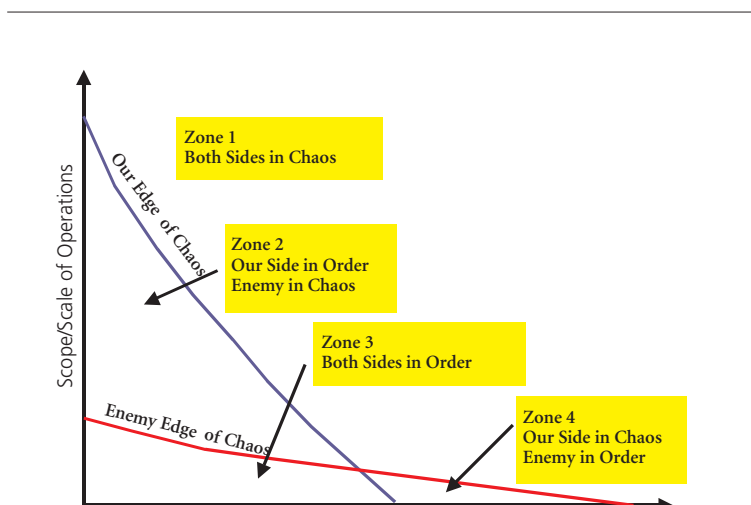
war blockaded in port. They distrusted Villeneuve, even as Villeneuve distrusted his own judgment. Added to this was the problem of coordinating with a Spanish fleet, with which the French had never before operated. The best Villeneuve could do was to form his ships into a conventional eighteenth-century line of battle, foreseeing an engagement in which two ordered, parallel battle lines would pound each other until most of the ships of one side or the other struck their colors, blew up, or sank. When Nelson refused battle on these terms and instead broke through the French-Spanish line, the pace of operation that he thereby forced on the French and Spanish immediately exceeded their ability to cope and invalidated their numerical superiority. Villeneuve largely lost control of his forces and with it the ability to fight a coherent battle. In such conditions his ships, though they fought bravely, could only contribute to the general chaos; a substantial proportion never entered the battle at all.

Network-centric operations can, after a fashion, replicate the cerebral networking of Nelson's band of brothers without the eight years of combat preparation and without the slow tempo of battle at sea that facilitated situational awareness in the early nineteenth century. However, there is a hitch: What would happen if one side's edge of chaos did not lie entirely on one side of the other's but crossed it (figure 10), producing a *second* asymmetric zone, in which the advantages were reversed?

This reversal points to a dangerously misleading assumption underlying much thinking today about the "revolution of military affairs": that the United States will always be technologically superior and thus fight faster and better. In reality, tempo of operations is not solely a function of technology; it is also a function of the centralization of command. One can choose to trade centralized control for speed and scope of operations. This may forgo some of the ability to

mass effects on a specific objective, but if the effect sought derives from the pace and scope of the attacks rather than from the amount of destruction, or from a cumulative impact rather than specific actions, then this trade-off may be acceptable. In other words, one could confront a technologically superior enemy by creating a new asymmetric zone in which small, decentralized units could operate successfully but in

**FIGURE 10**  
**INTERSECTING EDGES OF CHAOS**

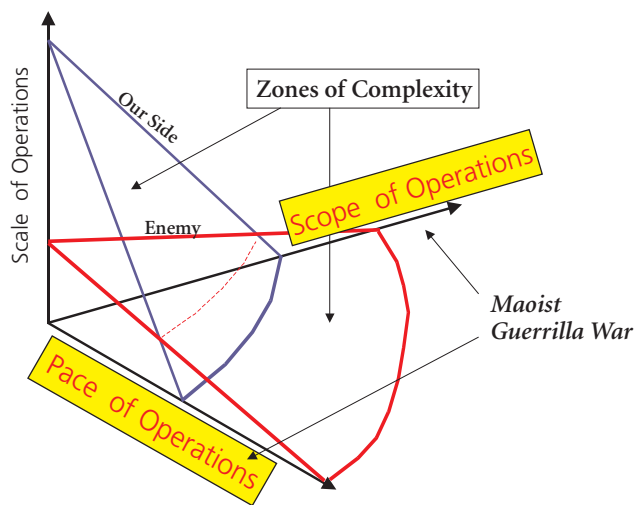


which an opponent using large formations under centralized control could not respond coherently.

The importance of this fourth zone is even more evident if we plot the respective edges of chaos on a graph with three axes (figure 11)—one for pace, one for scale, and a separate orthogonal axis for scope. This presentation highlights two aspects of decentralization: forces can be broken into smaller, self-synchronized units, and they can be dispersed over a wide area to make co-

ordinated and timely response by the other side more difficult. These points correspond rather closely to Maoist theory of guerrilla warfare. Guerrillas use dispersed formations so small that they cannot be targeted effectively by heavier government forces. These bands then conduct many small raids, so rapidly that the raiders are gone before opposing forces can be brought to bear. Since the desired effect, attrition of an opponent's will, depends more on pace and scope than on damage to specific targets, control can

**FIGURE 11**  
**EDGE OF CHAOS—THREE AXES**



remain highly decentralized. This was the essential problem the United States confronted in Vietnam.

These examples imply a new understanding of chaos—that chaos need not mean solely loss of control over one's forces. It could also mean a situation in which the size of forces and delays in generating and using them consistently prevent one side from accomplishing its objectives. How do network-centric operations address this low-tech asymmetry? One way is based on the knowledge and situational awareness brought to bear by the network. If the guerrillas' actions can be anticipated or instantly detected and responded to, much of what they gain by dispersing and decentralizing can be negated. In effect, networking permits the high-tech side to move its edge of chaos out from the *x* and *z* axes of the diagram until decentralization no longer confers any advantage on the guerrillas. Also, whereas by decentralization guerrillas or urban fighters opt for increasing the number and decreasing the size of their operations, a network-centric force might do the same—for example, by resorting to a ground war of small units aided by superior situational awareness. Alternatively,

it could increase its pace, using the network to manage high-speed, complex operations. In each case, networking combined with self-synchronization enables forces to operate as a “self-adjusting complex adaptive system” while retaining the ability to mass superior effects at will.

### A REALITY CHECK

As we gradually build a working concept of network-centric operations, we need to bear in mind some commonsense caveats. Networking is not a universal solution to warfare problems, nor will it change the nature of war. Older forms of warfare are likely to persist alongside the new. Speed will be critical to our success, but numbers and endurance will still count. Situational awareness will multiply our power, but knowing the enemy will be more important than ever. Above all, intelligent adversaries will respond, and the more successful our concept of network-centric operations becomes, the more asymmetrical their responses are likely to be.

But it is not our objective in developing a working concept to provide all the answers. It is simply to identify combinations of new thinking and new things that offer *better* answers to our warfare needs, on as many levels of war as possible, and over as wide a portion of the spectrum of conflict as possible. The measure of our success will be not the quality of the networking or the quantity of firepower we can bring to bear but the effect that networking enables us to have on our would-be enemies in peace and in war.

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### NOTES

1. Observe, Orient, Decide, Act—a cycle used by Colonel John R. Boyd, U.S. Air Force, to characterize fighter engagements and since then applied to the decision-making process in general. See John R. Boyd, *A Discourse on Winning and Losing* (Maxwell AFB, Ala.: Air Univ. Press, August 1987).
2. Walter Morrow, “Technology for a Naval Revolution in Military Affairs,” Second Navy RMA Round Table, Science Applications International Corporation, Tysons Corner, Virginia, 4 June 1997.
3. Ibid.
4. This trend is already evident in the falling unit-price of the Navy Tomahawk cruise missile, from \$1.2 million ten years ago to less than \$700,000 in 1998, to possibly \$300,000 or less before the decade is out—a roughly 50 percent drop every ten years. Daniel Murphy [Rear Adm., USN], “Surface Warfare,” Navy RMA Round Table.
5. The situation is analogous to the triple revolution in guns, armor, and propulsion that marked warship design between 1862 and 1910—that is, from the commissioning of the USS *Monitor* to the first launch of an aircraft from a U.S. Navy ship. That three-fold advance induced a period of trial and error that produced in turn such rapid change in warship design that new units were obsolete within a few years of entering service. It also brought forth Alfred Thayer Mahan and a fundamental rethinking of what navies could do.
6. Boyd.

7. In Boyd's tactical engagement loop, "orient" and "decide" are separated into two phases; however, this distinction becomes problematic in more complex operations, especially at the operational and strategic levels of war. As used here, the "orient" and "decide" phases are considered together, as collectively defining the time necessary to generate the right force to achieve the right effects.
8. The results of the *Nimitz* demonstration are detailed in a two-volume CNA study: Angelyn Jewell et al., *USS Nimitz and Carrier Airwing Surge Demonstration* (Alexandria, Va.: Center for Naval Analyses, 1998).
9. In the *Nimitz* case, the air wing was composed of low-maintenance, quick-turnaround F/A-18s, which could readily fly five or more sorties per day. The carrier air wing started with intense "flex-deck" operations but soon discovered that the flight deck became unworkable; the "edge of chaos" had been reached. It therefore switched to an aggressive concept of cyclical operations that enabled the wing to launch more aircraft while maintaining better order on the flight deck. Interview with Rear Adm. John Nathman, USN, Commander, *Nimitz* Battle Group, Pentagon, 11 February 1999.
10. The problem is especially bad in coalition operations, governed as they are by multiple national rules of engagement.
11. For the Japanese decision process and force-generation cycle at Midway, see Dallas W. Isom, "The Battle of Midway: Why the Japanese Lost," *Naval War College Review*, Summer 2000, pp. 60–100, esp. pp. 72ff.
12. In the Midway example, because the U.S. and Japanese forces were very alike, their OODA cycles would have been roughly similar. In a conflict between two dissimilar forces, that would not be the case, making the adversary's OODA cycle much more difficult to predict.
13. However good the surveillance picture or "battlespace awareness" we generate, the ultimate determinant of the speed and direction of the enemy decision-making cycle is the enemy. Sufficiently fine-grained knowledge of the enemy arises not from sensor data but from analysis based in large part on human-intelligence reporting—which is necessarily sporadic. We cannot, therefore, depend on having the intelligence when we need it or, indeed, on collecting the needed data at all.
14. Note that in each case the total amount of force applied remains constant and that what varies is the way in which that force is applied.
15. The idea of inducing chaos will hardly be a new concept to ground forces, for whom the fundamental challenge is to control very large numbers of "actors" in battle. In the ground context, "breaking the enemy's will to resist" equates to causing the enemy to disintegrate into panicked flight. While this understanding remains operative, the focus of the chaos sought here lies at the operational, even the strategic, level rather than the battlefield.
16. Barry Watts, *Clausewitzian Friction and Future War* (Washington, D.C.: National Defense Univ. Press, 1996), pp. 105ff.
17. Major Glenn James, U.S. Air Force, uses the example of a water faucet that drips with annoying regularity. As the flow of water is increased, the frequency of the drip rises but the regularity remains. However, when the flow is quickened even minutely beyond some definable rate, the drops no longer have time to form, and the drip changes abruptly to a sporadic—that is, chaotic—flow. The very minor increase in flow has caused the physical system to become chaotic. Glenn James, *Chaos Theory: The Essentials for Military Applications*, Newport Paper 10 (Newport, R.I.: Naval War College, 1997), pp. 15–6.
18. It is worth making a distinction here between tactical-level chaos that induces the enemy to take flight and strategic-level chaos that induces irrational behavior by a power with nuclear weapons. Between these two extremes lies a realm in which "shock and awe" can achieve specific effects calculated to support political and military objectives. However, implicit in the idea of effects is a risk-versus-gain calculus that applies to chaos as much as to other effects.
19. In the strategic nuclear confrontation of the Cold War, it was necessary to operate in this zone of order to avoid the risk of an irrational act or an uncontrolled escalation.
20. An example arose in the October 1973 Arab-Israeli War. The Egyptian army's "edge

of chaos” was far inside that of the Israelis. Therefore, the Egyptians were forced to resort to a scripted preemptive campaign. That gave them an initial success in crossing the Suez Canal but left them largely incapable of responding to Israeli counteraction.

21. The two fleets took more than three hours to close. This allowed ample time for the

commanders to observe the enemy line and any gaps in it that they might exploit. The cerebral networking provided a common understanding of how such gaps might be exploited and of how ships might provide mutual support and exploit any further opportunities.



## MILITARY EXPERIMENTATION

### Time to Get Serious

*Andrew F. Krepinevich, Jr.*

In January 1929, the U.S. Navy undertook a major exercise known as Fleet Problem IX, part of a series of exercises conducted by the service between the two world wars. Despite the isolationist mood of America at the time, compounded by tight budgets and arms control constraints, the Navy persisted in conducting these exercises as, among other things, a means for determining the influence upon sea power of continuing rapid advances in aviation technology.<sup>1</sup>

Fleet Problem IX took place off the coast of Panama. Present for the first time in these fleet problems were two ships of radically new design—the aircraft carriers USS *Lexington* (CV 2) and USS *Saratoga* (CV 3). During the exercise, Vice Admiral William V. Pratt, commanding the attacking force, authorized Rear Admiral Joseph Reeves, commanding the *Saratoga* and a

light cruiser, to execute a high-speed run toward the Panama Canal. Reeves then “attacked” the canal with a seventy-plane strike force launched 140 miles from the target.

Following Fleet Problem IX, Admiral Pratt observed, “I believe that when we learn more of the possibilities of the carrier we will come to an acceptance of Admiral Reeves’ plan which provides for a very powerful and mobile force . . . the nucleus of which is the carrier.”<sup>2</sup> The following year, upon becoming Chief of Naval Operations, Pratt directed that carriers be placed in offensive roles in war games and fleet exercises. In such exercises,

*Dr. Krepinevich is executive director of the Center for Strategic and Budgetary Assessments, an independent policy-research institute in Washington, D.C. He is a graduate of the U.S. Military Academy at West Point and of the Naval War College’s College of Naval Command and Staff. Dr. Krepinevich holds MPA and Ph.D. degrees from Harvard University. He is a frequent lecturer and contributor to scholarly journals and the media. His published works include Transforming America’s Alliances (2000), A New Navy for a New Era (1996), and The Army and Vietnam (1986, Furniss Award).*

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involving experimentation with new kinds of equipment, doctrine, and formations, were sown seeds that brought forth the fast carrier task forces that enabled the U.S. Navy to defeat the Imperial Japanese Navy during World War II.

Eight years after Fleet Problem IX, on the north German plain, a new and very different formation appeared in exercises conducted by the German army: the panzer division. The panzer division was a combined-arms formation possessing large numbers of fast tanks with extended ranges; it was centered on a doctrine that called for rapid, deep penetration as a means to achieve quick victory. This represented a dramatic departure from Germany's World War I experience against its principal enemy, France. That conflict had been dominated by slow-moving forces employing heavy firepower and waging a war of gradual attrition.

In the 1937 German maneuvers, after a sixty-mile approach march, the panzer division went into the attack, forcing the enemy to commit its reserves. The following day the panzer division not only broke through the enemy front but penetrated deep into its rear. The enemy position quickly became untenable, and the issue was essentially decided only four days into what had been planned as a seven-day exercise. General Franz Halder, who witnessed the spectacle (and who would become chief of the General Staff a year later), was stunned by the "fluid mobility" of the panzer operations.<sup>3</sup>

Many other exercises were conducted during the 1920s and 1930s by the German military. They included experiments not only in mechanized warfare but with radio communications schemes and the use of aircraft to provide reconnaissance and close air support for rapidly moving ground forces. These exercises were indispensable in enabling the German high command to develop a devastating new form of land warfare known as *blitzkrieg*—lightning war.

Today, the U.S. military finds itself in a circumstance somewhat similar to those that confronted the two military services mentioned above. As in the interwar era, rapidly progressing technologies have emerged, creating a military revolution ("revolution in military affairs," in Pentagon speak) that will produce dramatic changes in the instruments of war and how military operations are conducted. But as with naval aviation and mechanized ground operations seventy years ago, it is not yet clear how this revolution will play out.

#### **THE RISK OF STAYING ON OUR CURRENT PATH: POWER PROJECTION**

Despite all the uncertainties the U.S. military must confront in preparing for the future, two things seem certain. First, the incentive is high for would-be adversaries to present the American military with challenges very different from those

that confronted U.S. forces during the 1991 Gulf War. Second, the diffusion of military technologies and the rapid progression of military-related technologies will offer such adversaries the means to achieve this goal. Their prospects are particularly good with respect to traditional power-projection operations, which form the core of the current U.S. two “major theater war” defense posture.

This “two war” posture is founded on the nation’s ability to project power rapidly and decisively to threatened regions around the globe. The Defense Department’s last Quadrennial Defense Review, conducted in 1997, concluded that “it is imperative that the United States now and for the foreseeable future be able to deter and defeat large-scale, cross-border aggression in two distant theaters in overlapping time frames.”<sup>4</sup> Along these lines, the Joint Chiefs of Staff’s vision statement, *Joint Vision 2010*, declared that “power projection . . . will likely remain the fundamental strategic concept of our future force.”<sup>5</sup>

However, the U.S. military’s accustomed method of deploying and sustaining air and ground forces at or through ports and airfields is almost certain to be jeopardized by the growing proliferation of national and commercial satellite services and of missile technology. Growing access to satellite services will allow even rogue states to monitor U.S. deployments into forward bases and (unless one makes heroic assumptions regarding the effectiveness of missile defenses) hold them at risk through the employment of large numbers of ballistic and cruise missiles. Senior U.S. military leaders have already voiced strong concern over the nation’s ability to deal with such a contingency. General Ronald Fogleman, when Air Force Chief of Staff, observed that

saturation ballistic missile attacks against littoral forces, ports, airfields, storage facilities, and staging areas could make it extremely costly to project U.S. forces into a disputed theater, much less carry out operations to defeat a well-armed aggressor.

Simply the threat of such enemy missile attacks might deter U.S. and coalition partners from responding to aggression in the first instance.<sup>6</sup>

As Chief of Naval Operations, Admiral Jay Johnson expressed very similar concerns when he declared,

Over the past ten years, it has become evident that proliferating weapon and information technologies will enable our foes to attack the ports and airfields needed for the forward deployment of our land-based forces.

I anticipate that the next century will see those foes striving to target concentrations of troops and materiel ashore and attack our forces at sea and in the air. This is more than a sea-denial threat or a Navy problem. It is an area-denial threat whose

defeat or negation will become the single most crucial element in projecting and sustaining U.S. military power where it is needed.<sup>7</sup>

Perhaps most revealing, however, are the comments of a retired Indian brigadier general who observed that future access to forward bases

is by far the trickiest part of the American operational problem. This is the proverbial “Achilles’ heel.” India needs to study the vulnerabilities and create covert bodies to develop plans and execute operations to degrade these facilities in the run up to and after commencement of hostilities. Scope exists for low cost options to significantly reduce the combat potential of forces operating from these facilities.<sup>8</sup>

According to a recent Defense Science Board Study, development by a regional power of this kind of anti-access capability by 2010 is certainly plausible, even given the relatively severe resource constraints under which many third-world militaries must operate.<sup>9</sup> A commander in chief of U.S. forces in Korea has declared that the problem of forward base access is not a problem for the U.S. military of 2010 but one that exists in embryonic form in Korea *today* and will only worsen over time.

As potential adversaries look for ways to deal with U.S. military preponderance, they seem to have little inclination to create their own versions of the Iraqi military as it existed at the time of the Gulf War. Iran, for example, seems far more interested in fielding anti-access systems—such as ballistic and cruise missiles, antiship cruise missiles, submarines, and advanced antiship mines—than such military systems as tanks and combat aircraft that proved largely ineffective for the Iraqis in 1991.

Assessing the emerging threats to U.S. power-projection forces, the National Defense Panel unanimously agreed upon the need to “radically alter the way in which we project power.”<sup>10</sup> The panel concluded that the U.S. military must develop the capability to execute the following missions (among others) within the next decade: inserting and extracting forces in the absence of forward bases; resupplying forward forces through airlift and sealift operations when access to forward ports and airfields is at risk; seizing and controlling key terrain (including urban areas) if friendly ground forces must operate dispersed; and achieving air superiority against an enemy’s missile force.<sup>11</sup>

#### MILITARY EXPERIMENTATION: PAST AS PROLOGUE

In the coming years the U.S. military will likely encounter challenges very different from those it has faced in the past. There is enormous uncertainty, however, with respect to how it should position itself to deal with them. What military systems, both existing and potential, will be needed? What prospective operational concepts will prove effective, and which will not? Will new forms of

military organization be required, analogous to the fast carrier task forces and panzer divisions that transformed warfare in World War II? Will different kinds of people possessing different skill sets than those in today's force be needed? These and other such questions require answers if America's military is to play its role in extending the post-Cold War era into a Long Peace.

Unfortunately, the answers to these questions are difficult to come by. Moreover, barring a dramatic increase in projected defense budgets, the Defense Department will have to prepare for these challenges with roughly the resources

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*The current DoD approach to experimentation stands in stark contrast to the sense of urgency that has historically characterized successful military revitalization.*

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that it has today, and perhaps less. Simply put, the Pentagon cannot afford to "think rich" about preparing for emerging challenges; instead, it must "think smart." It cannot build a military for every prospective threat, nor can it afford

to proceed with a modernization program that is oriented to meeting today's challenges but will prove ineffective against those that are emerging.

Yet the Pentagon may be doing precisely that when it undertakes large-scale production of a new armored combat system, aircraft, or class of ships without a good understanding of how the new weapon will compete against tomorrow's threats. For example, with respect to power projection, how does the Air Force plan to deploy its new F-22 fighters to forward bases against the kind of theater-denial forces described by General Fogleman, or to employ the fighter to achieve air superiority against an enemy's missile force? How does the Army plan to deploy and sustain its heavy, digitized divisions in the absence of forward-base access? How does the Navy plan to move its carrier battle groups safely through narrow straits so as to influence the battle ashore, given that the range of the F/A-18E/F carrier-based aircraft it is buying is inferior to that of the A-6 attack aircraft being replaced? Or does the U.S. military need to begin fielding very different kinds of systems, emphasizing different performance characteristics (such as extended-range, precision, and stealth), as outlined in the report of the National Defense Panel?<sup>12</sup> Experimentation—at both the joint and service level—provides an indispensable means for answering these questions and, in so doing, for determining the mix of new and legacy (that is, existing) systems required to operate effectively against future threats.

Military experimentation is one of the keys to defense planning in an era of high uncertainty and rapid technological change. Experimentation with innovative operational concepts that employ emerging military systems and radically new force structures has historically been an essential ingredient to preserving, or gaining, advantages in military capability. For example, the twenty-one large-scale fleet problems undertaken in the 1920s and 1930s were crucial to

developing the principles, doctrine, trained personnel, defense-industrial base, and systems mix that enabled the fast carrier task forces to supplant the battleship-dominated fleet during World War II. Similarly, the numerous field exercises conducted by the German military in that same time frame were indispensable prerequisites to the highly coordinated, mechanized air-land forces and operations that achieved the rapid conquest of France.

### THE NEED FOR MILITARY EXPERIMENTATION

Military experimentation at the operational level (at which military campaigns are waged) confers several critical benefits, both for defense planners and for those concerned with fiscal accountability.

*Reducing Uncertainty as to How Best to Meet Emerging Threats.* Take the problem of projecting power in the absence of forward bases. Joint experimentation would permit military leaders to try out different operational concepts for deploying forces into a theater, conducting extended-range precision strikes, determining whether achieving secured access to forward bases is feasible, and deciding how to sustain the operation for a period sufficient to accomplish its objectives. Through such experiments commanders can develop a far superior feel for what operational concepts might succeed in such a threat environment, and for the force mix and systems needed to support such operations. Equally important, experimentation enables military leaders to identify force elements and modernization plans that are likely to diminish in value over time. This proved to be the case with the blitzkrieg; experimentation enabled the German military to work through the coordination problems associated with fast-moving mechanized formations, other ground formations, and supporting air units.

*Determining the Proper Mix of Emerging and Legacy Systems.* Experimentation also assists military organizations in determining what new systems and capabilities will be required, what legacy systems and capabilities should be sustained, and what combination of the two should be established. The Germans, for instance, used a series of exercises to experiment with different panzer-division designs. They found their initial organization was far too “tank heavy” in proportion to the other elements, such as artillery and engineers; consequently, the number of tanks was reduced by 50 percent, and the proportion of certain supporting forces (such as engineers) was increased. Finally, many supporting elements were motorized to enable them to support the tanks’ rapid advances better. In short, these exercises proved critical to the Germans’ ability to determine the proper mix of new (panzer, airborne, radio communications, reconnaissance and attack aircraft) and existing (artillery, engineers, logistics) capabilities.

*Creating Options for the Future.* Experimentation that identifies new forms of military operations and new force elements can permit the military to exercise those options quickly when the threat emerges. For example, in the early 1960s the U.S. Army conducted extensive experiments to assess the potential of air-mobile and air-assault operations. These experiments gave the Army an important option when, in the summer of 1965, it was ordered to send large forces to Vietnam. The first division selected for deployment was the newly formed 1st Cavalry Division (Airmobile). Similarly, the U.S. Navy that entered World II was, first and foremost, a battleship navy. However, through its Fleet Problems the Navy created the option of carrier-based operations, a capability that it pursued quickly following Pearl Harbor.

*Complicating the Planning of Would-Be Enemies.* Importantly, experimentation that enables the U.S. military to “buy options” can also complicate the planning of potential adversaries. For example, in the 1930s the Imperial Japanese Navy had to plan counters against a U.S. Navy that was exploring a range of options for naval aviation, including both large (*Saratoga* and *Lexington*) and small (USS *Ranger* [CV 4]) carriers, the use of seaplanes, airships, and land-based aircraft, and proposals for a class of “flying-deck” (partial flight-deck) cruisers. By compelling a would-be adversary to stretch resources thin in order to cover all possible options, or to concede that there are options for which it cannot prepare a counter, experimentation can play an important role in dissuading other militaries from entering into a competition in the first place.

*Avoiding Legacy-Force Lock-In.* Experimentation through war games, simulations, and field exercises provides a means of avoiding the purchase of large numbers of legacy systems under the assumption that since they are important today, they will remain so for the foreseeable future. For example, German military exercises led many senior leaders to conclude that horse cavalry had a very limited future.

*Avoiding False Starts.* Experiments can help military organizations avoid “buying in” too early during a period of transformational change in military capabilities. The U.S. Navy’s first carrier designed from the keel up, the *Ranger*, was commissioned in 1934. Although some Navy leaders had pressed for construction of five *Ranger*-class carriers, game analysis and fleet problems soon indicated that the *Ranger*, at roughly fourteen thousand tons, was far too small to meet many of the demands of future fleet operations. As it turned out, the *Essex*-class ships that formed the backbone of the Navy’s fast carrier task forces in World War II displaced nearly twice as much tonnage.

*Avoiding Dead Ends.* Military systems or capabilities that appear promising, even revolutionary, sometimes fail to live up to their promise. In this case, the issue is not to avoid “buying in” too early; rather, it is to avoid buying in at all. Again, the experience of the U.S. Navy during the development of naval aviation in the interwar period provides an example of how rigorous experimentation and operational exercises can help avoid accumulating military capabilities that lead not to transformation but to dead ends. In 1930 the Navy’s Bureau of Aeronautics proposed the construction of eight ten-thousand-ton flying-deck cruisers. The ships—half cruiser and half flight deck—were subjected to war game experiments at the Naval War College and to some experiments with surrogates in the fleet. The results painted a distinctly unfavorable picture of the hybrid ship, and it sank beneath the Navy’s programmatic waves, never to be heard from again.

*Identifying and Solving Practical Problems.* Planning exercises and war games can go only so far in identifying new forms of operations and system requirements. As with many things, the devil is in the details. For example, war games conducted at the Naval War College in the early 1920s indicated the importance of maximizing the aircraft complements and sortie rates of carriers.<sup>13</sup> It was not, however, until a prototype, the USS *Langley* (CV 1), was available that the Navy could determine precisely *how* this goal was to be achieved. Under then-Captain Reeves, the *Langley* conducted a series of experiments that led to such innovations as crash barriers and the deck park, which enabled the ship to more than double its aircraft complement and dramatically increase its sortie rate. Similarly, the German army’s field exercises and operations in the late 1930s enabled it to solve critical issues with respect to fuel and spare parts for its panzer formations and to determine how the German air force, the Luftwaffe, could provide highly mobile reconnaissance and fire (close air) support. Experiments like these were essential to both militaries’ efforts to transform to dominate emerging conflict environments.

#### EXPERIMENTATION: TIME TO GET SERIOUS

How well is the Defense Department doing in its efforts to secure the benefits of experimentation to support its transformation efforts? To answer this, we must assess how well the Pentagon’s efforts match the characteristics of successful experimentation efforts in earlier periods of military transformation. To succeed, a Defense Department experimentation initiative must reflect the following characteristics.



### *Vigorous*

Experiments must be conducted on a frequent basis, and funding, forces, and equipment (including prototype equipment and surrogates) must be made available to support them. Unfortunately, the Defense Department leadership's rhetoric asserting the need for military transformation and experimentation has not been matched by the requisite urgency or resources.

For example, the establishment of Joint Forces Command for the purpose of undertaking joint experimentation was not a Defense Department initiative. Rather, it was the consequence of congressional leadership and the recommendations of an independent panel of experts.<sup>14</sup> The Pentagon's budget for Joint Forces Command's experimentation efforts stands at a meager forty-one million dollars for fiscal year 2000. The Clinton administration's request for FY 2001 was for forty-nine million. Such funding levels are at least an order of magnitude lower than what is required to conduct vigorous and sustained field experiments at the operational level. In 1999, for example, *one* service, the Air Force, spent more than sixty million dollars—over 50 percent more than the Joint Forces Command's *entire budget* for joint experimentation—on *one* exercise. According to the general in charge of JFC's experimentation efforts, the command is able, owing to funding shortages, to explore only half the warfighting concepts it has identified.<sup>15</sup> The first major exercise, or "major joint integrating experiment," is not scheduled to occur until 2004, some six years after the command was charged with the responsibility for joint experimentation.

This is not to say that a vigorous program of experimentation would necessarily involve enormous sums of money. To be sure, it would probably involve an investment of several billion dollars a year. However, the investment would be relatively modest—less than 1 percent of the defense budget—while the payoff, in terms of improved military effectiveness and efficiency, through avoiding such funding sinkholes noted above as premature lock-in, false starts, and dead ends, promises to more than justify it.

In any event, the current Defense approach to experimentation stands in stark contrast to the sense of urgency that has historically characterized successful military revitalization. Consequently, it is difficult to conclude the department's effort to date represents a serious intention to exploit the potential of experimentation to support and inform military transformation.

### *Enduring*

Experimentation must be an enduring element of what the U.S. military does, as thoroughly institutionalized as forward-presence operations and training activities. Here certain services deserve credit for attempting to develop long-term approaches to experimentation. The Marine Corps, for example, has sustained a

series of exercises and experiments under the rubric of SEA DRAGON, which includes HUNTER WARRIOR, URBAN WARRIOR, and CAPABLE WARRIOR. The Marines apparently intend to pursue these experiments on an enduring basis, as a means for preparing to meet emerging challenges while looking for ways to exploit advances in technology to support future operations.

The Marines also have explored innovative ways to surmount the lack of emphasis and resources accorded to such enterprises by senior Defense Department leadership. For example, they have identified urban control and eviction operations as being key elements of the post-transformation operational environment. They immediately confronted the fact that the “combat towns” on U.S. bases, while excellent for training small units in basic tactics, do not offer the complexity or the communications interferences that real cities do. The National Defense Panel recommended that a Joint Urban Warfare Center be established for training and experimentation in an urban environment, but the Defense Department declined to act. Absent such a facility, the Marines have tried to conduct small-scale exercises in actual urban areas. One of their more innovative efforts addresses the problem of close air support. In the absence of a true urban-warfare training facility, the Marines commissioned the construction of an Urban Close Air Support Facility at their air station in Yuma, Arizona, comprising 167 buildings constructed from shipping and cluster-bomb containers. The buildings of this jerry-rigged urban landscape range in size from one to five stories and are configured in various shapes. In cases such as this, it appears that experimentation is being sustained almost in spite of senior Defense Department levels.

### *Comprehensive*

Experimentation must take place at all levels (tactical, operational, and strategic) of warfare, and also among all principal organizations involved, to include all the services and, where appropriate, other governmental and nongovernmental elements. As asserted above, such experimentation implies a level of effort on the part of the Defense Department that simply does not as yet exist. To date, experimentation has been heavily weighted toward the tactical level of warfare. While such experimentation is desirable, it must be informed by how military organizations believe they will have to act at the operational level.

For example, a recent Joint Forces Command simulation involved attacks on critical mobile targets, such as self-propelled ballistic and cruise missile launchers. However, the specifics of how the military might accomplish this task are greatly influenced by considerations at the operational (and strategic) level. Consider, for example, how the experiment’s conduct would change under the

assumption that forward bases were either unavailable or had been placed at unacceptable risk (perhaps by the very missile forces that were the target of U.S. operations). In sum, experimentation that focuses on the tactical level of warfare without the context of the situation at the operational level risks arriving at irrelevant or impractical solutions.

### *Focused*

Experimentation must be aimed squarely at the post-transformation challenges and opportunities at the operational level of warfare. While experimentation must be comprehensive, history indicates that its principal focus should be

meeting challenges—or exploiting opportunities—at the campaign level. Furthermore, experimentation must be directed at preparing for the next war, not at becoming more

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*Planning exercises and wargames can only go so far. . . . As with many things, the devil is in the details.*

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proficient at waging the last. As we have argued, if these factors are not taken into consideration, experimentation, no matter how vigorous, well funded, and enduring, may arrive at some very good solutions to the wrong problems. This is all too often the case with current experimentation.

Again, consider the recent simulation conducted by Joint Forces Command on engaging critical mobile targets. It assumed the availability of forward bases to support such operations, as was the case during the “Great Scud Hunt” of the Gulf War. Similarly, the Air Force’s Joint Expeditionary Force Experiment 99 involved the rapid forward deployment of an Air Expeditionary Force (AEF) to fixed forward bases. This was done despite a growing chorus of military leaders—including an Air Force Chief of Staff—and blue-ribbon expert advisory groups cautioning that operating out of such bases will be a risky proposition until enemy missile forces have been neutralized. Similarly, the Army, with its emphasis on deploying a brigade to a forward base within ninety-six hours, may, like the Air Force, find that its vision serves only to get itself to the enemy missile ambush point (that is, a fixed forward base) more quickly.

On a brighter note, the Marines, through experiments like HUNTER WARRIOR, are attempting in a small way to confront post-transformation challenges at the operational level: “How do we sustain our forces in a world that will feature fewer and fewer overseas land bases and where a large build-up of supplies and equipment ashore may be impractical because of geographical, political, or threat conditions?”<sup>16</sup> The Navy’s Fleet Battle Experiment “Foxtrot,” which explored maritime operational concepts in an area-denial threat environment, is a significant step in the right direction. The Air Force has taken some positive, albeit small, initiatives as well. In 1995–96 it sent three specially created AEFs to unimproved airfields in

Bahrain, Jordan, and Qatar. For its part, the Army has war-gamed the forward-basing problem (although it has not yet conducted experiments based on the insights its games produced regarding the anti-access challenge). These are modest steps, to be sure, but ones that could be encouraged by a comprehensive Defense Department effort to exploit experimentation in support of transformation.

### *Both Service-Level and Joint*

The U.S. military plans to fight as a joint force, one that draws upon all the services' capabilities. This makes sense, as modern technology has enabled each of the services to operate far outside its traditional battlespace—and into the battlespaces of the other services. Joint experimentation should therefore encourage a spirited, though friendly, competition among the services to determine the proper mix of capabilities. To its credit, the Army has sought to expand the major exercise on urban operations it planned for September 2000—now known as the Joint Contingency Force Advanced Warfighting Experiment, or MILLENNIUM FORCE 2000—to include participation from the other three services as well as the staff of Joint Forces Command. Once again, this represents a bottom-up approach by the services, as opposed to top-down encouragement from senior Defense Department leaders.

Certainly, there are operations or campaigns that one service may dominate, such as antisubmarine warfare, long-range precision strike, and space control. Here, service experimentation might assume primacy over joint experimentation. However, given current and projected technology trends, such cases at the operational level will likely become increasingly rare.

### *Exploited in Developing Future Requirements*

It goes almost without saying that the insights and lessons derived from experimentation must be harvested if innovation and transformation are to succeed. Focusing on post-transformation challenges and opportunities helps to ensure that the military is addressing the right questions with respect to future warfare and thus can get the right answers with respect to emerging requirements. These insights mean little, however, unless they actually influence the way requirements are determined, budgets are shaped, resources are allocated, institutions are adapted, and forces are developed.

At present it is unclear how this is to be accomplished. Even if one assumes a robust level of service and joint experimentation focused on emerging challenges, it is not clear how the insights will be translated into new requirements. As one senior general officer has put it, “You fund these things and do an experiment and you find out great things, but then [do] you have to wait another two years or so before you get it into the normal budget process?”<sup>17</sup>

Indeed, in recent years both the Defense Department's Planning, Programming and Budgeting System and the Joint Chiefs' Joint Requirements Oversight Council (with its "joint warfighting capabilities assessments" approach) have seemed incapable of effecting significant changes in service budget shares or in program focus, despite the declared determination of Secretary of Defense William S. Cohen to transform the U.S. military.<sup>18</sup> Promising new capabilities or force elements—such as unmanned combat aerial vehicles, moving-target-indicator satellites (such as Discoverer II), the arsenal ship, Strike Force, the Deep-Strike Brigade, the STREETFIGHTER littoral operational concept, and the Trident SSBN conversion to conventional missile carriers—have been terminated, delayed, or jeopardized. Yet support for such programs as modernizing tactical air and heavy divisions continues unabated, even though it is far from clear these would fare well in an anti-access power-projection environment.

If the Defense Department is to meet emerging challenges in such a way as to preserve the current level of national security, it will have to effect significant changes in its approach to military experimentation; specifically, it will have to increase dramatically the priority accorded to experimentation. At present, the department's effort is poorly focused and severely underfunded. The potential gains to be expected from a properly directed and funded experimentation effort are clear. To see the payoff of successful military transformation, and, by extension, the importance of a well-designed program of experimentation, one has only to look at how the blitzkrieg upset the military balance in Europe and how the U.S. Navy's fast carrier task forces turned the tide in the Pacific during World War II. The potential costs of continuing along the current path are clear as well. They include investing in false starts and dead ends, arriving at the right solutions to the wrong threats, and perhaps ultimately paying a price in jeopardized security interests, national treasure wasted, and the lost lives of young American men and women in uniform.

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#### NOTES

1. The Washington Naval Treaty of 1922, among other things, banned the construction of battleships and limited carrier tonnage among the major naval powers. In addition, in 1928 the United States signed the Kellogg-Briand Pact renouncing war.
2. Clark G. Reynolds, *The Fast Carriers* (Annapolis, Md.: Naval Institute Press, 1968), p. 17; and "Remarks by Commander Black Fleet, W. V. Pratt," *Fleet Problem IX*, "Report of the CINC, U.S. Fleet," National Archives Publication M964, cited in Robert L. O'Connell, *Sacred Vessels: The Cult of the Battleship and the Rise of the U.S. Navy* (Boulder, Colo.: Westview, 1991), p. 285. Pratt flew his flag from the *Saratoga* on the return cruise, "partly as a badge of distinction, but most

- because I want to know what makes the aircraft squadrons tick.”
3. Robert M. Citino, *Path to Blitzkrieg* (Boulder, Colo.: Lynne Rienner, 1999), p. 241.
  4. *Report of the Quadrennial Defense Review* (Washington, D.C.: Department of Defense, May 1997), p. 12.
  5. U.S. Joint Chiefs of Staff, *Joint Vision 2010* (Washington, D.C.: Department of Defense, n.d.), p. 4.
  6. Bill Gertz, “The Air Force and Missile Defense,” *Air Force Magazine*, February 1996, p. 72.
  7. Jay Johnson [Adm., USN], “Anytime, Anywhere: A Navy for the 21st Century,” U.S. Naval Institute *Proceedings*, November 1997, p. 49.
  8. V. K. Nair [Brigadier, Indian Army], *War in the Gulf: Lessons for the Third World* (New Delhi: Lancer International, n.d.), p. 230.
  9. Defense Science Board, *Final Report of the Defense Science Board Task Force on Globalization and Security* (Washington, D.C.: Office of the Under Secretary of Defense for Acquisition and Technology, December 1999), p. vi.
  10. The National Defense Panel, *Transforming Defense: National Security in the 21st Century* (Washington, D.C.: n.d., December 1997), p. 33.
  11. *Ibid.*, p. 35.
  12. *Ibid.*, pp. 44–8.
  13. A sortie is one mission flown by one aircraft.
  14. National Defense Panel, pp. 68–72.
  15. William H. McMichael, “Joint Experiment in Expeditionary Force,” *Air Force Magazine*, January 2000, pp. 46–50.
  16. Senate Armed Services Committee, Emerging Threats and Capabilities Subcommittee, statement of John E. Rhodes [Lt. Gen., USMC], “Concerning Marine Corps Experimentation Efforts,” 20 October 1999.
  17. McMichael, pp. 46–50.
  18. See M. Thomas Davis, *Managing Defense after the Cold War* (Washington, D.C.: Center for Strategic and Budgetary Assessments, 1997).

# TRANSFORMATION AND THE NAVY'S TOUGH CHOICES AHEAD

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## What Are the Options for Policy Makers?

*Ronald O'Rourke*

**A**fter a decade of making painful choices and implementing wrenching changes, it now seems that policy makers face another set of potentially far-reaching decisions concerning the future of the Navy. These new decisions, which are driven in large part by a significant apparent mismatch between current programs and potential resources, could significantly affect the structure and capabilities of the Navy over the next twenty years or more. Some of the most significant of the new choices concern the concept of military transformation: What does it mean for the Navy? What might be involved in implementing it?

There are many ways to explore this issue. This article begins by focusing on

*Mr. O'Rourke is a Phi Beta Kappa graduate of the Johns Hopkins University, from which he received his B.A. in international studies, and a valedictorian graduate of that university's Nitze School of Advanced International Studies, where he received his M.A. in the same field. Since 1984, he has been a naval analyst for the Congressional Research Service of the Library of Congress. In 1996, he received a Distinguished Service Award from the Library of Congress for his service to Congress on naval issues. Mr. O'Rourke is the author of several journal articles on naval issues and is a past winner of the U.S. Naval Institute's Arleigh Burke essay contest. This article is adapted from an address delivered to the Current Strategy Forum at the Naval War College in June 2000.*

*The views expressed in this article are those of the author and not necessarily those of the Congressional Research Service or the Library of Congress.*

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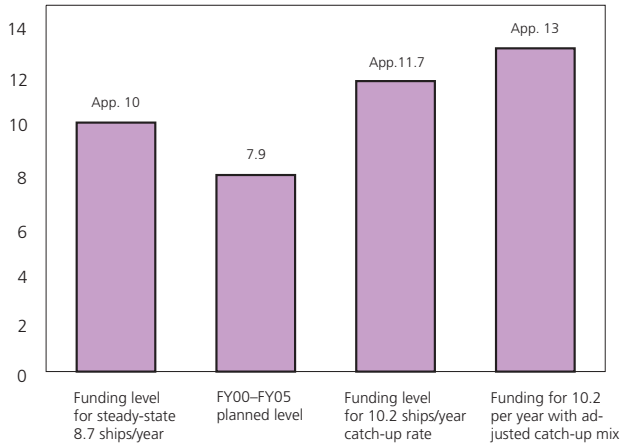
the balance between program goals and potentially available resources. It then presents four general options for future U.S. naval forces that arise from this balance. The discussion concludes by examining possible elements of a strategy for policy makers to implement the fourth and least-defined of these options—the transformation of U.S. naval forces in a manner more rapid and extensive than now planned.

### WHERE WE ARE: THE BALANCE BETWEEN PROGRAMS AND RESOURCES

Policy makers cannot develop or assess options for future naval forces until they first assess where the Navy currently stands, and from a programs-versus-resources perspective, the first thing to be said about the current

**TABLE 1**  
**ANNUAL FUNDING FOR SHIP PROCUREMENT**

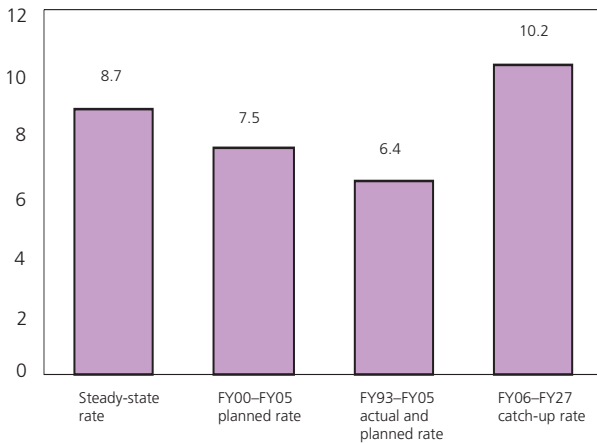
For 310-ship Navy, in bil. of \$FY01



Prepared by Ronald O'Rourke, November 2000

**TABLE 2**  
**SHIP PROCUREMENT FOR 310-SHIP NAVY**

Average annual number procured



Prepared by Ronald O'Rourke, November 2000

situation is that the Navy's current programs collectively appear to be significantly larger than its budget.

Take, for example, just one portion of that budget—the shipbuilding account, which is intended to support the currently planned fleet of about 310 ships. (This figure includes fifty-five attack submarines, up from fifty in the 1997 Quadrennial Defense Review.) The shipbuilding account currently provides an average of about \$7.9 billion per year for actual procurement of new ships and procures a mix of about 7.5 ships per year (see tables 1 and 2). Increasing the ship-procurement rate to about 8.7 ships per year—the steady-state rate for a 310-ship Navy—and adjusting the mix of ships procured to reflect the planned mix of ships in the 310-ship plan would require the shipbuilding account to be increased by about two billion dollars per year. A bit less than four billion dollars in additional funding per year would be needed to achieve and maintain a procurement rate of 10.2 ships per year, which is what would be needed after fiscal year (FY) 2005 to work off the backlog of deferred



ship procurement that has accumulated relative to the steady-state rate since fiscal 1993. About five billion dollars in additional funds per year might be needed to adjust the mix of these 10.2 ships to compensate for the fact that the ships procured since the early 1990s have included a less-than-proportionate share of submarines, which are more expensive than most other types of ships.<sup>1</sup>

That would be two billion to five billion dollars in additional required funding per year—for just one of the Navy’s appropriation accounts. Other individual Navy accounts would not require nearly as much additional money to fund fully, but it appears that several program areas could easily absorb increases of from several hundred million dollars to more than a billion dollars a year if the programs in these areas were to be more fully funded.

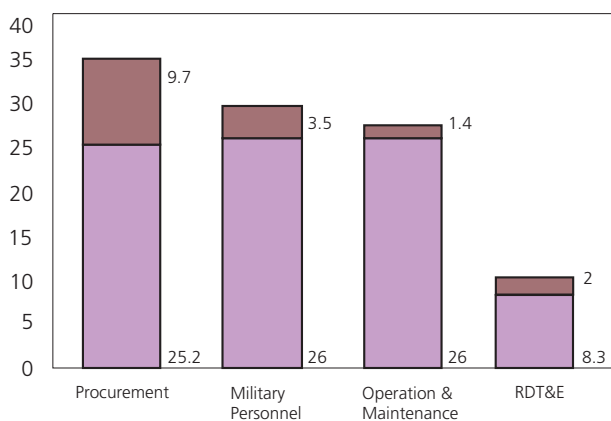
The “Procurement, Marine Corps” account, for example, has a steady-state funding requirement of about \$1.2 billion a year. The FY 2001 budget returns this account to about that level, but because this account was funded at about one-half of that level for several years, the Marine Corps states that it must now increase this account to about \$1.8 billion a year—an additional six hundred million dollars for each of the next several years. Similar things could be said for the Navy’s aircraft procurement, weapon procurement, and research and development (R&D) ac-

counts, and the accounts relating to readiness, maintenance of real property, and housing.

When one adds up the increases for all these areas, including shipbuilding, the total funding differential could be ten billion or more dollars per year, depending on how robustly the current programs of the Department of the Navy (DoN) are funded (table 3). A recent Congressional Budget Office report puts the figure at seventeen billion dollars per year.<sup>2</sup> This considerable difference between what it would take to fund fully the Navy’s programs and its current budget “top line” is a central feature of the Navy’s current situation.

**TABLE 3**  
**ANNUAL DON FUNDING SHORTFALL**

Billions of FY 2000 dollars  
 Average planned funding for FY01–FY05 (bottom) and additional amount needed to reach sustaining level (top)



Prepared by Ronald O’Rourke, November 2000  
 Data taken from CBO report, *Budgeting for Naval Forces* (October 2000), table 5.

The Center for Strategic and International Studies, in Washington, D.C., last year published an updated analysis of what it calls the “coming train wreck” between defense program goals and available resources.<sup>3</sup> The title of this analysis has made the train-wreck metaphor a well-established phrase in debates over future defense spending. This metaphor, however, may not be the best one, because it suggests that the conflict between programs and resources is still ahead, that the services have not yet felt its effects, and that these effects, when they arrive, will come all at once, in a cataclysmic way.

The conflict between program goals and available resources, however, is already with us. It has been growing incrementally for the last several years, and the tensions that have built up over that time have already begun to outstrip the Navy’s strategies to generate internal budget savings, as well as the service’s other temporary coping measures.

As a result of the tension between program goals and available resources, Navy programs have undergone a succession of cutbacks and reductions in recent years. The cumulative effects of these reductions are difficult to discern unless one stands back and assesses them in their entirety—which sometimes can be hard for military officers to do, since their career paths often move them from one job to the next every two or three years. Rather than a train wreck, then, it might be better to think of the effects of the imbalance between goals and resources as akin to gradual oxygen deprivation: it happens slowly, its effects build up over time, and the victim is likely not to be fully aware of what is happening. But in the end, if not alleviated or at least well managed, it can be just as fatal as a train wreck.

A second feature of the Navy’s current situation is that in the midst of this growing tension between programs and resources, there are proposals for increasing the Navy’s force structure from the current 318 or so ships to about 360 ships, so that the fleet can better meet the demands being placed on it, particularly for maintaining desired levels of forward deployments, without placing an undue burden on the Navy’s personnel and equipment. Such an increase in force structure would clearly require substantially more additional funding than would be required to fund fully the current 310-ship program.

A third important feature of the Navy’s current situation is that since the middle of 1999 there has been an increased focus in debates over future U.S. defense spending on the “revolution in military affairs” and on “defense transformation.” The theme of transformation was featured prominently in the Defense Department’s presentations of its proposed defense plan to Congress in early 2000, and in statements on defense policy that year by both sides in the presidential campaign.

## WHERE WE MIGHT GO FROM HERE: FOUR GENERAL OPTIONS

Given this situation—the programs/resources imbalance, the proposals for increasing force structure, and increased interest in defense transformation—four general options for future U.S. naval forces can be sketched out:

- The first of these options would stay on today's path: it would maintain today's collection of programs and today's level of resources. It is, in effect, the baseline option.
- The second option would maintain today's programs but seek the additional resources needed to fund them fully—the ten billion (or more) additional dollars per year mentioned earlier.
- The third option is force-structure expansion toward a fleet of something like 360 ships. This option would maintain today's collection of programs in expanded form and would require an even larger amount of money to achieve.
- The fourth option is transformation, which would involve changing the current mix of programs. It could be implemented at various resource levels, but since it is not usually spoken of today in connection with large net increases in total resources, it can be associated here with today's levels of resources or something a bit higher.

### *First Notional Option—Stay on the Current Path*

Choosing the first option would mean continuing the various strategies now being pursued to generate internal budget savings that would in turn be applied to currently underfunded priorities, including modernization. These include familiar measures like regionalization of bases and of maintenance; competitive sourcing and privatization; “smart ship,” “smart work,” and “smart base” initiatives; and also acquisition reform measures, such as multiyear procurement, commercial-off-the-shelf (COTS) procurement, and using cost as an independent variable (CAIV) in the design of new systems.<sup>4</sup> This approach would also continue to balance, as well as possible, near-term readiness against longer-term modernization. It would seek to protect core procurement programs, the readiness of deployed forces, and selected R&D efforts leading toward a moderate, gradual evolution of the force.

In theory, the internal savings produced by this strategy might be enough to finance an increase in procurement rates approaching steady-state replacement levels. This plan, however, depends on certain key, and rather optimistic, assumptions: that the money-saving strategies will be implemented as planned, that they will generate the projected amounts of savings within a certain amount of time, and that no unexpected needs for increased expenditures will arise—that there will be no more financial shocks to the system.

This strategy appears to be a fragile one in that its success requires all these factors to work out as planners hope. The experience of the last several years, in fact, suggests that there is a good chance that one or more of these assumptions will not pan out. Some strategies for saving money may be only partially implemented; some even of those that are fully implemented may not produce hoped-for results; and unexpected financial demands could well arise.

If matters did not work out as planned, the result would be an intensification of the challenges that the Navy now faces in trying to make ends meet. This strat-

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*The first thing to be said about the current situation is that the Navy's current programs collectively appear to be significantly larger than its current budget.*

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egy carries a high risk of producing, over time, a gradual erosion in force structure, an erosion that would begin when today's ships begin to retire in large numbers after 2010 and particularly after 2020. The fleet could

fall below the current level of about 318 ships, and then below three hundred ships, as the consequences of fifteen or twenty years of deferred procurement begin to manifest themselves. This would lead to a corresponding reduction in the number of ships that could be deployed forward at any one time. Similar effects would become manifest in aircraft inventories. In general, there would be pressure on the Navy's ability to maintain required levels of readiness, with the burden for this task falling increasingly on the backs of Navy personnel. Also, there would be limited or spotty modernization; in place of new designs and new production, there would be significant reliance on modified designs, upgrades, and service-life extensions.

With regard to the potential for reduced forward-deployed operations, the nation could respond to such a state of affairs in a number of ways. It could simply accept reduced levels of forward-deployed forces, which could require choosing to maintain higher levels of presence in one region at the expense of presence in another, reducing the number of ships sent to each region, or reducing the fraction of the year that ships are deployed to various regions.

Alternatively, the nation could seek to maintain higher levels of forward-deployed naval forces by increasing the number of ships that are "forward homeported" in overseas operating areas. This would raise all of the traditional issues associated with forward-homeported ships, including the need for host-nation acceptance; the possibility of host-nation restrictions on how the ships are used; the risk of becoming excessively tied politically to one region at the expense of others; the issue of how and where these ships are to be maintained; and the risk—the severity of which would depend on the host nation involved—of being evicted and seeing calculations made on the assumption of forward homeporting upset.

Finally, the nation could respond by seeking greater efforts from allies and friends in support of maintaining regional security. This option, however, would depend not just on the willingness of those allies and friends to take on this responsibility but on their capability to do so as well. For naval forces, capability is a significant consideration, since U.S. naval forces include platforms and systems (and resulting capabilities) that are rare in or absent from the naval forces of U.S. allies and friends, including carrier-based fixed-wing aircraft, nuclear-powered attack submarines, surface combatants with highly capable area-air-defense systems, land-attack cruise missiles, and substantial amphibious assault forces.

Optimistically, this first option would result in a fleet of about the size of today's, with some amount of modernization. Less optimistically, the fleet would have fewer ships than it does today, and the amount of modernization could be meager. Either way, but particularly in the less optimistic scenario, this option raises issues regarding both numerical and qualitative sufficiency for carrying out potential missions fifteen or twenty years from now.

*Second Notional Option: Fully Fund the Current Plan*

Pursuing the second option—fully funding the currently planned 310-ship force—would involve continuing the same money-saving measures described under the first option while seeking the additional resources needed to fund today's collection of programs more completely. These additional resources could come from an increase in the defense budget top line or an increase in the Navy's share of the top line.

It is not clear whether the next administration will support an increase in the defense budget so large that the Department of the Navy's proportionate share of that increase would amount to ten (or more) billion dollars per year. While both presidential campaigns spoke in favor of maintaining a strong defense, neither committed itself specifically to an increase of this size. Moreover, the new administration will face numerous competing federal budget priorities, such as shoring up Social Security; financing new domestic program initiatives in areas such as education, health care, and the environment; granting tax reduction; and carrying out debt reduction. In light of these competing federal budget priorities, substantial growth in the defense top line, while possible, is by no means certain.

The alternative of increasing the Department of the Navy's share of the Defense Department's top line has been mentioned regularly for many years now. The experience of the past several years, however, suggests that mutually offsetting forces in the Pentagon tend to make such shifts difficult to achieve. All the services will likely ask the new administration for more funding, and all of them

will bring well developed arguments to bear. In practice, each service's efforts have tended to cancel out those of the others.

If the division of the defense budget changes, moreover, it might not be in the Navy's favor. The Army is now pursuing a force transformation, and policy makers on Capitol Hill, at least, have reacted very supportively to this initiative. On this basis, one might argue that the most likely beneficiary of a defense-budget reallocation would be the Army rather than the Department of the Navy.

If the Navy were to obtain enough new money to fund fully today's programs, then compared to the first option, force structure would be more stable, there would be less pressure on readiness, and there would be somewhat more modernization. Current levels of presence could be maintained, and there would be less need for compensatory measures like forward homeporting or increased reliance on allies. Whether this force would be sufficient numerically and qualitatively for tomorrow's forward requirements, however, would still be in question. If the Navy did not succeed in obtaining all the additional needed resources, the outcome would be more like that of the first option, and the adequacy of the force numerically and qualitatively would be more problematic.

#### *Third Notional Option: Expand the Force Structure*

The third option of increasing the Navy's force structure toward 360 ships and maintaining today's collection of programs in expanded form would be pursued like the second, except that the amount of additional resources to be sought would be substantially greater. The question of an increased defense top line or an increased Department of the Navy share would arise again, but in more intensified form.

This option offers a fairly wide array of potential outcomes, depending on how much additional funding the Navy secured. If the Navy obtained most or all of what it asks for, the Navy could over time build itself up toward the 360-ship figure. Forward deployments could be expanded from present levels. Numerical sufficiency would be less of an issue, or no problem at all, but qualitative sufficiency might still be an open question, particularly if the new money were devoted primarily to acquisition of current systems rather than development of new ones. If, however, the Department of the Navy did not receive a large increase in resources, the outcome could be more like that of the second option or the first, depending on the amount it did manage to obtain.

#### *Fourth Notional Option: Transformation*

The fourth notional option is transformation beyond that which is already reflected in the Department of the Navy's plans. This option would involve altering today's mix of programs and implementing this altered mix at a level of funding about equal to or a bit higher than today's level.

In discussing this fourth option, it should be noted that, in debates over future U.S. defense spending, the term “transformation” is currently being used in two basic ways. The Defense Department and supporters of current defense plans often use transformation to refer to measures to change U.S. military forces that are already incorporated into the current Five-Year Defense Program, and to such long-range Defense Department conceptual documents as *Vision 2020*. This is the kind of transformation to which the Defense Department referred when it presented its proposed fiscal 2001 budget to Congress in early 2000. For naval forces, these measures include, among other things, current plans for implementing network-centric warfare in the fleet. It is an implicit feature of the three general options discussed above.

Those who believe present Defense Department efforts to implement transformation are inadequate use the term transformation in a different way—to refer to measures that would change U.S. military forces more rapidly or extensively than now planned by the department. This is the kind of transformation referred to under the fourth general option discussed here.

Although there has been much discussion of this more ambitious kind of transformation since the early 1990s, and particularly over the last year or two, it is still not clearly defined in terms of program content or cost. In relation to naval forces, it is typically characterized simply by citing specific proposals, such as STREETFIGHTER, the Arsenal Ship, or the conversion of Trident ballistic-missile submarines (SSBNs) to an SSGN configuration, carrying cruise missiles.

In general, however, it might be fair to say that this kind of transformation can be contrasted from the first kind—the kind reflected in the other three options—as involving different platforms and systems, different operational concepts, and a greater emphasis on long-term investments (as opposed to nearer-term programs). Its advocates argue that this kind of transformation is a means to produce, for a given amount of resources, a force more effective against future threats than one that would result from funding and implementing today’s collection of programs.

#### THE FOURTH OPTION: IMPLEMENTING TRANSFORMATION

A major question facing policy makers and others who support or are interested in this kind of transformation is how to make it happen. What measures, in other words, could policy makers consider taking (or encouraging others to take) to implement this second kind of transformation? The following are some candidate measures that might form the core of a strategy for transforming U.S. naval forces.

**Signaling.** One measure to consider in beginning a transformation process would be to make clear to people both outside and inside the naval community

that transformation has become an important Department of the Navy priority, even the top priority. Signaling to outsiders is important in terms of winning support for any effort, particularly from Congress. The support that the U.S. Army received in congressional markups of the fiscal 2001 defense budget for its own transformation program is a good example. Signaling to members of the naval community would be equally important, because it would alert them to the facts that they may need to alter the focus of their efforts and that the current distribution of resources may change.

*RDT&E.* A second item would be to expand research, development, testing, and evaluation efforts so as to include a greater emphasis on “clean-sheet” designs and prototyping. This is likely to require a substantial increase in the RDT&E account—even more than what would be needed to fund more fully current research and development programs—particularly for developing new designs and building and testing prototypes. Instead of adding perhaps several hundred million or a billion dollars to the Navy’s RDT&E account (as under the second option discussed earlier), pursuing a transformation strategy might involve adding some multiple of this amount—perhaps two or three times as much.

*Experimentation.* A third need—one that is often mentioned in connection with transformation—is greater use of experimentation. This could include the establishment of standing experimental forces to supplement the experimentation that can be carried out by general-purpose forces.

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These first three items come quickly to mind and are frequently mentioned in discussions of transformation strategies. There are additional measures, however, that can be considered, some of which are less frequently mentioned.

*Reassurance.* One of these would be to reassure platform communities (that is, the major sectors of the service closely involved with either surface ships, submarines, or aircraft) as well as program managers and contractors that transformation does not represent a mortal threat to their organizational well-being. Institutions, like individuals, tend to prefer stability and continuity over instability and discontinuity. Transformation carries with it the prospect of the latter and thus tends to elicit defensive reactions from people and organizations. The likelihood of swift and vigorous defensive reactions may well have been increased by several years of defense downsizing, which has encouraged institutions and individuals to focus more intensely on self-preservation. Years of program cutbacks and cancellations have encouraged a strong inclination toward “circling the wagons” and defending programs and priorities that have survived earlier reductions.



If transformation is to succeed, incentives would need to be changed so that individuals would know that they can succeed and advance in a transformative environment, and so that businesses would be confident of maintaining their profitability. Program managers' success should not be measured solely by their ability to carry forward procurement programs that were designed years ago if those programs are no longer appropriate, but rather on their ability to recognize where change may be needed and to move quickly to restructure the efforts.

*Keeping NCW in Perspective.* A fifth potential initiative would be not only to emphasize network-centric warfare but set it in context, in terms of its place in the intended transformation. Much excitement has been generated by network-centric warfare, and for good reason. But in the midst of this enthusiasm, there is a potential for simply equating transformation with network-centric warfare and letting it go at that. That would be a mistake, for although network-centric warfare is essential to transformation, a comprehensive transformation would involve other changes as well.

Right now, the Navy is essentially superimposing network-centric capabilities onto its existing force architecture. This will clearly increase Navy capabilities; but network-centric warfare, which fundamentally alters the relationships between different elements of a force, makes possible wholly new naval force architectures that can differ from today's fleet design. Indeed, exploiting the full potential of network-centric warfare may actually demand a change in the current force architecture. Simply applying it as a veneer over today's force architecture will limit the benefits it produces.

At a time when funds for the development and procurement of new designs are limited, there is a temptation to use network-centric warfare as a rationale for not investing in platforms and systems that could contribute to a new and different force architecture. Misapplying the concept of NCW in this manner would result in missed opportunities. Network-centric warfare will help a great deal, but transformation does not begin and end there.

*Force Architectures.* The Navy does not show much evidence, at least to outside observers, of having done very much work for years in the area of alternative force architectures. The last completed major effort that was publicized outside the Navy may have been a project conducted by Captain Clark "Corky" Graham at the Naval Surface Warfare Center at Carderock, Maryland, in 1989–92. This architecture focused on a large, modular ship that went by various names, including "carrier dock multimission" and "carrier of large objects," the objects being such things as aircraft, smaller scout/fighter ships, and amphibious forces.<sup>5</sup>

Instead of alternative force architectures, the focus in recent years appears to have been primarily on designing new platforms and systems for the current

fleet concept. But with the Navy becoming ever more networked, and with the capabilities of individual platforms increasingly becoming functions of their

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*The total funding differential could be ten billion or more dollars per year, depending on how robustly the Navy's current programs are funded.*

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places in that network, the need for paying more attention to the design of the overall force is becoming increasingly urgent. Just as the designer of a ship should

seek to optimize the total ship (rather than its individual systems or components), the need now appears to be to optimize the architecture of the entire naval force rather than simply the designs of the individual platforms that make it up.

There are several new platform and system concepts now on the table, but their merits and limitations will be less and less easy to identify and evaluate except in the context of a larger force architecture. If the focus remains on designing individual new platforms without parallel work on revised architectures, the result is likely to be a perpetuation of the current architecture, producing only next-generation versions of today's platforms and allowing change only through linear descent—stovepipe evolution, if you will.

It might turn out that a further elaboration of today's force architecture is the right approach to meeting tomorrow's operational needs. But this cannot be known with any confidence if the issue is not explored, and there is little evidence of such exploration in recent years. One hears references to a future "system of systems," but the tendency is to consider this metasytem as a by-product of individual platform and program development—something that will emerge and evolve passively, from the bottom up. Such an approach could overlook many of the opportunities that a more consciously designed "system of systems" could offer for increasing fleet capabilities. To achieve not just any system of systems but the best one will require not just bottom-up evolution but top-down concept generation as well.

One current example of focusing on optimizing the entire force architecture and approaching fleet modernization from the top down is the U.S. Coast Guard's DEEPWATER acquisition project. This project, which aims at replacing a large portion of the Coast Guard's current deep-water-capable assets, is deliberately seeking to avoid a simple one-for-one replacement of cutter classes and aircraft types. Instead, it focuses on identifying the most cost-effective force architecture—that is, the optimum combination of surface platforms, air platforms, C4ISR\* systems, and logistics systems—that technology now permits. The

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\* C4ISR stands for command, control, communications, computers, intelligence, surveillance, and reconnaissance.

program would then procure the elements of this architecture in an integrated fashion.

This is an ambitious project for the Coast Guard, and that service faces several challenges in implementing it successfully. Parts of what the Coast Guard is attempting may not be appropriate or practical for the Navy to consider. Even so, it is worth examining for the lessons it can provide for thinking about future naval force architectures and for achieving them.

What might a transformed naval force architecture include? Elements that are frequently mentioned include a greater reliance on unmanned vehicles (including autonomous vehicles), increased use of distributed sensor networks, and new kinds of ships.

The possibilities for ships are quite diverse. In comparison to current designs, they could have larger and more varied payloads; they could be much more

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*All the services will likely ask . . . for more funding and . . . bring well developed arguments to bear. In practice, each service's efforts have tended to cancel out those of the others.*

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modular; they could be significantly smaller, or significantly larger; they could have much higher maximum speeds; and they could take advantage of nontraditional hull forms. They could be hybrid ships, mixing, say, the

functions of an aircraft carrier and surface combatant, or a surface combatant and an amphibious ship. They could be “mother ships,” deploying large numbers of smaller ships and unmanned platforms; they could be mobile offshore bases rather than ships at all. They could be derived from commercial designs. All these things have been proposed at one time or another.

An effective strategy to develop alternative force architectures might have three primary aspects. First, it could involve parallel efforts by multiple groups. Alternative force architectures could take various shapes, and the most promising candidates are likely to be discovered more quickly if a number of groups try independently to find them. These groups could be recruited from a variety of settings—the fleet, the platform communities, government laboratories, industry, universities, and think tanks. Each kind of group would have different strengths and limitations. For example, a group whose members are drawn from one of the Navy’s platform communities might create architectures that expanded the capabilities of that platform in ways that other groups might not think of; on the other hand, however, it would understandably be disinclined to propose an architecture that downplayed or eliminated that platform.

Similarly, an industry group might have a better understanding of how to apply cutting-edge technologies, particularly from the commercial arena, to create new force architectures. It might be less bound by force-design traditions than people working within Navy offices, and it would be likely to have a keener

appreciation for producibility considerations. But a group whose members were drawn from the “widget” industry could not be expected to advance an architecture, whatever its merits, that did not require widgets.

A second potential element of an effort to generate alternative naval force architectures would be a greater use of simulation-based design as applied to the entire force rather than individual ships. The nation cannot afford to build new architectures for experimental purposes, and the Navy could sift through the many possibilities more quickly through intensive modeling and assessment.

Lastly, developing new force architectures should not be thought of as a one-time exercise but as a continuing effort, so that it can incorporate new developments and the contributions of new participants.

*Operational Concepts.* The need for new operational concepts is frequently discussed in connection with transformation. Much of this discussion concerns proposed operational concepts for warfighting and crisis response operations, and this part of the discussion does not need to be further elaborated here. The discussion of new operational concepts, however, arguably should not stop with warfighting and crisis-response operations, because it can also include consideration of new concepts for how to maintain normal forward-deployment and presence operations. A key goal here would be to identify concepts that can reduce the Navy’s current “station-keeping multipliers”—the numbers of ships of given kinds needed to keep one such ship on station in an overseas operating area. These multipliers are considerably higher than people often assume. Although it has often been asserted with conviction over the years, even by admirals, that it takes three Navy ships to keep one on station, the actual station-keeping multipliers for Navy ships are in fact more like five to one, or six to one for ships homeported in the continental United States—the exact numbers depending on the category of ship in question, the specific overseas operating area involved, and (for deployments to the Persian Gulf/Indian Ocean region) whether the ship is homeported on the East or West Coast.<sup>6</sup>

In the post–Cold War era, these station-keeping multipliers have been used extensively to justify Navy force levels. Indeed, for several years now the Navy’s force-structure requirements have been based primarily on the number of ships necessary to maintain established levels of presence overseas, and only secondarily on warfighting needs.

Although these station-keeping multipliers are effective force-level justifiers, they also reflect a high operational-cycle “overhead”—the fact that the Navy must procure a large number of expensive platforms to keep a fraction of them deployed on station at any one time. Reducing the multiplier might permit a smaller number of ships to maintain a given level of presence. Frequently

mentioned strategies for accomplishing this include double-crewing ships and scheduling long-duration deployments coupled with crew rotation, as was envisaged for the Arsenal Ship. Even after taking into account the additional costs of such measures—for additional crews, more shore-based training facilities, and shorter ship-service lives—this approach might produce net savings that could be devoted to research and development or acquisition.

Measures like these to reduce station-keeping multipliers could be applied only insofar as they did not leave the fleet with insufficient forces for warfighting.

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*Incentives would need to be changed so that individuals would know that they can succeed and advance . . . and so that businesses would be confident of maintaining their profitability.*

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They also raise serious issues concerning maintenance, training, and crews' sense of "ownership" of the ships they serve on—which can contribute to the efforts they make on behalf of their ships. These issues are

by no means trivial and may prove difficult to resolve. But that should not disqualify them from consideration as potential components of transformation.

*The Acquisition System.* If much of this is to be accomplished, significant changes might need to be made to the Defense Department acquisition system, particularly in terms of how proposed systems are evaluated and justified. One potential change would be to reduce the emphasis the system puts on replacing specific capabilities that are now being provided by systems approaching retirement age. This approach encourages decisions in favor of replacing older systems with new-generation versions of the same things—a replacement-in-kind strategy that leads to force modernization by linear descent and to a consequent perpetuation of the current force architecture. Instead, the acquisition system could be broadened to accept justification of proposed systems in terms of how they make sense within a future force architecture, irrespective of whether they exactly replace the capabilities of systems being retired, and even if they would result in overlaps of capabilities with other systems that are still years away from retirement.

If transformation is to involve greater use of prototypes, then the acquisition system might need to be changed so that the large up-front design costs associated with developing prototypes can be justified more in terms of their demonstrative (as opposed to purely operational) benefits. In addition, if transformation would mean frequent design changes during production, and frequent modification or restructuring of programs, then the acquisition system would need to be changed so that the assessed cost-effectiveness of proposed systems is not dependent on completing lengthy production runs of stable designs.

Finally, if transformation were to include increased use of experimentation, the acquisition system arguably should be changed to reduce its current emphasis on avoiding test failures at all costs on the grounds that such failures are inherently wasteful. This potential kind of waste should be compared to the more subtle forms of waste that can result when the emphasis on avoiding test failures at all costs slows down the replacement of inappropriate or cost-ineffective systems. Just as the Navy is trying to move away from the “zero-defect” mentality in its personnel policies, so too might it consider, in a transformative era, moving away from an acquisition system with a zero-defects orientation. The Navy (and the Defense Department generally) would need to recognize that if transformation is the goal, an absence of mistakes can be evidence of insufficient effort.

The current acquisition system can be viewed as, among other things, a huge system for avoiding errors and apportioning the blame when something goes wrong. A transformed acquisition system would encourage people to take risks when appropriate and protect them from blame or criticism for errors that result from honest efforts to discover something new.

*Agile Manufacturing.* Lastly, industry, in coordination with government efforts to change the acquisition system, can assist in the transformation process by altering its business model so that its operations are no longer built so much around the concept of executing long production runs of stable designs. Under this new model, profitability in the future would be derived more principally from research and development work, prototyping, and short production runs or longer runs with frequent changes in design. These activities would need to be viewed by industry as a significant and stable source of profits. The idea of operating profitably on the basis of short production runs of frequently changing designs is established in certain commercial industries that must contend with rapid changes in product technology or with frequent shifts in consumer preferences. The practices adopted by these commercial firms may be able to provide lessons in how to accomplish the same thing in defense production.

Moving toward this new business model, which might be called “agile manufacturing,” would likely involve the adoption of new production capabilities and processes. Defense firms have already made significant strides in adopting new production capabilities and processes in areas such as “lean” manufacturing (which involves, among other things, the avoidance of tools and jigs that are suitable for producing only one kind of item) and “flexible” manufacturing (which includes systems that can produce various components in small quantities in response to user demands for individual spare parts). Agile manufacturing would build on these improvements to put prototyping, limited

production runs, and rapidly changing designs more at the center of a firm's business operations.

These are not the only elements that might be included in a successful transformation strategy, but a strategy that lacked elements like these would be less likely to achieve its goals. Policy makers in the new administration and the 107th Congress may consider what a transformed naval force might look like and whether it would be better than the force that might result from pursuing the three alternative options discussed earlier. Their views on these issues will no doubt vary, but the Navy and the nation will likely benefit from the debate.

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#### NOTES

1. For a discussion, see *Statement of Ronald O'Rourke, Specialist in National Defense, Congressional Research Service, before the Senate Armed Services Committee Subcommittee on Seapower Hearing on Ship Procurement and Research and Development Programs*, 2 March 2000, pp. 3–9.
2. U.S. Congress, *Budgeting for Naval Forces: Structuring Tomorrow's Navy at Today's Funding Level* (Washington, D.C.: Congressional Budget Office, October 2000).
3. Daniel Gouré and Jeffrey M. Ranney, *Averting the Defense Train Wreck in the New Millennium* (Washington, D.C.: Center for Strategic and International Studies, in Cooperation with Management Support Technology, Inc., 2000).
4. In an acquisition program using CAIV, goals are set for procurement or total ownership of the system (or both). Industry is given broad flexibility in making system-design tradeoffs to develop a system that meets the government's minimum-performance specifications and offers the most overall system capability for that cost.
5. For published discussions of this concept, see Anne Rumsey, "Navy Plans Look-a-Likes," *Defense Week*, 13 March 1989, p. 3; Robert Holzer, "Navy Floats Revolutionary Ship Design for Future Fleet," *Defense News*, 14 May 1990, pp. 4, 52; Norman Polmar, "Carrying Large Objects," U.S. Naval Institute *Proceedings*, December 1990, pp. 121–2; Edward J. Walsh, "'Alternative Battle Force' Stresses Commonality, Capability," *Sea Power*, February 1991, pp. 33–5; and Michael L. Bosworth, "Fleet Versatility by Distributed Aviation," U.S. Naval Institute *Proceedings*, January 1992, pp. 99–102. See also the "USN's '2030' Plan for Future Fleet," *Sea Power*, April 1992, pp. 79, 82. At one point in the early 1990s, the Advanced Research Projects Agency (ARPA) explored an alternative fleet architecture that included mobile offshore bases and small modular boats. For a discussion, see "ARPA Envisions Future Battle Fleet," *Navy News & Undersea Technology*, 3 October 1994, pp. 3–5.
6. For a discussion, see U.S. Congress, Library of Congress, *Naval Forward Deployments and the Size of the Navy*, by Ronald O'Rourke, CRS Report for Congress 92-803 F, 13 November 1992 (Washington, D.C.: Congressional Research Service, 1992), pp. 13–23. See also U.S. Congress, Library of Congress, *Naval Force-Structure Planning: Breaking Old Habits of Thought*, by Ronald O'Rourke, CRS Report for Congress 93-332 F, 19 March 1993 (Washington, D.C.: Congressional Research Service, 1993), pp. 2–3.

## THE CONFEDERATE NAVAL BUILDUP

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### Could More Have Been Accomplished?

*David G. Surdam*

**T**he Union navy's control of the American waters was a decisive element in the outcome of the Civil War. The Federal government's naval superiority allowed it to project power along thousands of miles of coastline and rivers, subvert large armies in Virginia, and slowly strangle the southern economy by stymieing imports of European and northern manufactures and foodstuffs, as well as of exports of southern staples, primarily raw cotton.

The infant Confederate government quickly established a naval organization. Jefferson Davis chose Stephen Mallory as Secretary of the Navy. Mr. Mallory confronted an unenviable task. The seceding states possessed no vessels capable of fighting against the best frigates in the Federal navy, nor did those states possess most of the necessary raw materials and industries needed to build modern warships.

Despite the Confederacy's handicaps in creating a navy, its embryonic fleet came tantalizingly close to upsetting the Federal navy's superiority in March and April of 1862. The Confederate ironclad *Virginia* temporarily terrorized a formidable Union fleet in Hampton Roads during March. The *Virginia's* success panicked some of Lincoln's cabinet members; fortunately for the North, the USS

*Monitor* arrived before the *Virginia* could wreak further havoc upon the fleet. The *Monitor* neutralized the *Virginia*, and the Federal fleet in the Chesapeake was never again seriously challenged. A month later, despite fears that the Confederates would have three ironclads waiting for then-Captain David Farragut's fleet, the Federal fleet captured New Orleans before the two largest Confederate ironclads became fully operational. Had the two

*Dr. Surdam is a visiting professor of economics at the University of Chicago and the University of Oregon. His Northern Naval Superiority and the Economics of the American Civil War is forthcoming from the University of South Carolina Press in July 2001. His "The Union Navy's Blockade Reconsidered," in the Autumn 1998 issue, won the Naval War College Review's Edward S. Miller History Prize.*

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large ironclads, the *Louisiana* and the *Mississippi*, been ready, the attack on New Orleans might have had a different ending. Even the *Arkansas*, an uncompleted warship, created consternation in two Union fleets on the Mississippi in mid-1862. Thereafter, Confederate naval efforts would continue to be insufficient and too late.

Could the Confederate government have fielded an even stronger navy, a navy strong enough to at least break the blockade? Did the Confederate navy make the best use of its time and resources? What were the important issues facing Mallory and the Confederacy in creating their navy? Did Mallory and the Confederate government make decisions that retarded the buildup of the Confederate navy?

### THE CONFEDERATE NAVAL BUILDUP: TOO LITTLE, TOO LATE

In April 1861, the North had forty-two commissioned warships; the Confederacy had none.<sup>1</sup> Although the South began the war without a navy, the initial disparity in naval forces was not necessarily decisive. With only forty-two warships, the northern navy was not large enough to implement an effective blockade of every significant Confederate port. Nor did the North possess warships to control the western rivers. The Confederacy's initial lack of a navy was further mitigated by three other factors. First, Union naval superiority would take time to manifest itself; the North would have to recall its existing naval warships from distant stations, and to implement its blockade, it would need to buy and build blockading vessels. Second, naval technology had been changing rapidly during the late antebellum period. Contemporary advances, particularly the idea of protecting warships with iron armor, could have rendered most of the Union vessels obsolete in the face of a Confederate navy built from scratch and immediately exploiting the latest technology. Secretary Mallory understood the opportunity presented by the new technology, especially the importance of ironclad vessels. He realized that the South could not compete in building standard wooden vessels, so he opted for a southern navy based upon ironclad vessels.

I regard the possession of an iron-armored ship as a matter of the first necessity. Such a vessel at this time could traverse the entire coast of the United States, prevent all blockades, and encounter, with a fair prospect of success, their entire Navy. . . . If to cope with them upon the sea we follow their example and build wooden ships, we shall have to construct several at one time; for one or two ships would fall an easy prey to her comparatively numerous steam frigates. But inequality of numbers may be compensated by invulnerability; and thus not only does economy but naval success dictate the wisdom and expediency of fighting with iron against wood, without regard to first cost.<sup>2</sup>

Finally, Mallory's hopes for gaining naval superiority via ironclad vessels received a boost from the initial hesitance of his opposite number, Secretary of the Navy Gideon Welles, to build ironclads. Welles obtained funding to build ironclads for the Union navy only in the summer of 1861. After appointing a board of naval officers to examine the various plans for ironclads, he settled on three designs; the actual construction of the famous *Monitor* started only in late October. Welles's hesitation in beginning an ironclad construction program may now seem unfathomable, but in fact the navy's experiences with ironclads urged caution; the United States had commissioned the building of an iron-armored vessel in 1852, but after a \$500,000 expenditure it had had nothing to show for the money. Thus, Welles decided to let Congress make the initial push for ironclads. Welles was also motivated by the knowledge that many radical Republicans disliked him and would be eager to expose any mistakes. Even after a panel of naval architects approved some prototype vessels, including John Ericsson's *Monitor*, Welles moved cautiously. Naval officer David Dixon Porter explained Welles's hesitation: "It would have been a bold man, indeed, who, as Secretary of the Navy, would have taken the responsibility of building any number of untried 'Monitors' without something to justify him in doing so."<sup>3</sup>

With the various delays facing the Union in assembling its naval might, the Confederacy was granted a grace period of several months in which to build its own navy. If the Confederacy had acted quickly to build several ironclads, its navy might have seized control of large expanses of American waters.

The South possessed at least a limited shipbuilding capacity. Although the antebellum southern shipbuilding efforts were dwarfed by northern shipbuilding, the South was not starting from scratch: the eighth U.S. census listed thirty-three southern "Ship and Boat Building" establishments, with 546 workers.<sup>4</sup> The Confederacy was blessed with two major shipbuilding facilities: Norfolk and New Orleans. When the Federals abandoned Norfolk in 1861, they failed to destroy the large Gosport Navy Yard completely, making possible the resurrection and transformation of the frigate USS *Merrimack* into the CSS *Virginia*. Norfolk contained a large amount of ordnance and was also fairly close to the Tredegar Iron Works in Richmond (a firm with a history of building naval guns and that would now produce iron plating). The naval ordnance at Norfolk was critical. The Confederates distributed it among various ports; the guns enabled the Confederates to hold some of the ports against the wooden vessels blockading them.

New Orleans had facilities to build ships, too; unfortunately for the nascent Confederate navy, the vessels produced in antebellum New Orleans had been primarily river craft, and it is unlikely that any warships or ocean steamers had been constructed there.<sup>5</sup> Despite the city's inexperience at building warships, the

fact that it nearly completed two ironclads before Farragut's fleet captured the city was testimony to its shipbuilding potential. Memphis was another early site of ironclad building. Two ironclads were laid down there, but these were unfinished when the Federal fleet took the city. One of the ironclads was destroyed, but the other, the *Arkansas*, was moved to the Yazoo River.

For all these reasons, Mallory did not believe that the South could immediately build a warship capable of sailing along the coast and engaging the Federal warships, but he was hopeful that it would eventually be able to construct high-quality steam frigates.<sup>6</sup>

Besides its limited shipbuilding facilities, the Confederate navy faced other difficulties. Domestically manufactured iron products were destined to be in short supply. While there were considerable pig-iron deposits in the South, many of them were located in remote areas; the few southern iron mills had typically

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received their ore from Pennsylvania. The South possessed some large iron mills (notably Tredegar in Richmond), but the region had always imported much of its railroad iron. P.

V. Daniel, an official of the Richmond, Fredericksburg & Potomac Railroad, estimated that almost fifty thousand tons of rails were needed annually just to maintain the southern railroads. He declared at the time that the existing iron mills in the South were capable of supplying less than half of that figure, let alone provide iron plate for armoring warships. According to the report of the secretary of the treasury for the year ending June 30, 1860, southern ports received sixty-five thousand tons of railroad iron; almost all of the imported rail iron was from Great Britain.<sup>7</sup> At the outset of the war, Mallory sent a naval officer to Tennessee and Georgia to see whether any rolling mills could roll iron plating; the officer reported that outside of Kentucky, none of the existing southern mills were capable of rolling the two-inch plates needed to armor warships. Mallory pressed the Confederate Congress to create incentives to get iron mills to adapt their machinery to produce such plates.<sup>8</sup>

Propulsion was also a problem, since the South's ability to produce boilers and machinery was limited. The eighth census listed 115 southern establishments that manufactured steam engines and associated goods; these establishments employed 4,570 workers. Southern steam engine manufacturers constituted about 10 percent of the total U.S. capacity, but most of these southern shops were capable of producing machinery only for small vessels. Even the machine shop at the Norfolk navy yard was inadequate; Mallory informed Jefferson Davis that this shop was incapable of producing heavy steam engines and that Tennessee possessed the only machine shop capable of doing such work.<sup>9</sup> However,

there were several establishments in New Orleans equipped to produce machinery, if they were given time to adapt to the needs of warships.

These domestic sources were insufficient to meet the navy's needs. The production of iron plating was hampered by a shortage of iron ore, the need to adapt rolling mills for rolling two-inch plate, and competition for the iron from railroads and other military needs. So strapped were the rolling mills for raw iron that even with virtual monopolization by the military of southern output, the available ore was insufficient to meet the navy's needs for iron plating. The shortage of raw iron offset the efforts to convert rolling mills in Atlanta and Richmond to produce plating. During 1864, Mallory would report that the loss of Atlanta further exacerbated the shortage of iron plating and that although the remaining mills in Richmond were "capable of rolling any quantity, . . . the material [iron ore was] not on hand, and the amount now necessary to complete the vessels already built would be equal to 4,230 tons." Because of the paucity of iron to make two-inch plates, T-rails from railroad iron were used; the T-rails were not as protective as the two-inch plate. Even such humble items as nails and bolts were in short supply.<sup>10</sup>

Because of inadequate domestic production of shipboard machinery and equipment, Mallory struggled to obtain such commodities from other sources. Although some iron, steel, boilerplate, and machinery was smuggled through the blockade, the flow was meager and uncertain. The Navy Department in Richmond purchased existing steamers and stripped them of their machinery for use in warships. In addition, Mallory hoped that the Confederate commerce raiders would capture steamers and that their machinery, especially propellers, could be stripped. The shortages and the inability to transport rapidly iron and machinery within the Confederacy delayed construction of warships, and such delays were often decisive.<sup>11</sup> Completion of the *Mississippi* was to be delayed while a Richmond firm shipped a propeller shaft (recovered from a vessel that had been burned) across the Confederacy to New Orleans and while railroad iron was collected for the armor. The vessel was not completed in time to contest Farragut's attack on New Orleans and had to be destroyed to prevent its capture.<sup>12</sup>

The shortages of supplies were accompanied by shortages of skilled labor. Many of the skilled laborers in the South on the eve of the Civil War were transplanted northerners or foreigners; the outbreak of hostilities depleted the skilled labor pool, as most of the northerners and foreigners left the South. In addition, many of the indigenous skilled workers volunteered for the military, and others were later conscripted. A more benign conscription policy, coupled with better recruiting incentives, might have either kept more indigenous skilled workers in the necessary industries or attracted foreign skilled labor. The loss of a

competent ironmaster (who managed the furnaces) could reduce the efficiency of a plant by a third.<sup>13</sup>

Perhaps the most important scarcity impeding the Confederate naval buildup was that of time. Historian William Still, Jr. concludes, “One other factor cannot be ignored—time. Materials needed to complete vessels were delayed because facilities were destroyed or had to be moved in the face of advancing enemy forces. Time and time again uncompleted ironclads and wooden gunboats had

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*Had the two large ironclads, the Louisiana and the Mississippi, been ready, the attack on New Orleans might have had a different ending.*

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to be destroyed to prevent their capture.” The Confederates ran out of time at New Orleans and Memphis; the cities were captured before the ironclads necessary for their

defense could be completed. The loss of these cities, as well as Norfolk, forced delays while craft under construction there were transferred to other, more remote, locations. Shortages of material and labor created other delays.

In addition, the southern shipbuilders needed time to learn how to construct warships and ordnance. Prior to the war, the builders of the *Mississippi*, the Tifts, had never constructed a ship, much less a warship. Confederate captain John K. Mitchell would later testify, “The facts show that the [war] vessels could be constructed [in New Orleans]. However, the work was unusual at that point [1861–62], and the mechanics engaged in it undertook to do what they were not accustomed to do, and the consequence was they took more time than they probably otherwise would.”<sup>14</sup> Confederate naval construction would have produced better results if left unmolested; the Union forces, primarily through the blockade and the capture of key ports, denied the South the time it needed to build a strong navy.

The Confederacy, then, faced significant disadvantages in building a strong navy using domestic resources. Indeed, relying upon domestic resources was probably the worst way for the Confederates to obtain a strong navy.

Besides not producing enough ironclads to defend southern rivers and ports, the South also failed to build ironclads capable of offensive operations in coastal waters. Because of their deficient machinery and haphazard design, the Confederacy’s domestically built ironclads were generally not seaworthy enough to operate in coastal waters, much less on “blue water.” Mallory decided that only vessels purchased or built in Europe could attack northern blockaders.

To achieve his goal of ironclad superiority, Mallory immediately sent a Confederate agent to Europe to purchase armored vessels. Mallory evinced an interest in a French armored vessel, *Gloire*, in the spring of 1861. Mallory reckoned that the *Gloire* had cost the French government less than two million dollars,

and although that was double the cost of a similar wooden warship, he was convinced of the vessel's worth:

This certainly seems to be a large price to pay for a six-gun [rifled eighty-pounder Armstrongs] ship, when we reflect that the finest wooden screw frigates that float, carrying 40 guns of the heaviest caliber, cost but half this amount. But no comparison of their relative values can be instituted, inasmuch as the most formidable wooden frigate would be powerless in a contest with such a ship; and the employment of ironclad ships by one naval power must compel every other to have them, without regard to cost, or to occupy a position of known and admitted inferiority upon the sea.<sup>15</sup>

Mallory proved persuasive, and the Confederate government authorized two million dollars for purchasing ironclad warships. Unfortunately for the South, Europe did not immediately sell any iron-armored vessels. Indeed, one may marvel at Mallory's brazenness in presuming that France would relinquish a ship that promised to give it naval superiority over the British.<sup>16</sup> The Confederacy continued to attempt to obtain iron-armored vessels from Europe after the failure to purchase the *Gloire*. Agents were instructed to have iron warships built instead of attempting to buy existing ones. These vessels were to be built with their ownerships, as well as purposes, cloaked in ambiguity. Historian Warren Spencer described the procedures of one Confederate agent, Commander James Bulloch:

Bulloch contracted as an individual for an unarmed ship to be delivered in Liverpool. It was, in his words, a "purely commercial transaction" and the Lairds never knew from Bulloch that he was acting for the Confederate government. . . . Furthermore, Bulloch reserved the right to make changes in the structure "as experience during the progress of the work may suggest." This stipulation was a concession to the ever-changing technology of ironclad ship architecture and allowed Bulloch to take advantage of any new developments that might emerge within the next several months.<sup>17</sup>

Two rams and another iron warship were to form the nucleus of a Confederate fleet designed to sweep away the blockaders and challenge northern supremacy in American waters. At one point, the Confederacy had ten warships of varying size and armor under contract.<sup>18</sup> Two Confederate naval officers, Bulloch and Commodore Samuel Barron, hoped to engage the Union fleet with the vessels being built in Europe.

Their hopes may have been overly optimistic. The two rams that were built under Bulloch's direct supervision (known as the "Laird rams") were originally intended to be able to navigate inland waters as well as the Atlantic. Therefore, they had shallow drafts and rode low in the water; while they were more seaworthy than many of the northern ironclads, their weatherly qualities were dubious. Indeed, after the rams were "sold" to the British in order to forestall outright

confiscation, they were primarily used for harbor defense and not for cruising the high seas.

An ironclad built under Confederate commander James North's auspices was larger than the Laird rams, thereby rendering it unable to participate in shallow-water actions.<sup>19</sup> Moreover, even though the vessel was intended to be an oceangoing vessel, its seaworthiness was poor, as its eventual owner, the Danish navy, found in its maiden cruise. Spencer concludes,

Had James North managed by some miracle to get [the warship] to sea, his luck and the ship's undesirable qualities probably would have brought disaster to the Southern cause and probably would have covered his name not with glory but with ignominy. It was his good luck and the South's good fortune, then, to have been caught in the squeeze of the British-tightened neutrality . . . and to have sold the vessel to the Danes. In this way only the Danes were the losers.<sup>20</sup>

Spencer concludes that while the rams, in conjunction with the other vessels being constructed in Europe (had all successfully traversed the Atlantic), would have been "exceedingly troublesome" to the Federal navy, the likelihood of their controlling the American waters was small.<sup>21</sup>

Confederate efforts to obtain European-built warships were also plagued by financial difficulties. As early as July 1861, Mallory was complaining about the lack of funds. The Laird rams were priced at a little less than a hundred thousand pounds each, while North's larger warship was roughly double that. The depreciating Confederate currency made payment more difficult, and Commander North had to request ever-larger sums.<sup>22</sup>

However, the Confederate navy had never been given munificent funds to work with. During the first eighteen months of the war, the Confederate government spent \$347,272,958, of which only \$14,605,777 went to the navy. The Navy Department did not even have direct access to what little money it was allocated; it had to apply to the Treasury Department for its funds, which incurred delay and inconvenience.<sup>23</sup> The generosity of Fraser, Trenholm & Company, a British financial firm, was vital to James Bulloch in his initial purchases in Britain; the firm extended credit to enable Bulloch to begin obtaining commerce cruisers and naval supplies in June 1861. While some British shipbuilders were also willing to grant the Confederacy credit, eventually the shortage of funds proved an embarrassment for Bulloch; James North, too, complained about the lack of funds. Despite the sympathy of certain British businessmen for the Confederacy, the lack of funds early in the war probably prevented the Confederacy from getting more commerce raiders and even some warships.<sup>24</sup>

The Confederate navy's attempts to get European-built warships, then, were largely futile. Aside from some commerce raiders and one ironclad

warship, the *CSS Stonewall* (which never reached a Confederate port by the end of the war), the Confederacy was unable to augment its naval power with European-built warships.

The Confederacy failed, narrowly in several instances, to wrest even temporary control of important American waters, despite vigorous efforts to obtain a strong navy. For various reasons, the Confederacy was forced to rely upon domestic resources in building its navy during the crucial first year of the war. In



*CSS Stonewall* Naval Historical Foundation

many cases, the Confederate efforts simply ran out of time, as the lack of iron plating, machinery, skilled labor, and other resources delayed construction of what could have been formidable warships. Indeed, time may have been the key resource for the Confederacy. The autumn of 1861 was the best chance for the Confederacy to gain effective control of southern waters: only three Union “timberclads” patrolled the western rivers, and the blockade was only beginning to become effective. But early in 1862, a new factor emerged to suppress the Confederate chances of gaining maritime superiority: the Union navy.

The Union fleet helped stunt the embryonic Confederate force. By blockading the mouth of the Mississippi River, the Federals forced the New Orleans shipbuilders to transport iron and machinery from Virginia and the eastern Confederacy by rail; the rickety Confederate railroad proved inadequate for the task. Also, the blockade depressed southern revenue from exports of raw cotton and raised import costs, thereby stymieing purchases and imports of iron plating and machinery. Thus, the Federal navy’s blockade became a form of self-preservation, as a weak effort would have eased the South’s difficulties in constructing or obtaining a strong navy and then sweeping away the blockaders. The stronger the Federal blockade, the more difficult for the Confederacy to contest Union sea power, specifically the blockade. In addition, the Federal navy’s capture of New Orleans and Memphis eliminated two key Confederate shipbuilding centers.

Despite Mallory’s strenuous efforts, which came close to succeeding, did the Confederates and Mallory make the best use of their resources, especially that of time? Could they have done better, and if so, why did they not?

#### WHY THE CONFEDERACY FAILED TO OBTAIN A STRONGER NAVY

The Confederacy ran out of time to build a stronger navy. It was also forced to rely upon inadequate domestic resources when its attempts to get warships from



Europe failed. This section examines some of the crucial decisions that affected the Confederate naval buildup. It concludes with what might have been a solution to the fatal delay in obtaining warships.

Most of the deep South seceded in early 1861. Several weeks elapsed before the Fort Sumter episode triggered the war. Although the Confederate government was beginning to organize, the young country might have immediately started to acquire a navy. The Confederates could have claimed that acquiring warships was not a hostile action but simply the action of an independent country seeking to protect its ports and waters.<sup>25</sup> An early acquisition of European-built warships might also have avoided the neutrality issue raised after the war began, as prior to Fort Sumter the Confederates could have more freely contracted with European shipbuilders to construct warships than they could afterward. The Confederates might have opted to purchase and import naval supplies such as machinery and iron plating before the war and its attendant blockade. Did the Confederates make good use of the prewar period?

Mallory wasted little time in attempting to obtain steamers for the nascent Confederate navy. In March 1861, he submitted estimates of the cost of ten coastal defense steamers (\$1,100,000 for all ten vessels). In late March and early April, he dispatched agents to Canada, the northern states, and throughout the Confederacy to purchase steamers that could be converted to warships. In early May, Mallory dispatched James Bulloch to Great Britain; Bulloch's mission was to obtain six steam vessels for commerce raiding. At the same time, Mallory sent James North to Europe to purchase ironclad warships. The Confederate Congress accepted Mallory's estimate of costs for the vessels and authorized a million dollars for the commerce raiders and two million dollars for the warships. North reported lack of success, but Mallory ordered him to redouble his efforts throughout the fall of 1861 and early 1862. Bulloch, too, was initially unsuccessful in purchasing any ironclads in England;<sup>26</sup> however, in February 1862, Mallory's hopes for obtaining European-built ironclads rose. He reported to Davis that

very recent information . . . induces the belief that one such vessel may now be contracted for in France and one in England, but I have not been able to ascertain at what cost or within what time they could be completed or whether we would be permitted to fit the vessels out in any European port. Upon this subject a special agent was sent to England recently.<sup>27</sup>

In early 1862, North reported to Mallory that "anything can be done here for money," but he continued to be slothful in obtaining warships. Finally, he reported that he had arranged for a large ironclad warship for £200,000. Mallory and Davis requested funds for North and Bulloch's proposed ironclads; the Congress approved the money in April 1862.<sup>28</sup>

Clearly, then, Mallory displayed energy in attempting to obtain warships. Despite his energy, the results were disappointing. Were some of the Confederate government's efforts, and his own, misguided?<sup>29</sup> The decisions early in the war to launch privateers and commerce raiders, to enact a cotton embargo, and to rely upon European-built warships were crucial to Confederate naval success or failure. These decisions were fraught with uncertainty.

Privateering and commerce raiding were supposed to disrupt the northern economy and draw Federal warships from their blockading duties, weakening the blockade. Jefferson Davis's decision to rely upon privateering, and later commerce raiders, was based partly upon the Confederate belief that European powers would intervene. The Confederates thought that European intervention would come soon, reducing the need for a strong Confederate navy.

Privateering failed, because the European nations' interpretations of neutrality laws forbade bringing captured prizes to neutral ports. With the Federal blockade making it difficult to deliver prizes to southern ports, the privateers had nowhere to take their prizes and to reap the financial rewards.<sup>30</sup> When the privateering program collapsed, Mallory promoted a "Provisional Navy," comprising Confederate naval officers and warships, that would prey upon northern shipping. Although privateering and commerce raiding succeeded in driving many northern shippers to transfer their registries, the northern economy was not unduly disrupted, nor did the Federals detach many ships from blockade duties in pursuit of the commerce raiders. The failure of the privateers and commerce raiders to draw off blockading vessels was due to a dichotomy between

vessels suitable for blockading in the shallow coastal waters and those suitable for "blue water" endeavors, such as pursuing commerce raiders. The blue-water warships were

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generally unsuited for blockade duty, so the indirect approach represented by the privateers and commerce raiders failed to raise the blockade.<sup>31</sup>

Privateering and commerce raiding, however, had three deleterious effects upon Confederate naval strength. First, privateering and commerce raiding antagonized many Europeans, particularly members of commercial and shipping classes. Bulloch reported that "the feeling everywhere in Europe is strongly against the simple destruction of private property at sea . . . and the cruise of the [cruiser] *Sumter* . . . has tended to incite some feeling against us among the commercial classes of Europe."<sup>32</sup>

The British, recalling the depredations of American raiders during the Revolutionary War and the War of 1812, were especially cool toward commerce raiding. Second, given the limited funds and time available to Confederate agents, expenditures upon the flamboyant commerce raiders meant less purchasing power and time for obtaining regular warships or naval supplies. Third, the northern outcry regarding the depredations of British-built commerce raiders eventually caused the British, and later the French, to tighten their interpretations of their responsibilities as neutrals. By the time the Confederates succeeded in making contracts for armored warships, the tightened neutrality enforcement prevented them from getting them to sea.

Though it boosted morale within the Confederacy and discomfited northern shippers, the policy of relying upon privateers and commerce raiders exacted a high price in terms of a Confederate naval buildup. The financial resources, time, and energy spent in obtaining raiders would have been better spent in obtaining naval construction supplies or European-built warships that could have engaged Union warships.

Another decision confronted the Confederacy in autumn 1861. The South considered its price-setting power in the market for raw cotton a strong strategic weapon. How best to use raw cotton to secure southern goals, however, was a daunting question. Southerners had long boasted that by withholding “King Cotton” they could drive the European powers and the North to their knees; therefore, many believed an embargo was the best way to use raw cotton as a strategic weapon. However, the South might have been mistaken about King Cotton’s real power. In retrospect, the unofficial embargo of late 1861 appears to have been the wrong choice, especially in that it did not inspire European intervention. In some ways, late 1861 proved decisive in this respect: the Confederacy needed to establish credit in Europe at that point, and cotton was the fledgling nation’s best asset.

Although some historians believe that 1861–62 would have been a poor time for Southerners, staying in the world raw-cotton market, to have used their collective price-setting power (by continuing to export cotton, albeit in smaller quantities—but for higher prices), an examination of that market casts doubts on this thesis.<sup>33</sup> The Confederate government might have obtained cotton via purchase or loans and shipped as much as it could through the still-developing blockade. The Confederacy’s enhanced purchasing power would have enabled it to purchase greater amounts of war materiel and to ship such supplies through the still relatively weak blockade, at lower transportation costs than were incurred later in the war. Thus, the Confederacy could have entered the second year of the war in a stronger position than it actually did, having embargoed exports of raw cotton. While this scenario presupposes that shipping would have

become available to transport cotton, the loss of northern shipping might have been offset by foreign vessels responding to rising freights.

Moreover, encouraging foreign shippers to pick up raw cotton carried an extra benefit: constant harassment or detention by Union warships of foreign merchantmen might have created a pressure for those governments to act. Further, the export of large amounts of raw cotton would have undermined the Union's assertion that its blockade was effective, and an erosion in the perceived effectiveness of the Union blockade might have swayed the Europeans toward intervention, or at least repudiation of the blockade's legality. Another compelling reason for not implementing an embargo was that a potential shortage of raw cotton could be better used as a standing threat; as it was, the embargo gradually forced the British to learn to survive without southern raw cotton, and the value of any such potential threat dissipated. The Southerners might have been better off keeping the British and French manufacturers in a state of fearful ignorance of the ramifications of a possible cutoff. By shipping raw cotton, the Confederacy would have put the onus of any shortage upon the North. The Confederates could have pointed to the Union's blockade as the cause of European economic dislocation. Finally, a free trade policy would have created better feelings between the Confederacy and the Europeans.

Therefore, the informal embargo on the export of raw cotton hobbled the southern economy, incurred the anger of Europeans, and did not induce intervention. Once the northern blockade became stringent, the Southerners' opportunity to exploit price-setting power in the world market for King Cotton slipped away. The Confederacy and its naval buildup would have been better off without the embargo.

As we have briefly noted, shifting European interpretations of neutrality laws confounded the Confederates. Aside from some commerce raiders, only one of the European-built warships earmarked for the Confederacy ever sailed under the Stars and Bars, because the Europeans developed a narrow interpretation of their neutrality responsibilities.<sup>34</sup> Mallory had instructed his agents to be scrupulous in observing European neutrality. International law seemingly allowed neutrals to build seagoing vessels for belligerents as long as the vessels were not armed in the neutrals' ports; Mallory relied upon this interpretation. Unfortunately for his efforts to purchase warships, the British (and later the French) eventually decided to interpret their neutrality as covering any vessel that could reasonably be used as a warship, even if not armed in that country.

As early as April 1862, Bulloch warned Mallory about the changing British attitudes, but the Confederate authorities were slow in recognizing the shift. Bulloch wrote, "The British government seems to be more determined than ever to preserve its neutrality, and the chances of getting a vessel to sea in anything

like fighting condition are next to impossible.”<sup>35</sup> Mallory preferred to believe that the escape of the British-built commerce raiders was a truer indication of British interpretation of their neutrality obligations. Certainly, the Confederates received mixed signals from their diplomatic and naval personnel. Several expressed their belief in early 1862 that recognition or at least an easing of the neutrality laws was imminent.<sup>36</sup> Based on these reports, Mallory renewed the efforts to purchase European-built warships.

While Mallory’s decision did not result in success, it was an understandable one. European-built warships promised to be better than any Confederate-built vessel. In addition, given Europe’s comparative advantage in building warships, less time would probably have been needed to acquire European vessels than to build them. Gambling upon European assistance may have been prudent, especially early in the war.

As the war continued, however, the prospects that the Europeans would recognize the Confederacy—or even connive at building warships for the Confederates—depended upon their estimations of eventual Confederate military success. By quickly acquiring European-built warships, the Confederacy might have forestalled Union naval victories, strengthened its bid for recognition, and increased the Europeans’ willingness to supply additional warships. Because the Confederacy suffered major defeats in the western theater during early 1862, European enthusiasm for intervention and recognition diminished, and the Europeans were more willing to tighten their neutrality rules when pressed by Washington. Ultimately, European recognition of Confederate independence and tacit permission for warships to sail from their ports proved elusive.

Unfortunately for the Confederacy, the recurrent hopes of purchasing ironclads in Europe may have delayed the eventual decision to build ironclads domestically; the two ironclads at New Orleans were authorized only in September 1861, after the attempts to purchase European-built warships failed.<sup>37</sup> In retrospect, the Confederates might have been better off not basing their actions on the hope of European recognition and intervention. This view is borne out by the assessment by Judah Benjamin, the Confederate secretary of state, of the value of Louis Napoleon’s professions of friendship with the Confederacy:

The Emperor of the French, after having himself suggested and promised acquiescence in the attempt of this Government to obtain vessels of war by purchase or contract in France, after encouraging us in the loss of invaluable time and of the service of some of our best naval officers, as well as in expenditure of large sums obtained at painful sacrifice, has broken his faith, has deprived us of our vessels when on the eve of completion, and has thus inflicted on us an injury and rendered to our enemies services which establish his claim to any concessions that he may desire from them.<sup>38</sup>

Given the difficulties faced by Confederate builders in the South and Confederate naval officers in Europe in securing sufficient warships for the Confederacy, was there another way to build Confederate naval strength? Bulloch advised that the shipbuilding efforts in Europe should be suspended in favor of domestic shipbuilding. He suggested that the South, with its ample timber resources, import iron plates from Europe: "Vessels [should] be laid down at once, at the various ports in the Confederacy where timber is abundant, then by sending over scale drawings or working plans of their decks and sides, the iron plates, rivets, bolts, etc., could be made here, marked, and shipped to arrive as soon as the vessels would be ready to receive them."<sup>39</sup>

Europe, of course, possessed greater capabilities for manufacturing iron plates than did the South. In addition, Mallory knew as early as May 1861 that the Confederacy would have difficulty producing them. The imported iron plates would have enabled the Confederacy to quicken the pace of shipbuilding, while conserving the scarce iron held in the Confederacy. The Confederates could have also more easily imported shipboard machinery earlier in the war. Further, the plan would have eased the dilemma posed by British and French neutrality (inherent in obtaining warships from Europe), as the importation of iron and machinery was less controversial than the purchase of entire warships. The shipping of iron plates and machinery would have also avoided the difficulty of making European-built iron-armored vessels seaworthy enough to navigate the Atlantic and yet shallow enough in draft for coastal waters.<sup>40</sup> Finally, Bulloch's original plan would have precluded the disappointments suffered by the Confederacy when their ships were seized by British and French authorities under neutrality rulings.

Thus, even as late as fall 1861, given sufficient purchasing power and the ability to import rolled iron and machinery through the still-developing blockade, the Confederacy could have obtained more materials to alleviate the shortages and to build enough ships domestically to contest the Union navy's control of the American waters. The key would have been to obtain the iron plating and machinery both to speed construction of the *Virginia* and other ironclads and to improve these vessels' quality.

While, even with foreign help, the Confederacy was unlikely to win a prolonged ironclad arms race with the North, it could have hoped to gain at least some localized superiority by early 1862; such an advantage might have persisted through mid-1862 and have created sufficient consternation further to discomfit the fragile northern political coalition. In retrospect, Bulloch's plan to ship iron plates and machinery looks astute; it could have improved the Confederate navy, especially had the attempt been made early in the war before the Union navy's blockade became stringent.

## FORESIGHT, SKILL, AND A LITTLE LUCK

The Confederate States of America failed to field a navy strong enough to gain superiority on the American waters; specifically, the South never completed enough ironclads to wrest control of the American waterways. The domestically built ironclad was not a total strategic failure: the presence of the ironclad *Tennessee* in Mobile Bay delayed Admiral Farragut's attack until northern ironclads could leave their posts in the Atlantic; the ironclads in Charleston, Wilmington (North Carolina), and Savannah—including the CSS *Atlanta*, *Chicora*, *North Carolina*, *Palmetto State*, and *Raleigh*—also helped delay Federal attacks, keeping these ports open for Confederate blockade runners.<sup>41</sup> Still, both the domestic building and foreign purchasing endeavors failed to net enough warships.

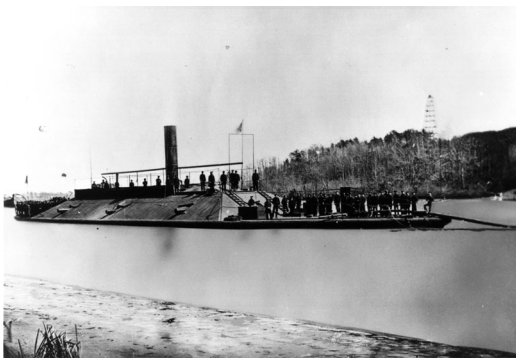
The reasons for the failures are not hard to discern: insufficient domestic resources; inadequate financial clout in Europe; tightening interpretations of neutrality by European powers; and perhaps a lack of vision by Confederate leaders. Many of these deficiencies can be traced to a set of decisions. First, the Confederate leaders' acquiescence in the informal embargo on raw cotton hurt southern purchasing power. Second, the initial reliance upon privateering and commerce raiding gave the Confederacy little advantage and diverted the Confederate navy's energy and resources from obtaining ironclad warships; also, the purchase of European-built commerce raiders contributed to the Europeans' tightening of neutrality rules so as to prevent the Confederacy from obtaining ironclad warships. Third, the early decision to rely upon European-built war-

ships proved wasteful in terms of time, energy, and purchasing power, and the unrealized hopes for such warships may have delayed domestic construction of ironclads. Fourth, the delay in importing naval supplies during late 1861 before the blockade became fully effective forced the Confederate navy to rely upon the South's inadequate domestic resources.

The first three decisions certainly rested upon the perception that quick European recognition and intervention were likely. While this perception proved erroneous, it was not necessarily unreasonable. Some

historians believe that the Confederates were on the verge of gaining European recognition or intervention (by mediation perhaps); if so, even a moderately stronger Confederate navy might have precluded certain key Federal victories in spring 1862 and triggered such intervention or recognition.

Nonetheless, there was an opportunity for the South during the fall and winter of 1861–62 to export more cotton before the blockade became too effective. The South's increased purchasing power could have enabled it both to obtain



CSS *Atlanta* Naval Historical Foundation

sufficient iron plating and machinery to build rapidly several ironclads and to reduce the disruption to its economy caused by the Federal blockade. The purchase of European-built warships was more feasible earlier in the war as well, before the British and French governments tightened their policies on building vessels destined to become warships for belligerents. Concentrating upon regular warships, particularly ironclads, rather than commerce raiders early on might have been more fruitful too. The prospects for a strong Confederate navy depended upon correct divinations by Davis and Mallory of European attitudes. Immediately and energetically pursuing ironclads or other warships in Europe, if such an opportunity arose, and promptly importing iron plating and machinery to bolster domestic construction, may have involved too much prescience to ask of any leader, much less those involved in creating a new country and navy.

Even had Davis and Mallory succeeded in their endeavors, we need to ask whether the Federals could have matched and forestalled them. Clearly, had Welles and Lincoln immediately implemented an ironclad construction program in early April or May 1861, the North might have rapidly built several and swamped the fledgling Confederate navy. As we have seen, though, Welles had reason to proceed cautiously. Indeed, although the Federals were aware in late 1861 of Confederate ironclad-building efforts at Memphis, New Orleans, and Norfolk, they reacted only belatedly and in a limited way: only three ironclads were begun by the Federal navy. The major buildup occurred after the *Virginia* and the *Monitor* showed their worth. If the Northerners lacked an immediate capacity to roll the requisite iron plating, they would have had an easier time purchasing and importing English-produced iron plating than the Confederates did. Certainly anything the Confederacy could do in the way of industry or overseas trade, the North could have done better. As it was, the North gave the Confederacy a head start, albeit a brief one, in procuring ironclads.

The Federal failure to destroy thoroughly the Gosport Navy Yard at Norfolk was another significant mistake. The naval ordnance enabled the Confederates to arm and defend their seacoast and inland ports, hindering the Federal navy's blockade and its attempts to capture those ports. The partially destroyed *Merrimack* at Norfolk, of course, was a godsend for the nascent Confederate navy, as was the shipyard's huge dry dock. Had the Confederates been denied these assets, their attempts to obtain a strong navy would have been further impaired.

Finally, the Union navy and army might have more aggressively attempted to capture key Confederate ports earlier in the war. Such endeavors were sometimes delayed while troops were scraped together from parsimonious army commanders. As we have seen, the capture of New Orleans, Memphis, and Norfolk severely reduced the Confederacy's ability to build warships domestically or export staple products to Europe.



Union naval superiority proved decisive in the war, but the North came perilously close to forfeiting, at least temporarily, its advantage. Mallory reacted creditably, by attempting to build a strong Confederate navy, but Jefferson Davis might have been more aggressive in pushing the Confederate Congress to support his secretary's efforts.<sup>42</sup> Still, if Davis and Mallory depended too much upon the hope of European intervention or connivance in supplying warships for the Confederacy, their error was, as we have seen, based upon not-unreasonable foundations. The delay and ultimate failure in obtaining European-produced iron plating and machinery was a less excusable mistake, for Mallory knew early in the war that the Confederacy was deficient in its ability to produce such commodities. Still, while it is possible that Mallory and Davis could have done better in building the Confederate navy, it also seems possible that other leaders in their places could have done much worse. A strong Confederate navy was not a chimera, but it would have required extraordinary foresight and skill, and perhaps not a little luck, to transform into reality.

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#### NOTES

1. After the war, Jefferson Davis expressed an interesting idea: he argued that the Confederacy had been entitled to some of the existing warships in the American fleet, since that navy had been the product of collective action by the states. Therefore, the naval officers who eventually cast their lot with the Confederacy should have brought their vessels with them. Jefferson Davis, *The Rise and Fall of the Confederate Government* (New York: D. Appleton, 1881), vol. 1, p. 313. Navy historian J. Thomas Scharf echoed Davis's complaint. J. Thomas Scharf, *History of the Confederate States Navy* (New York: Rogers and Sherwood, 1887), pp. 17–8.
2. U.S. Navy Department, *Official Records of the War of Rebellion: Navy* [hereafter ORN], 30 vols. (Washington, D.C.: U.S. Govt. Print. Off. [hereafter GPO], 1894–1922), ser. 2, vol. 2, p. 67.
3. U.S. Naval History Division, *Civil War Chronology* (Washington, D.C.: GPO, 1971), vol. 1, p. 30; Paul H. Silverstone, *Warships of the Civil War Navies* (Annapolis, Md.: Naval Institute Press, 1989), p. 15; T. Harry Williams, *Lincoln and the Radicals* (Madison: Univ. of Wisconsin Press, [1941] 1969), pp. 359–60; and David D. Porter [Adm., USN], *Naval History of the Civil War* (New York: Sherman, 1886), p. 357. During the war, an entire class of ironclads (twenty vessels) proved defective, costing over ten million dollars; the fiasco was investigated by a congressional committee. U.S. Congress, "Light-Draught Monitors," *Report of the Joint Committee on the Conduct of the War*, vol. 3, 38th Cong., 2d sess. (Washington, D.C.: GPO, 1865), pt. 2, pp. 824–5.
4. U.S. Bureau of the Census, *Eighth Census: Manufacturing* (Washington, D.C.: GPO, 1865), p. 698.
5. ORN, ser. 2, vol. 1, pp. 503–4 and 507; and Louis C. Hunter, *Steamboats on the Western Rivers* (Cambridge, Mass.: Harvard Univ. Press, 1949), p. 107.
6. ORN, ser. 2, vol. 2, pp. 51 and 67–9; and William N. Still, Jr., *Iron Afloat: The Story of the Confederate Armorclads* (Nashville, Tenn.: Vanderbilt Univ. Press, 1971), p. 11.
7. U.S. War Department, *Official Records of the War of Rebellion*, 128 vols. (Washington, D.C.: GPO, 1880–1900), ser. 4, vol. 2, pp. 512–3; and U.S. Department of the Treasury, *Report of the Secretary of the Treasury: Commerce and Navigation, for the Year Ending June 30, 1860*, 36th Cong., 2d sess., Sen. Ex.

- Doc. 8 (Washington, D.C.: GPO, 1861), p. 461. Only two southern manufacturers were capable of rolling railroad iron—the Atlanta Rolling Mill and Etowah Iron Works. Robert C. Black III, *The Railroads of the Confederacy* (Chapel Hill: Univ. of North Carolina Press, 1952), p. 23. The rails normally lasted from ten to fifteen years, but the increased wartime traffic probably meant a shorter life. The increased rate of deterioration exacerbated the shortage of iron in the Confederacy.
8. *ORN*, ser. 2, vol. 1, p. 606, and vol. 2, pp. 72–3, 152, and 183; and Still, *Iron Afloat*, p. 144. During the war, three southern rolling mills adapted their machinery to roll two-inch iron plate. *ORN*, ser. 2, vol. 1, pp. 581 and 599; and vol. 2, pp. 74 and 244. The North had difficulty in completing the *Monitor* because initially only one firm could roll even one-inch iron plates. Frank D. Moore, ed., *Rebellion Record* (New York: D. Van Nostrand, 1861–67), vol. 4, p. 59.
  9. U.S. Bureau of the Census, *Eighth Census: Manufacturing*, pp. 716 and 738. Before the war, the shafts for the engines were produced in Baltimore and other northern cities. Mallory hoped that the purchase of a Nasmith hammer would rectify the deficiency at Norfolk. *ORN*, ser. 2, vol. 2, pp. 77 and 151. See also James Bulloch, *The Secret Service of the Confederate States in Europe* (New York: G. P. Putnam’s Sons, 1884), vol. 1, p. 21.
  10. *ORN*, ser. 1, vol. 21, p. 600; and Still, *Iron Afloat*, pp. 44 and 144. Naval officers tested armor plating and decided to cover the vessels with two two-inch-thick layers of iron (one layer running vertically and the other running horizontally across the hull). Secretary of the Navy Mallory had hoped to cover the vessels with three-inch plate, but the southern mills were unable to roll this thickness. *ORN*, ser. 2, vol. 1, pp. 785–6; and Still, *Iron Afloat*, pp. 97–8.
  11. *ORN*, ser. 1, vol. 5, p. 821; and ser. 2, vol. 2, p. 151. Tredegar faced many difficulties in getting pig iron from New Orleans in late 1861. The railroads needed months to get the material to Richmond, and the freights were greater than the original cost of the pig iron. In addition, 120 tons were lost in transit. C. B. Dew, *Ironmaker to the Confederacy: Joseph R. Anderson and the Tredegar Iron Works* (New Haven, Conn.: Yale Univ. Press, 1966), p. 103.
  12. *ORN*, ser. 2, vol. 1, pp. 461, 534–5, and 605–6.
  13. William N. Still, Jr., *Confederate Shipbuilding* (Athens: Univ. of Georgia Press, 1969), p. 67; Dew, *Ironmaker to the Confederacy*, p. 154; and *ORN*, ser. 2, vol. 2, pp. 135 and 151. Many of the Irish puddlers (who converted pig iron to wrought iron by a process involving heat, stirring, and oxidization) left Richmond and went north when hostilities began. Dew, p. 90. Early in the war, Jefferson Davis sent a naval officer, then-Commander Raphael Semmes, to the North to recruit skilled mechanics. Raphael Semmes, *Memoirs of Service Afloat, during the War between the States* (Baltimore: Kelly, Piet, 1869), p. 83. Tredegar attempted to recruit skilled workers from Europe in 1862, but the effort failed. Driven by desperation, Confederate officials began to scour prisoner-of-war camps for Union prisoners with skills. Usually the prisoners of war took oaths of allegiance to the Confederacy; to preclude escape attempts, the Confederate authorities then sent lists containing the names of these new Confederates to the Union army. Dew, p. 234.
  14. *ORN*, ser. 2, vol. 1, pp. 461 and 527; and William N. Still, Jr., “Facilities for Construction of War Vessels in the Confederacy,” *Journal of Southern History*, vol. 31, 1965, p. 304.
  15. *ORN*, ser. 2, vol. 2, pp. 67–9. Mallory cited mitigating factors that would reduce the cost of the *Gloire* and other ironclad vessels—that they carried fewer guns and required smaller crews than traditional sailing vessels. *ORN*, ser. 2, vol. 1, p. 742. Ironically, *Gloire* might have been a useless acquisition. Historian Warren Spencer details the dubious seaworthiness of *Gloire*. Warren Spencer, *The Confederate Navy in Europe* (Tuscaloosa: Univ. of Alabama Press, 1983), p. 66.
  16. *ORN*, ser. 2, vol. 2, pp. 106, 122, and 168; and Still, *Iron Afloat*, p. 11. Mallory’s thoughts on acquiring the *Gloire* are found in *ORN*, ser. 2, vol. 2, p. 70. However, his agent in Europe believed that such attempts were futile, “as both France and England are anxious to get all the ironclad ships they can.” *ORN*, ser. 2, vol. 2, p. 87. This agent may have exaggerated the difficulty, as he subsequently contracted for a large ironclad vessel.
  17. Spencer, *Confederate Navy in Europe*, p. 82.
  18. *Ibid.*, p. 117.

19. Bulloch advised North that such a large vessel was impractical for the Confederacy's purpose. *ORN*, ser. 2, vol. 2, pp. 207–8; and Bulloch, *Secret Service*, vol. 1, pp. 384–5.
20. Spencer, *Confederate Navy in Europe*, p. 122.
21. *Ibid.*, p. 118. Spencer freely admits that no one really knows how formidable these European-built warships would have been, but he argues that the aura of “invincibility” attached to the vessels in later years was a myth. Naval historian Frank Merli believes that the ram aspect of these warships may have been overestimated, though the turrets would have proved useful. The vessels were often uncomfortable in the open seas and left their crews doubting their seaworthiness in rough seas. Frank J. Merli, *Great Britain and the Confederate Navy, 1861–1865* (Bloomington: Indiana Univ. Press, [1965] 1970), pp. 141–3, 155–6, 159, and 213–7. Silverstone, in contrast, claims that the Laird rams were “turret ships superior to any Federal warship.” Silverstone, *Warships of the Civil War Navies*, p. 200.
22. Bulloch, *Secret Service*, vol. 1, pp. 385–6; *ORN*, ser. 2, vol. 2, pp. 79, 223–4, 226, and 269; and Richard Lester, *Confederate Finance and Purchasing in Great Britain* (Charlottesville: Univ. of Virginia Press, 1975), pp. 119 and 122. Bulloch received a volume discount of £1,250 on each vessel's original price of £95,000. Bulloch's complaints about the shortage of funds are found in *ORN*, ser. 2, vol. 2, p. 167.
23. Scharf, *Confederate States Navy*, p. 32; and Joseph T. Durkin, *Stephen Mallory: Confederate Navy Chief* (Chapel Hill: Univ. of North Carolina Press, 1954), p. 145.
24. Bulloch, *Secret Service*, vol. 1, pp. 53–4, 85, 100–2, and 376; *ORN*, ser. 2, vol. 2, p. 87; and Semmes, *Memoirs of Service Afloat*, pp. 367–8.
25. During and after the war, there were allegations that the Confederates had conspired to obtain war materiel, including warships, prior to secession. For typical opinions regarding these allegations, see Porter, *Naval History*, p. 356; and Davis, *Rise and Fall*, vol. 1, pp. 311 and 314. If the North had tried to match the Confederate naval buildup before hostilities began, the action might have been seen as aggressive and provocative by Europeans and many northerners. If it was important, as Lincoln believed, to maneuver the Confederates into firing the first shot at Fort Sumter, it may have been foolhardy to counter aggressively a Confederate naval buildup. However, the U.S. Congress did authorize the construction of seven new steam sloops in February 1861, before Lincoln's inauguration. U.S. Naval History Department, *Civil War Chronology*, vol. 1, p. 26; *ORN*, ser. 2, vol. 2, pp. 44–50, 51, 64–6, 70–2, 95, 106, and 108–30; and Bulloch, *Secret Service*, vol. 1, p. 41.
26. *ORN*, ser. 2, vol. 2, pp. 44–50, 51, 64–6, 70–2, 95, 106, and 108–30; and Bulloch, *Secret Service*, vol. 1, p. 41.
27. *ORN*, ser. 2, vol. 2, p. 152.
28. *Ibid.*, pp. 168, 177, 181–2, and 185; and Jefferson Davis, *Messages and Papers of Jefferson Davis and the Confederacy*, ed. James D. Richardson (New York: Chelsea House–Robert Hector, 1966), vol. 1, p. 211.
29. After the war, critics charged Davis with missing opportunities, including an offer made by the East India Company. The company had ten steam vessels designed to carry ordnance that it no longer needed and offered to sell them to the Confederacy at half price. General Pierre Beauregard (through his ghostwriter Alfred Roman) and R. Barnwell Rhett accused Davis of bungling this opportunity. Details are sketchy; historian William C. Davis has the best discussion of this tantalizing but vague offer. Alfred Roman, *The Military Operations of General Beauregard* (New York: Harper & Bros., 1884), vol. 1, p. 59; R. Barnwell Rhett, “The Confederate Government at Montgomery,” *Battles and Leaders of the Civil War* (New York: Century, 1884), vol. 1, p. 107; and William C. Davis, *A Government of Our Own: The Making of the Confederacy* (New York: Free Press, 1994), pp. 350–1. Davis did not hinder Mallory's efforts in building a navy, but he did not encourage the Confederate Congress to help Mallory. Davis apparently never understood the importance of the navy, aside from commerce raiding and keeping the ports open. For Davis's attitudes toward Mallory, see Josiah Gorgas, *The Civil War Diary of Josiah Gorgas*, ed. Frank E. Vandiver (Tuscaloosa: Univ. of Alabama Press, 1947), pp. 58–9.
30. Davis, *Messages and Papers*, vol. 2, pp. 179–80.
31. Stephen R. Wise, *Lifeline of the Confederacy: Blockade Running during the Civil War* (Columbia: Univ. of South Carolina Press, 1988), p. 121.

32. Davis, *Messages and Papers*, vol. 2, p. 180; and *ORN*, ser. 2, vol. 2, pp. 165 and 183–4. Naval historian Bern Anderson believes that Davis's decision to implement privateering was "the death warrant of the Confederacy, because it prompted Lincoln to proclaim a naval blockade against the southern ports." He may have overstated the case, as Lincoln probably would have implemented the blockade regardless of Davis's decision. Bern Anderson, *By Sea and By River: The Naval History of the Civil War* (New York: Knopf, 1962), p. 26.
33. See David Surdam, "King Cotton: Monarch or Pretender? The State of the Market for Raw Cotton on the Eve of the American Civil War," *Economic History Review*, vol. 51, 1998, pp. 113–32.
34. See *ORN*, ser. 2, vol. 2, pp. 83–4, 165, and 186–7; Davis, *Messages and Papers*, vol. 2, pp. 389–90, 459, 474, 516, 597, 624, 676, and 706; and Bulloch, *Secret Service*, vol. 1, pp. 23–4, 380–1, and 383.
35. *ORN*, ser. 2, vol. 2, p. 183. Bulloch was still hopeful about getting unarmed vessels out of Britain. He believed that had he been supplied with enough cash, more warships might have been completed and sailed before the British tightened their policies regarding neutrality. *ORN*, ser. 2, vol. 2, p. 167.
36. Davis, *Messages and Papers*, vol. 2, pp. 159 and 164; and Jefferson Davis, *The Papers of Jefferson Davis*, ed. Lynda Lasswell Crist and Mary Seaton Dix (Baton Rouge: Louisiana State Univ. Press, 1992), vol. 7, pp. 255, 308, 374–5, and 395; and *ORN*, ser. 2, vol. 2, p. 152.
37. *ORN*, ser. 2, vol. 2, p. 122.
38. Davis, *Messages and Papers*, vol. 2, p. 676.
39. *ORN*, ser. 2, vol. 2, p. 184. At least two historians of the Confederate navy believe that Bulloch's idea was feasible and astute; however, Raimondo Luraghi disagrees. Merli, *Confederate Navy*, pp. 178–9; Tom H. Wells, *The Confederate Navy: A Study in Organization* (Tuscaloosa: Univ. of Alabama Press, 1971), p. 136; and Raimondo Luraghi, *A History of the Confederate Navy* (Annapolis, Md.: Naval Institute Press, 1996), p. 203.
40. Spencer, *Confederate Navy in Europe*, pp. 67 and 117.
41. Still, *Iron Afloat*, pp. 203–4 and 231, and "Confederate Naval Policy and the Ironclad," *Civil War History*, June 1963, p. 156.
42. Historian Tom Wells presents a more critical assessment of Mallory's performance as Secretary of the Navy: "Unfortunately for the Confederacy, Mallory was a dreamer and a romantic. He kept hoping things would somehow work themselves out if left alone. A lover of innovation and a progressive thinker, he failed to take sufficient cognizance of the means by which some of his ideas were to be applied. Ever proud of his cabinet position, he refused to risk it in an all-out effort to obtain the men, money, and material essential to the navy's well-being" (Wells, *Confederate Navy*, p. 151).

*Commander Joseph A. Gattuso retired from the U.S. Navy in 1998. He holds a master's degree in aerospace engineering and is a distinguished graduate of the U.S. Naval War College. He has served at the Naval Strike and Air Warfare Center, in A-7 and F/A-18 aircraft, at the F/A-18 Weapons Systems Support Activity, and at the U.S. Naval Academy. Commander Gattuso has been published in numerous professional journals. He is currently an independent naval strategist and futurist for Brandes Associates.*

*Ms. Lori Tanner served fourteen years as a naval aviator before leaving the service in 1997 as a lieutenant commander. After receiving her wings in 1985, Ms. Tanner served as an instructor pilot, aggressor pilot, and test pilot for the A-7 and T-45, and flew the F/A-18 at Weapons Test Squadron, China Lake, where she was also executive officer. She received her master's degree in aerospace engineering from the U.S. Navy Postgraduate School, Monterey, and holds undergraduate degrees from Michigan State University in mechanical engineering and theoretical and applied mechanics. She is currently employed as an independent strategist and futurist by Brandes Associates. Ms. Tanner has been published in numerous professional journals and has been a featured speaker on many panels concerning ethics and integrity in the military.*

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## SET AND DRIFT

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### NAVAL FORCE IN THE NEW CENTURY

*Joseph A. Gattuso, Jr., and Lori J. Tanner*

It is 1890.<sup>1</sup> The United States is flexing its broad, young shoulders, strengthened by an infusion of new immigrants, new technologies, and by American political leadership that represents the growing nation's outward-looking perspective. The United States desires to play on the world stage along with the great imperial nations. However, naval leadership has a different viewpoint. It is content with its small, coastal, commerce-raiding, Jeffersonian fleet. Then along comes a reticent, unlikable naval captain of middling reputation who captures the nation's imagination with his plan for a navy that will do battle at sea upon the great world stage. Alfred Thayer Mahan's concept of sea power perfectly matches the nation's vision of itself. What about the naval hierarchy? They exile Mahan to sea, noting in his fitness report that naval officers should not concern themselves with writing books. As it turns out, the Navy's leadership will be dragged kicking and screaming into the twentieth century, down the path Mahan predicted.

It is 1922. The United States has fought the war to end all wars. The political leadership, again representing the nation's view of the world, evinces a desire to retrench, to pull back from international involvement. The Navy, however, imagines a forward-leaning, internationally involved nation, with fleets of battleships leading the way. Its views are so mismatched with those of the government that the political leadership effectively excludes the Navy from meaningful participation in the Washington Naval Treaty—an event that would have significant implications for the Navy's force structure in the next world war.

It is 1947. U.S. political leadership has one picture of how it wants to project power, and once again the Navy has another. The admirals revolt—with predictable consequences. The Navy loses a significant portion of its leadership as the world enters the Cold War, and it suffers a loss of political clout and a degraded reputation among the American public.

It is 1970. The nation is in the throes of sweeping change. The Navy struggles to match its missions to the international environment, but for the first time it encounters the “gasoline fuel in the diesel engine” dilemma. Its organizational structure is ill matched to social input and ill prepared for the rapid shift in the political foundations of the country. It sputters and becomes a hollow force.

What do all these periods have in common? Just this—that the Navy’s picture of the world, or what Edward Rhodes calls its “cultural-cognitive framework,” did not match that of the political leadership. This mismatch, whenever it occurs, has disastrous consequences for the Navy and the public it serves. The United States is now approaching a similar period in history. This time, however, the problem is shaping up to be not only a strategic mismatch but one of technology and organizational structure as well. In light of these three critical fault lines, the Navy’s perch at the dawn of the new century is a precarious one.

#### THE STRATEGIC MISMATCH

The Navy operated in a Cold War international system from 1947 until the fall of the Berlin Wall in 1989. Most strategic observers agree that globalization (to varying degrees) is now the emerging international system. We have seen globalization before, but never with the pervasiveness or intensity of today. To form a clear picture of the ramifications of globalization for military organizations, compare the Cold War international system of well defined geographic boundaries to globalization’s rabid need to eliminate borders. The fundamental operating paradigm (at least for the West) of the Cold War—constrained capitalism was embodied in two words—“Stop communism”—while the fundamental operating premise of globalism is to spread democratic, free market capitalism. The Cold War put a premium on separatism, maintaining the status quo, stability, and tradition; the key character traits of a globalistic international system are speed, innovation, chaos, and “churn.” The Cold War had its own ideologies, demographics, technologies, and politics that formed particular domestic policies, foreign relations, economic policies, and military structures. Militaries of the Cold War period were noted for their weight, mass, technology, and firepower; their fundamental *raison d’être* was pure and simple—destruction. Globalization has its own ideologies, demographics, technologies, and politics, which form different domestic and foreign relations frameworks, technologies, and economic policies.

But wait—we still have a Cold War military structure, with the same *raison d’être*.

There is a lethal tension within globalism that will determine the roles and missions of future forces. Those who consider economic prosperity the best hope for global stability will bring immense pressure to bear to ensure

unimpeded access to economic markets on a global scale. But others consider family, tribe, race, religion, or the environment to be inviolate values. The global economy, indigenous cultures, the environment, and international crime are “globally sovereign issues” that threaten the entire planet if not properly addressed.<sup>2</sup> Watch for the phrase “The New Security Agenda,” which embodies this new philosophy.

In the past, the successful nations were those who best tailored force structures to meet political objectives. There has always been a duality in conflict: due to the very nature of divergent political objectives and the unlikelihood of frightening global consequences should one ideology meet its demise, someone would win, and usually someone would lose. However, this period of globalization is different. The future global community will have to tailor its forces to meet new, worldwide political objectives. The planet is just about filled up, and globalism puts a dangerous twist on the old zero-sum political game. For perhaps the first

time in history, mankind will discover that if any one ideology wins, everyone might lose. If the global economist succeeds in overpowering the environment, no one will have a place to live. If the environmentalist

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*What about the naval hierarchy? They exile Mahan to sea, noting in his fitness report that naval officers should not concern themselves with writing books.*

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succeeds in imposing excessive controls, the poor in many nations may remain poor, and without jobs they will destroy the environment so they can eat.<sup>3</sup> If the monoculturalistic steamroller of globalism sweeps away even one culture, somewhere on the globe, it may take only one disgruntled idealist to cause massive human destruction or ruin environmental resources. If issues of national sovereignty impede the fight against international crime, that crime may soon erode all nations. If issues of national sovereignty become licenses to commit crimes against humanity, rampant global conflict may result as neighbors get nervous and intervene militarily, igniting a worldwide domino effect—in the global village, everyone is your neighbor.

Typically it has always been one side against another, but in a global village, there *is* only one side. What, then, should forces that are designed to look after security and defense be about? More to the point, what defines “security and defense”?

Within the United States there is one common thread to that definition, one thing the American public will not suffer—a threat to its personal prosperity. In America and much of the world, that is what the public will fight for, and it is certainly what it votes for. Thus the question of roles and missions for future forces must occur within a framework that has little to do with any issue of national sovereignty (observe the presidential candidacy polls in 2000 for Mr. Pat



Buchanan). America has a global economy that is currently generating the greatest economic boom in its history. Purely national interests no longer define the American public's emerging desires; securing what it wants will mean securing the global economy. There's the rub.

The global economy might best be described as "biological imperialism." There is no central point of control. One and a half trillion dollars move around the world *every twenty-four hours*, driven by the interests of a wide range of global investors. These investors vote every minute, not every four years. Governments are finding their internal freedoms and political latitude restricted as they are compelled to establish certain economic or political policies to stay plugged into the massive flow of investment capital. If they do stay plugged in, they get rich; if they do not, they get poor—very quickly. This biologically imperial globalistic economy grows on the opportunities it chaotically creates by and for itself.

Empires have three basic needs: expansion, trade, and security. In today's interconnected world, the global economy will demand the same. Why? Wherever in history an economic system has sprung up and flourished, shortly thereafter a military force has appeared to secure that system. Therefore, in a global economy, one expects that a military force (perhaps not a global force, but most likely one with globalistic priorities rather than national ones) will appear to protect it.

The missions of a future global force can be found in three straightforward goals. First, a naval force for the future will be required to further the expansion of the global economy, most probably by creating or fostering, wherever it goes and in whatever it does, an environment conducive to globalization. Second, sea power (on the sea or not) will be needed to ensure the openness of trade everywhere around the globe; it is a global economy primarily because goods can be shipped anywhere in the world by water, at insignificant cost. Third, ensuring free trade will mean ensuring communications. Force may be needed to disrupt or deny systems or infrastructures—not blow them up, since someone will have to pay to replace what gets blown up, and in our connected global economy that means anyone who has any investments whatsoever in any country. Sea power may also be required to "stand up" an on-scene, ad hoc financial system to maintain a crisis region's economy, or to ensure the fair and humanitarian application of embargoes and sanctions.

Security for such an economy will require a vastly different approach than our current one envisions or permits. Force in the new century must secure globally sovereign issues, which will mean much more than what we now think of as things military. It means a force connected to global expertise in economics, politics, the environment, culture, civic infrastructure, science and technology, and, not to forget, defense.

The strategic environment of nations determines the nature and demands of their national security requirements—nations being essentially the “customers” for any forces charged with their security. The old international system (the old customer, collectively) demanded a certain type of military force. Well, the customers are changing, and they want different things. Somalia, Kosovo, and East Timor are pregnant with significance for those responsible for force structure. The convocation of nations in a global society no longer wants forces that will blow up things and wreak economic, environmental, and political havoc with neighbors.<sup>4</sup> Just like any other customer, nations will get what they need where they can. America has no monopoly in this market; in fact, its current defense product does not appear to be shaping up to meet this emerging need.<sup>5</sup>

#### THE TECHNOLOGY MISMATCH

The weapon systems in today’s military were conceived, designed, and developed during the industrial age. They no longer match the networked world. In network environments, mass of any kind tends to become a target. The economics of leveraging dumb power will drive those who depend upon high-cost, clumsily complex technology right into the fiscal dirt.<sup>6</sup> Aircraft carriers are today’s battleships—national treasures that may become too valuable to risk when some Osama Bin Laden figures out (soon) how to do them in, with any one of a number of asymmetric strategies. More probably, the carrier will become obsolete because of its aircraft. Weapon systems today that shoot down manned aircraft are dependent upon technologies that are advancing much faster than the aircraft themselves. Precision guided weapons—which are what surface-to-air missile (SAM) systems are—depend upon computer, sensor, network, miniaturization, and communications technologies. Aircraft depend upon material and propulsion technologies, and their greatest limitation is the need for a human-friendly environment.

Which group of technologies is progressing faster? One day soon, in a cultural battle, someone will no longer wish to put up with arrogant Western overflights. Some nation or group will buy a few “sons of SA-10” that can be fired by connectivity between cell phones, laptops, and a department-store telescope. The United States will launch a few F/A-18E aircraft (remarkably procured on time, on budget, and under weight), with their (equally remarkable) joint stand-off weapon or joint direct-attack munitions, to blow up a bridge, probably, and not one of them will come back. U.S. air forces of every service have already conceded air superiority to certain SAM systems. Who do we think will get better faster?<sup>7</sup> The United States is making a few well-armored knights, and they will face a forest full of peasants with longbows.

Cruise missiles will replace manned aircraft and sink the ships that carry them. This is both good and bad news for the DD 21 crowd. Yes, the advocates of that advanced new destroyer program will probably see the strike role migrate to their platform, because foreign adversaries will have SAM systems that manned aircraft cannot approach (after some “Pearl Harbor” event for manned aircraft). Unfortunately, those adversaries will probably also invest in surface-to-surface missiles as capable as the air variety; those big floating pieces of metal, no matter how high-tech, snazzy, or expensive, will be in dangerous waters.

It is interesting to note that unmanned aircraft, smaller than current surface-to-air missiles, will take over the role of manned aircraft in the same way that aircraft usurped that of the battleship.<sup>8</sup> The future for big metal ships is less clear, but it may be along the same lines.

The U.S. Navy recognized in the 1920s that it needed to develop new aviation technology. It assigned Admiral William Moffett the task of developing not only

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*For perhaps the first time in history, mankind will discover that if any one ideology wins, everyone might lose.*

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the technology but the organizational structure, doctrine, and culture that would enable the new technology to come to fruition. So far, naval aviation has not shown the

foresight that once enabled its own heritage. Unmanned airborne vehicles (UAVs) and unmanned combat airborne vehicles (UCAVs) are now accurately described as “redheaded stepchildren” in the bottom-line pecking order of funding. The danger here is that carriers and their aircraft constitute a senile weapon system, rapidly approaching obsolescence. Over fifty years ago, U.S. naval aviation was ready with a powerful, and young but eager force, when the “Gun Club”—the battleship admirals—woke up to find their champions in the mud at Pearl Harbor. It is not so with the UCAV world. The gap between the senility of U.S. naval aviation’s force structure and the vitality of unmanned forces is dangerously large. Given the U.S. industrial-age acquisition system, the Navy’s shortsightedness may very well degrade national security.

Missions designed to secure sovereign interests will demand much that manned aircraft are unable to do. Aircraft will need to stay airborne for days on end, going where perhaps manned aircraft cannot, to places where we do not wish to risk human lives. Today naval aviation’s power is largely limited to the single venue of the aircraft carrier, and even that niche is rapidly dwindling as cruise missiles take a bigger chunk of the market. UAVs and UCAVs would enable a new force to gather information from, and act through, many more platforms. Since a force designed to secure global interests must act globally, and since no nation will have the resources to build the number of carriers the new century will require, the answer must be to use something else. Money spent furthering

manned aircraft technologies and programs—the CVNX (proposed *Nimitz*-class carrier replacement) being one of them—is like polishing cannonballs so they will fly a little farther.

Current U.S. efforts in the direction of network-centric warfare (NCW) are worth mention. I am reminded of two technicians standing in a room full of completely integrated nuts, bolts, screws, and parts. “Well,” says one, “we’ve finally made everything connect to everything else.” “That’s right,” says the other, “but what do we build now?” The Navy’s current approach to NCW is properly described as platform-centric; there is a focus on the platform, not the quality of the network. The Navy’s expertise resident in its networks is based entirely on Cold War mentality—a hope to do the same things faster and more precisely by tying the players together with computers.<sup>9</sup> The Navy must recognize that the expertise residing within a network is more important than the design of the network’s nodes, and that the appropriate type of expertise is dependent upon the customer’s needs. The Navy would be well advised to meet those needs before the customer goes elsewhere, and it should not look in its wake to do so.

#### THE ORGANIZATIONAL STRUCTURE MISMATCH

Networks are the new world. Today’s U.S. industrial-age military places priorities on things that information-age constituents just “don’t get” or even want to. The current exodus of personnel from the military has nothing (and everything) to do with pay, time away from home, operational tempo, or any other reason we read about. The fundamental cause for the mass exit is that the military’s industrial-age structure is now recruiting people who were raised in the digital age and possess a completely different structure of values. In the networked world, information—and therefore loyalty and dedication—diffuses. The results now being seen in personnel retention, budgetary pressures, maintenance and parts levels, and operational performance should not be a surprise. The Navy is using gasoline to run its diesel engine. The solution is simple but hard—get a new engine that will match the available fuel.

Networked environments put a premium on innovation. Contrary to the opinion voiced at the top levels, the majority of the Navy perceives that innovation is discouraged within the organization, not encouraged. This might be explained by the fact that what passes for innovation in today’s Navy would have been laudable in yesterday’s Cold War structure (the current naval leadership’s “cultural-cognitive framework”) but to the digital worker-bees in the trenches, the efforts are so meager compared to what the new environment demands as to be laughable. Think about it. Who makes up and then runs current innovation efforts, lieutenants or admirals? Who is in charge of formulating and then reporting the lessons? Any organization rooted in maintaining tradition and the status quo

will have a short life in the new world. If its leadership cannot keep up, then the organization, however skilled, dedicated, innovative, or self-sacrificing, will die.

Networked environments demand speed—speed of responsiveness, speed of innovation, speed of organizational reactions. The Navy’s organizational speed—the speed with which it creates new organizational structures; conceives, designs, develops, and acquires new weapon systems; or reacts to the external cultural-cognitive framework of national or global leaders—is dangerously out of synch with that of other institutions. Even more dangerous is the tendency to use current organizational structures and solutions to bring

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*Just like any other customer, nations will get what they need where they can—America has no monopoly in this market.*

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about radical, revolutionary change. It is dangerous for two reasons. One, it gives the organization’s leaders the impression that they are “doing something,” which causes

complacency; two, assets expended on “doing something” are assets that could have been used along more productive, more innovative vectors. To survive the vast disruption caused by the shifting foundations of our new world, organizations must deconstruct and then remake themselves into something new that may not resemble the originals at all. Fatal to most organizations in such a situation is the fact that those who are most adept at maintaining the status quo are *the last ones* to spearhead creative deconstruction and reconstruction efforts. “Fair-haired,” fast-track players need not apply; get the trouble-making mavericks. If the Navy hesitates, if it draws back or just “commissions a study” to consider what to do, the pace of events will overwhelm it, like so many other organizations stuck in the past. It will be too late.

#### FORCE IN THE NEW CENTURY

The requirement to secure sovereign issues globally, and in combination with the particular dynamics of the networked world, will extrude a new type of force. Such a force will focus not on destruction but on proficiency in gathering, analyzing, and acting on information within appropriate time frames. This is the type of force the Navy needs to integrate. Rather than operations based on geographic or finite temporal objectives (relics of an industrial-age, militaristic mind-set), such a force will be required continuously to generate information and provide options for exercising global political leadership in every social dimension. Rather than consuming information for the purpose of destruction, a force that secures globally sovereign issues must *produce* information centered around its defining role of securing the global economy, and it must do so without violating other people’s basic cultural, religious, ethnic, or traditional values. Human nature will always require arbitration of violence—the need to

kill people and break things will not go away. Still, force in the new century will require a different primary role. It must focus on the nonviolent management of conflict.

The new force must have unparalleled connectivity with every dimension in society. Global security will demand forces to keep in close touch with the finest expertise on the planet. Economics, politics, the environment, culture, civic infrastructure, science and technology, and defense are social dimensions that define the scope and breadth of this new force—*this* is what network-centric warfare should really be about. Naval forces should focus on building networks into every social dimension. We may be tempted to say that the “Navy after Next” will meet these needs. Unfortunately, however, the world is moving at a speed that makes such an approach negligent at best, fatal at worst; the United States must create the “Navy after Next” now. If it does not, someone else will. Someone else may create a navy that, whether or not it can compete with the United States, will be able to assume the role of securing emerging globally sovereign issues—and that will have disastrous consequences for the United States, and for its navy.

Lastly, there is the issue of time. Behold the dichotomy of the age: a world that lives and moves at the speed of light finds its survival dependent upon solutions that span decades. Technology shrinks moral horizons (Einstein was a pretty sharp guy). Powerful technology shrinks them faster. Security for the global citizen will require that those horizons be restored, enlarged, and invigorated. Only a force that is proficient in every dimension of society can bear upon the world’s moral horizons. It is in this way that *today’s* Navy (not the Navy after Next) should approach its roles and missions. Networked to *all* the dimensions of human society, the Navy should conceive, design, and institute processes, maintain a presence, and act with a responsibility and a conception of time that extend across generations.

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#### NOTES

1. This historical sequence, as well as a full discussion of the concept of a “cultural-cognitive framework,” may be found in Edward Rhodes, “Constructing Power: Cultural Transformation and Strategic Adjustment in the 1890s,” in *The Politics of Strategic Adjustment: Ideas, Institutions, and Interests*, eds. Peter Trubowitz, Emily Goldman, and Edward Rhodes (New York: Columbia Univ. Press, 1999), pp. 29ff.
2. Note the difference between “globally sovereign issues” and issues of “global sovereignty.” The former identifies a variety of issues with separate but equal authority or importance to the survival of the global citizenry. The latter describes a single entity—a single, overriding source of authority that embraces all other issues.

3. Most of the drastic environmental damage in the world today occurs in poverty-ridden areas.
4. Macedonia, a pro-Western nation in the Balkans, now finds its economy in shambles because the economy of its major trading partner, Serbia, has been severely impaired. There is concern over the destruction of facilities that causes environmental damage in the region that spreads to allies nearby. Also there is, and will always be, concern about causing mass casualties among neighbors who will have to live next to the victimized area after the destructive force returns home.
5. The European Union plans to establish its own defense force. See, for example, *The Economist*, 4 December 1999, p. 18, and *The World in 2000*, a special offprint from the offices of *The Economist*, 1999, p. 54.
6. “Dumb power” is best illustrated by a true story. There was an Australian cattle rancher with fifty thousand square acres. He could put up a very expensive UAV that monitors everything—it has a sensor for every conceivable spectrum—but he could afford only one of them. Another option was to place in the horn of every animal a five-cent chip that would report the animal’s position. He could also put a chip in every water tank to report if it was empty or full. He could put a chip at every gate to report if it was open or closed. In this way, he could get a very clear picture of his operation. This is leveraging dumb power. Find this story and other explanations like it in Kevin Kelly’s *Out of Control: The New Biology of Machines, Social Systems, and the Economic World* (Reading, Mass.: Addison-Wesley, 1994).
7. This is a scenario in a context most traditionalists will understand. A more likely option, however, will be for the opponents simply to hire someone to shoot the aircrews’ spouses and children in their homes.
8. It is interesting to note the parallel. Once upon a time, the Gun Club was willing to let aircraft scout. The airplane could not do much else. Today, naval aviation is kind enough to let UAVs scout for it—reconnaissance missions and such. It cannot do much else—or can it?
9. A cursory reading of the history of information technology in the commercial sector for the last thirty years would quickly deflate this false hope. Automating old processes never works.

## LEADERSHIP AND STRATEGY

*Carnes Lord*

Winston Churchill once said that most strategic failures in war are due to the “total absence of one directing mind and commanding willpower.” During World War II, Churchill was determined to be that one directing mind, taking for himself a new cabinet portfolio for defense as well as the office of prime minister. Difficult as it may be to resist the ideas of one of the greatest leaders of the twentieth century, there are many today who will be skeptical of such a claim.

The literature of contemporary international relations (for all its hard-fought differences) is united when considering leadership as secondary in importance to military or political success. Realists believe the most important factor to be the unique strategic logic of each situation that imposes itself on world leaders. Liberals emphasize it is the power of institutions that shape ideas. Constructivists point to cultural and historical factors, or to the dynamics of collective psychology.<sup>1</sup>

In the narrower sphere of military affairs, the picture is not very different. For example, in *Military Misfortunes* (1991), Eliot Cohen and John Gooch criticize the tendency to blame strategic failure on the commander (the “man in the dock”) and emphasize instead the central role of dysfunctional military organization.<sup>2</sup> (Debunking leadership in the academic studies of war is hardly new.) The distinguished British historian Michael Howard, in his well known paper on “the forgotten dimensions of strategy,” for example, argues that the logistics, technological, and social dimensions of military success have been systematically neglected and undervalued when compared to the operational dimension, in large part because of the myth of glamour of the commander in the field.<sup>3</sup>

In professional military studies, the great captains of history continue to hold a place of honor, and military education maintains its traditional concern with

practical leadership issues. Yet even in today’s military, the standing of leadership is becoming increasingly precarious. For many, the revolution in military affairs (RMA) validates Howard’s emphasis on the technological dimension of strategy rather than the operational. Though rarely directly saying so, proponents of the RMA presume that leadership will inevitably become irrelevant as technology increasingly takes over that function.

*Carnes Lord recently joined the Naval War College faculty as professor of strategic studies. He has taught security studies and international relations at the Fletcher School of Law and Diplomacy, and at the University of Virginia. He also served on the staff of the National Security Council and in the office of the vice president. He is the author of The Presidency and the Management of National Security.*

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The Gulf War is of particular interest here. In spite of much subsequent self-congratulation over the allied flanking maneuver that broke the Iraqi Republican Guards, what was most impressive and decisive in sober retrospect for the allied victory happened in the dimensions of logistics and technology, not in operations. Indeed, it could be argued that the war's outcome foreshadowed for future wars how unimportant operational art and military leadership are becoming.

But did it? Let us look more closely at the Gulf War. The failure of the flanking maneuver to close the ring on the Republican Guards clearly reflected a failure of operational art and leadership at senior command levels, which greatly impacted the war's strategic outcome. Also, at the level of political-military decision making, a series of errors compounded this failure. The premature halt of the ground war for ill-considered public relations reasons, the signaling of the U.S. intent to withdraw from Iraq without a quid pro quo, the abandonment of the Kurds and Shiites, and more generally, the obvious absence of any serious planning for the war's endgame—all helped turn a stunning feat of arms into something considerably less than a strategic victory.<sup>4</sup>

Even a cursory review of the recent record of American military actions suggests that this state of affairs is not the exception. From Lebanon and Somalia to Bosnia and Kosovo, American political and military leadership has too often been operationally inadequate and unsure, internally divided, and shortsighted

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*Most strategic failures in war, Winston Churchill once said, are due to the “total absence of one directing mind and commanding willpower.”*

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in its strategic decision making. Rarely has the world sensed in American councils the presence of “one directing mind and commanding willpower.” At the same time, there are few signs that the military-technical

revolution is easing the requirements for leadership at senior command levels. Recent U.S. military actions in Iraq, as well as in Kosovo, point to the futility of RMA-style precision bombing, absent appropriate operational concepts and serious thought about strategic outcomes. Technology cannot substitute for an appreciation of the logic of war; the responsibility of senior military leaders becomes that much greater when the logic of war is lacking in civilian decision makers. It is not even clear that the dynamics of the contemporary battlefield are reducing the scope of command authority. A good case can be made that the evolving technologies are at least as likely to recentralize control at relatively senior echelons.<sup>5</sup>

What exactly is the relationship between strategy and leadership? Searching for a productive way to come to grips with this large question, one could do worse than consult ancient history. The word “strategy” is derived from the

classical Greek, *strategia*, which does not mean strategy as we define it but “generalship,” or “leadership of the army,” or more literally, “leading out the people in arms.” (In contrast, “tactics” refers to drawing up an army in battle formation.)

Several points can be made here. First, strategy is not only a military function; the ancient Greeks saw little distinction between military and political leadership.<sup>6</sup> Second, strategy is less about operational maneuver than about motivating and disciplining citizen-soldiers. In classical Greece, to borrow Howard’s terms once more, the key to strategy was not the operational, logistic, or technological dimension but the social dimension. This is apparent in Thucydides’ famous account of the Peloponnesian War. His history is short on details of military operations (not to speak of logistics or technology), but he has taken great pains to record speeches made by generals and politicians designed to encourage troops in the field or to persuade citizens at home to support particular policies or courses of action. Third and finally, it is noteworthy that the Greeks also did not distinguish between strategy and diplomacy. In an age that lacked established diplomatic services, generals abroad necessarily played the ambassador’s role, making friends and influencing people as they marched.

Obviously war is infinitely more complicated and technical now than it was 2,500 years ago—because of the reason just discussed, because of its sheer scale, and because it requires a much higher level of organization, teamwork, and discipline. However, none of this obviates the need for leadership. In fact, today leadership is all the more important.

In contemporary states, leadership is a vital strategic function for two reasons. First, it is essential to control and correct astrategic tendencies of modern military organizations; and second, it plays a key role in countering the astrategic tendencies of modern governments and societies.

Cohen and Gooch are certainly right to pinpoint organizational dysfunction as a prime cause of strategic failure. Organizational routines, service rivalries, the dominance of managerial perspectives, etc., often make contemporary defense establishments highly resistant to strategic rationality. The United States recognizes these problems and has made major changes in its defense organization (the Goldwater-Nichols reform legislation of 1986) that center on strengthening the leadership role of the chairman of the Joint Chiefs of Staff. Recent U.S. history has shown, however, that such problems call for continuing leadership from outside the ranks of the military as well.<sup>7</sup> The tendency for military establishments to develop a strong corporate identity and outlook is also well known. Therefore, informed and vigorous civilian leadership is essential, not only to ensure basic civilian control but also to maintain a genuinely strategic perspective and to facilitate broader cooperation between military organizations and other elements of the bureaucracy in common strategic enterprises.

Perhaps less well known is the requirement for strong leadership as a counterweight to the astrategic tendencies of contemporary government and society, particularly in the United States. As Alexis de Tocqueville put it almost two hundred years ago in his great work *Democracy in America*, “Democracy finds it difficult to coordinate the details of a great undertaking and to fix on some plan and carry it through with determination in spite of obstacles. It has little capacity for combining measures in secret and patiently waiting for the result. Such

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*Though rarely directly saying so, proponents of the RMA presume that leadership, in any recognizably traditional sense of the term, will inevitably tend to become irrelevant as technology takes over.*

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qualities are more likely to belong to a single man or an aristocracy. But these are just the qualities which, in the long run, make a nation prevail.”<sup>8</sup> Planning, coordination, secrecy, and patience tend to be in short supply in ordinary democratic politics, and it

is the particular burden of the democratic leader to provide or facilitate them.

More important, the democratic leader, whether political or military, has the equally difficult task of reconciling these requirements with the openness and accountability of a democratic government. (This is where the classical model of strategy or generalship may have some further relevance.)

Central to democratic leadership, particularly in time of war, is the task of persuasion, motivation, and inspiration. In a modern bureaucratic state, this task extends beyond the public to the legions of soldiers and civilians on which the government must depend for the implementation of its policies. In order to perform effectively, leaders (especially, though not only, political leaders) arguably need four qualities: an understanding of their country and its history; an understanding of the strategic environment they face, and of their actual and potential adversaries; a vision of the future; and an ability to communicate. Churchill’s possession of all four qualities explains why he was the great leader that he was.<sup>9</sup>

However, the example of Churchill is likely to discourage as much as inspire, or else strike us as simply irrelevant. After all, the present strategic environment is very different from that of Churchill’s. It is one thing to call for “one directing mind and commanding willpower” to lead a nation in total war, but quite another to apply it during an era of ambiguous threats and politically constrained military operations. Under such circumstances, what may be required is not so much a leader but rather someone who is skilled at crafting compromise and consensus at home and abroad.

Churchill’s dictum points out several important problems that currently confront U.S. leaders. One is the pluralism in national security policy making, the result of the constitutional structure of the American government, as well as

certain developments of the last three decades that have strengthened the policy role of Congress. (Let it be said here that there is much left to do. Reforming the internal structures of Congress, rationalizing legislative authorities for various executive branch national security activities [the War Powers Act and perhaps even the National Security Act of 1947, for example], and repairing executive-legislative relations could have large payoffs for American policy. Although such steps are often dismissed as hopeless, it is far from clear why. The relatively benign international environment of the present offers a good opportunity to address these sorts of legal and institutional issues.)<sup>10</sup>

Another is the uncertain relationship between military and civilian authority within the executive branch. Although the alarmists have recently gained ground, when discussing U.S. civil-military relations today one should be concerned with the growing estrangement and lack of communication between the military and its civilian leaders, and with the continuing difficulties that the U.S.

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*Technology cannot substitute for an appreciation for the logic of war.*

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government as a whole encounters in articulating coherent doctrine for the use of force and in applying force with strategic effect.<sup>11</sup> While part of

the problem is philosophical, much is a reflection of the clash between military and civilian cultures and their failures to craft new organizational solutions to the novel challenges of contemporary limited warfare and operations other than war. It is, therefore, a prime leadership issue, on both sides.

Finally, a few remarks may be in order concerning the personal dimension of leadership. It is often said that leaders are born and not made; there is no doubt of this. On the other hand, it is also a convenient excuse for not thinking very hard about how one finds, recruits, trains, and manages the careers of potential leaders. In particular, it is an excuse for ignoring the central but too often neglected issue of the intellectual (as distinct from the personality-based) requirements of leadership. In the business world, there has long been a tendency to separate leadership from substantive knowledge of a particular business sector or kind of enterprise, though the limitations of such an approach are by now frequently acknowledged. While perhaps not as pronounced, this tendency can also be seen in the political world and in government itself. What exactly do our leaders need to know to be strategically effective? We have only to pose this question to realize that an Ivy League education today gives little consideration to the subject; even a professional military education offers no guarantee.

A further point: good leaders do not necessarily make good strategists, and good strategists are not always effective leaders. The qualities that Churchill listed are more typically scattered among several individuals. From this perspective, the management of personnel and decision-making systems, both civilian and

military, must be seen as an integral aspect of strategic leadership. Leaders should be more attentive to the individual talents and character of their subordinates and to the dynamics of team organizations, be they personal staff or interagency committees. Leaders must also be quick to recognize ineffective performance and deal with it decisively. This, of course, was one of Churchill's great gifts. It is not apparent that these matters should be handled any differently today.<sup>12</sup>

All this is easily summarized: leadership itself is today the truly forgotten dimension of strategy.

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#### NOTES

1. For a classic presentation of the opposing case, see Sidney Hook, *The Hero in History* (New York: Humanities Press, 1943).
2. Eliot A. Cohen and John Gooch, *Military Misfortunes: The Anatomy of Failure in War* (New York: Vintage Books, 1990).
3. Michael Howard, "The Forgotten Dimensions of Strategy," *Foreign Affairs*, Summer, 1979; reprinted in his *The Causes of Wars and Other Essays* (Cambridge, Mass.: Harvard Univ. Press, 1983), pp. 101–5.
4. Michael R. Gordon and Bernard E. Trainor, *The Generals' War: The Inside Story of the Conflict in the Gulf* (Boston: Little, Brown, 1995), chaps. 19–20 and epilogue.
5. James R. FitzSimonds, "The Cultural Challenges of Information Technology," *Naval War College Review*, Summer 1998, pp. 9–21.
6. See Donald F. Kagan, *Pericles of Athens and the Birth of Democracy* (New York: Simon and Schuster, 1991).
7. See Dick Cheney's leadership role in the Gulf War, as recounted in Bob Woodward's *The Commanders* (New York: Simon and Schuster, 1991), pp. 290–6, 327–3, and passim.
8. Alexis de Tocqueville, *Democracy in America*, ed. J. P. Mayer (New York: Anchor Books, 1969), pp. 228–9.
9. For a useful recent survey of Churchillian statecraft, see Robert Blake and William Roger Louis, eds., *Churchill* (New York: Oxford Univ. Press, 1993).
10. Consider, for example, Zbigniew Brzezinski's *In Quest of National Security* (Boulder, Colo.: Westview, 1988), chap. 6.
11. General John Shalikashvili remarked, shortly after his retirement as chairman of the Joint Chiefs of Staff, about the problems concerning U.S. policy in Bosnia: "We don't have a system that puts someone in charge of the overall operation that can coordinate the efforts." See Philip Shenon, "No G. I. Role Seen in Arrests of Bosnian War Suspects," *New York Times*, 29 August 1997. For a general discussion see Douglas E. Lute, *Improving National Capacity to Respond to Complex Emergencies: The U.S. Experience* (New York: Carnegie Commission on Preventing Deadly Conflict, 1998).
12. A striking case is the Falklands War, which the Argentines might have won had they not made the fatal mistake of appointing a military administrator, rather than an operationally oriented leader or strategist, as the island's governor. See Lawrence Freedman and Virginia Gamba-Stonehouse, *Signals of War: The Falklands Conflict of 1982* (Princeton, N.J.: Princeton Univ. Press, 1991), pp. 147–9.

## IN MY VIEW

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### COLD WAR GAMES

Sir:

I graduated from the Naval Command Course (NCC) at the U.S. Naval War College in Newport, Rhode Island, in 1965. On my return to India, I reported at Naval Headquarters New Delhi for an appointment at sea. As a matter of protocol and having undergone training abroad, I was required to call on the Chief of the Naval Staff (our CNO) to apprise him of my assessment of the NCC course. I briefly narrated the curriculum, concluding that it was a wholesome course promoting understanding amongst the international naval community. After carefully listening, the Chief shot a straight question back at me: “Do you believe this training in the USA is of any value to the Indian Navy or a prop to your personal career?” I was taken aback a bit, but collecting my wits, I replied that such an exposure as in the NCC should help one to contribute to the interests of the Navy in the long run, and that my career was only a side issue. He gave an enigmatic smile. To date I have not been able to figure out whether the Chief thought that I believed in what I said.

It was exactly six years after the NCC experience, in 1971, that I had the privilege of commanding the only aircraft carrier of the Indian Navy, INS *Vikrant*. The tension between India and Pakistan was building up. The USA/Soviet Union cold war was at its height, with the famous U.S. tilt against India. A good deal is on record as to how the nuclear carrier task force led by USS *Enterprise* (the “Big E”) was sailed from the Far East to create a presence in the Bay of Bengal to influence the outcome of the Indo-Pakistani conflict.

INS *Vikrant* Task Force, comprising the carrier and three anti-aircraft/anti-submarine frigates, was deployed in the Bay of Bengal with a directive to establish a Zone of Command to ensure that there was no outside interference from the sea with the advancing Indian Army in the erstwhile East Pakistan (now Bangladesh). In the execution of its aim the Indian Task Force had in a short time

captured about forty foreign and Pakistani ships attempting to break the blockade to reach East Pakistan ports, carrying reinforcements and supplies for the beleaguered Pakistani Army. By 12th December, 1971, the fighting on land had entered the final phase in favour of the Indian Army. INS *Vikrant* was on patrol north of Andaman Islands blocking the approaches to Chittagong when, on 15th December, late in the evening, the BBC announced the entry of the “Big E” task force in the Bay of Bengal. The broadcast added that the U.S. task force was to make for Chittagong to evacuate the stranded American citizens.

This was a bolt from the blue. I conjured up a situation of a direct confrontation. I waited for instructions from the Naval Headquarters but none arrived. It was later at night that I decided to proceed south anyway, to intercept the “Big E” before she could enter the war zone. It was near midnight when the Midshipman on Watch approached me on the bridge and sought permission to ask a question. I nodded, and he said, “Sir, what would you do when you sight the ‘Big E’?” This question was no doubt uppermost on my mind, but without any hesitation I replied, “You do not have to worry, young man. America is a friendly country, so I would wish the captain of the ‘Big E’ a good morning and ask him what I could do for him.” The midshipman was not convinced and added, “What if the ‘Big E’ opened fire against us?” I replied, “I have been educated in the Naval War College, and I understand the American psychology well. If the ‘Big E’ attacks us, Abraham Lincoln would be turning in his grave.”

Throughout that night *Vikrant* continued her sortie south, and our air recce covered an area to a depth of five hundred miles. There was no sign of the U.S. task force, so in the absence of any instruction from the Naval Headquarters I turned back north to rejoin my patrol area. As the day dawned, BBC broadcast amplified its earlier report: that having entered the Bay of Bengal from the Malacca Straits, the U.S. task force had proceeded west instead of going north to Chittagong. On reflection I felt that my reactions in the warlike situation proved the value of my tenure at the NCC.

As a postscript to this anecdote, soon after the victory of the Indian Armed Forces, one of the foreign celebrities that visited India was the renowned naval leader Admiral S. G. Gorshkov, chief of the Soviet Navy. During his visit to Bombay he came onboard *Vikrant*. I had known the admiral well earlier during my tenure in Moscow as the Indian naval attaché. The admiral congratulated me and asked, “Were you worried about a battle against the American carrier?” He answered himself: “Well, you had no reason to be worried, as I had a Soviet nuclear submarine trailing the American task force all the way into the Indian Ocean.”

I thought to myself, it is not easy to convert a cold war into a hot war. Cold war is brinkmanship and only posturing. When the chips are down, you do not play cat and mouse games but come prepared to hit hard to vanquish your adversary.

SWARAJ PARKASH

*Vice Admiral, Indian Navy (Ret.)*

NCC class of 1965

#### SHOOTING UP THE WORLD

Sir:

In “The Military Response to Terrorism” [*NWCR*, Summer 2000, pp. 13–39], Captain Mark Kosnik makes the argument that military force is useful and modifies the behavior of terrorist groups. The attack on the USS *Cole* proves him wrong. We have enemies. We cannot shoot up the world—Panama, Grenada, Somalia, Kosovo (where we unlawfully interfered in a civil war and made it worse), Afghanistan, Libya (where we demolished an apparently innocent pill factory, and where we targeted the leader and killed his daughter)—and not have enemies. By what right (and for what purpose) do we establish a no-fly zone over a sovereign nation?

The misuse of military force is costly—in treasure, in readiness, in otherwise unnecessary defensive measures, and in the establishment of enemies.

H. F. ROMMEL

*Captain, U.S. Navy (Ret.)*



*Lieutenant Colonel McMaster is a former professor of history at the U.S. Military Academy and the author of Dereliction of Duty: Lyndon Johnson, Robert McNamara, The Joint Chiefs of Staff and the Lies That Led to Vietnam (1997).*

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## REVIEW ESSAY

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### THE GI GENERATION AND THE VIETNAM WAR

*Lieutenant Colonel H. R. McMaster, U. S. Army*

Kaiser, David. *American Tragedy: Kennedy, Johnson, and the Origins of the Vietnam War*. Cambridge, Mass.: Harvard Univ. Press, 2000. 566pp. \$29.95

Twenty-five years after the fall of Saigon, it seems doubtful that historians will ever achieve consensus on America's experience in Vietnam. In recent years, newly available evidence has reinigorated the debate over how and why Vietnam became an American war. David Kaiser, a professor of strategy and policy at the Naval War College, has produced the most recent examination of that question. In *American Tragedy*, Kaiser devotes the first nine chapters to the Kennedy years. The last seven chapters cover the period from November 1963 (John Kennedy's assassination) to July 1965, when Kennedy's successor, Lyndon Johnson, made a series of decisions that led to an American war in Vietnam.

Kaiser, an accomplished historian of Europe and the author of many books, describes his latest work as "the most thorough and best documented account of America's decision to go to war in Vietnam." Indeed, Kaiser's book is well researched, and he draws heavily on recently declassified memoranda, tapes of telephone conversations, and minutes of meetings. Vietnam specialists and students of the war will benefit from both Kaiser's evidence and his provocative interpretation of how Kennedy and Johnson confronted the complex military and political challenges of Vietnam.

Somewhat disconnected from the evidence, however, is Kaiser's generational explanation for Lyndon Johnson's decisions. He asserts that LBJ and his advisors, as members of the "GI generation," possessed "relentless optimism" and a firm belief that American power could solve the problem of Vietnam just as it

had solved the problem of Nazi and Japanese aggression in World War II. He portrays Kennedy as an exception to the generational rule, implying strongly that JFK, had he lived, would have steered the United States away from war in Vietnam.

In his first chapter, Kaiser argues that President Dwight Eisenhower laid the intellectual foundation and policy precedent for an American war in Southeast Asia. Kaiser states that Kennedy acted as a moderating influence against intervention after he inherited from Eisenhower a deteriorating situation in Laos and Vietnam. He portrays Kennedy as a “brilliant natural diplomat,” “more sensitive to the dangers of rash action than the contemporaries he chose as his leading subordinates.”

While Kaiser emphasizes Kennedy’s decision against a potentially disastrous intervention in Laos in 1961, Kennedy’s foreign policy record and the legacy of his Vietnam decisions cut against the argument. Kennedy’s greatest foreign policy disaster, the Bay of Pigs, receives little attention, and Kaiser describes Kennedy’s embarrassing encounter with Khrushchev in Vienna in June 1961 as merely a “difficult experience.” Although Kennedy did disapprove a recommendation to send American combat units to South Vietnam in 1961, he dramatically increased the American advisor effort there, from eight hundred at the time of his inauguration to 16,500 in November 1963.

Kaiser does not examine fully the most significant decision Kennedy made about Vietnam—to instigate and support a coup that led to the overthrow of the South Vietnamese government and the assassination of President Ngo Dinh Diem and his brother Nhu. Kaiser argues that “without question, the two men most responsible for the overthrow of the Diem government” were Diem and Nhu themselves. The Kennedy administration, however, permitted the CIA and Ambassador Henry Cabot Lodge to engineer the coup and thereby saddled the United States with responsibility for the successor regime. The coup exacerbated political instability in South Vietnam and presented Vietnamese communists with an opportunity to exploit. Kaiser praises Kennedy for his “detachment, curiosity, and quick intelligence,” but the president’s failure to provide direction and to make a clear decision about the coup revealed a remarkable degree of neglect, indecisiveness, and an absolute failure to consider long-term consequences.

Kaiser contrasts Kennedy’s and Johnson’s approach to Vietnam and argues that LBJ took “a much more straightforward approach” than Kennedy to the containment of communism. Kennedy, however, was a reflexive anticommunist; in the late 1940s, then-Congressman Kennedy befriended and allied himself with America’s most avid “Red” hunter, Senator Joseph McCarthy. Much of the evidence that Kaiser presents to demonstrate LBJ’s “straightforward approach” comes from public statements that Johnson used as president to portray himself as a tough and determined leader in the realm of foreign policy. Those statements, however, were wholly inconsistent with LBJ’s reluctance

even to discuss Vietnam policy with his advisors. Any comparison between administrations in connection with Vietnam is likely to be fraught with difficulty. The situation in Southeast Asia changed dramatically over time, and it depended much less upon who occupied the White House than on the political and military interaction between Vietnamese communists and South Vietnamese loyal to the Saigon government.

How each administration coped with the changing situation in Vietnam depended upon many factors, including its appreciation of the situation; individual character and experience; national, institutional, and individual interests; relationships among the president's advisers and their relative influence; and perceptions of potential short and long-term consequences of competing courses of action. While the evidence Kaiser presents illuminates many of these factors, he relies overwhelmingly on the generational explanation. Under the author's construct, the war seems inevitable, and those who shaped the course of the war escape responsibility—their generation made them do it.

Kaiser argues that the GI generation's faith in America's ability to prevail generated overconfidence and impelled LBJ and his advisers toward war. However, as early as May 1964, Johnson told his national security adviser, McGeorge Bundy, "[It] looks to me that we're getting into another Korea. It just worries the hell out of me. I don't see what we can ever hope to get out of this." Vietnam was, Johnson exclaimed, "the biggest damn mess that I ever saw." The president's lack of confidence and a pessimism that bordered on defeatism among many of his advisers in both the Defense Department and the White House brings into question the usefulness of generational determinism to explain America's military escalation in Vietnam. The paradox represented by Johnson's premonition of disaster and his subsequent decisions that moved the United States closer to war stemmed from factors more specific and complex than a generational proclivity, including Johnson's preoccupation with domestic priorities, his character, and the character of his principal advisers, as well as advisory relationships within the administration.

Kaiser's research led him to devote more attention than have most historians to the critical decisions of 1964—decisions that placed the United States firmly on the path toward a gradual escalation of American intervention in Vietnam. While his emphasis on those early decisions is appropriate, the evidence does not support the author's conclusion that they reveal a firm commitment on the part of the president to preserve an independent, noncommunist South Vietnam. America's objectives in Vietnam remained ambiguous and ill defined during the entire period of escalation. Lyndon Johnson was preoccupied with preserving the consensus on Vietnam and preventing a debate that might affect his domestic priorities. He was determined to tell both those opposed to a greater military

commitment and those who advocated resolute military action what they wanted to hear. It was a consensus built on a fragile foundation of lies and obfuscation.

Kaiser points out the fundamental dishonesty of Johnson's approach, but he does not examine fully the consequences. Those who did not tell the president what he wanted to hear were relegated to positions of little influence. Over time, it became difficult for the president to distinguish the administration's propaganda from reality in Vietnam. Johnson considered alternatives to a slow military escalation only to preserve the façade of debate and consultation. Lies to Congress permitted his administration to circumvent the Constitution—behavior that not only was undemocratic but also removed an important corrective to what was an unwise policy. The war was not inevitable; it was made possible by the Johnson administration's dissembling.

Despite the sometimes tenuous connection between Kaiser's conclusions and the evidence he presents, the author deserves credit for doing thorough research and for advancing a provocative argument. Indeed, Kaiser's generational interpretation of how and why Vietnam became an American war is not without explanatory power; it is worthy of serious attention. Students of the war will benefit from comparing Kaiser's arguments to those of such historians as Lloyd Gardner and Michael Hunt, who place less emphasis on generational proclivities and a greater emphasis on America's Cold War ideology of containing communism.

## BOOK REVIEWS

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### THE FUTURE OF NATIONAL SECURITY

Cambone, Stephen A. *A New Structure for National Security Policy Planning*. Washington, D.C.: Center for Strategic and International Studies, 1998. 262pp. \$23.95

Stephen Cambone is the director of research at the Institute for National Strategic Studies at the National Defense University. A former senior fellow at the Center for Strategic and International Studies, Cambone is obviously well qualified to undertake work that focuses on a proposed reorganization of the National Security Council (NSC). Cambone approaches his work with vigor and an insider's knowledge of the workings of the U.S. government's highest national-security entity. He also extensively uses the knowledge and expertise of two colleagues, Patrick J. Garrity of the Los Alamos National Laboratory and Alistair J. K. Shepard of the University of Aberdeen, Scotland. They have included valuable appendices for students of national security affairs on the major interests and issues that surround national security policy development, as well as a historical synopsis of the various national security councils used by past presidents and how the institution has evolved. Cambone has included a compendium of important presidential directives.

Cambone's principal argument is that it is time—now that the end of the Cold

War is nearly a decade in the past—to re-evaluate the National Security Act of 1947 and the institutions created by that watershed law. Moreover, Cambone asks his readers to consider what, if any, institutional changes should be implemented to ensure that the United States is properly prepared for national security policy planning in the post-Cold War era. He is attempting, by his own admission, to conduct an organization-and-process approach to the question of revising the 1947 National Security Act; he is largely successful.

Cambone boils down the present-day debate over national security policy making to two essential features. He identifies one side as the *issues* faction and the other as the *interests* faction. "Issues" advocates emphasize such things as religion, ethnicity, and human rights. These national security analysts focus on the need for countries to conform to international laws and norms. They emphasize the protection of the rights of individuals against the power of the state. They rely heavily on international agreement to settle problems. The "interest" faction, on the other hand, is less concerned with

the legal authority of the international community and more interested in the construction of a system that manages risk to the United States as a sovereign state. However, Cambone argues that the real problem is that neither “issues” nor “interests” elements within national-security policy-making circles can agree on an overarching concept for, or definition of, the nation’s security. The author’s answer is to suggest a new model for national security decision making that eschews the Cold War mentality and methodology for policy making and takes into account the new paradigms of the post–Cold War era.

Cambone reviews how past national security policy was developed. He then proposes a reorganization of the NSC into five directorates: crisis management, regional affairs, home defense affairs, finance and trade, and science and technology. A “dual-hatted” cabinet secretary would head these directorates. In this way, the president’s control over national security policy development would be strengthened.

While his suggestions for improvement are well thought out and well intentioned, his proposals may prove nearly impossible to implement. First and foremost, such a proposed reorganization would need strong political support on Capitol Hill. A new National Security Act would likely entail a tremendous amount of debate, as senators and congressmen attempt to influence the legislation. One need only recall the highly rancorous and largely unhealthy debate over service roles and missions following the passage of the 1947 law to understand what might occur if a new national security law were passed along the lines that Cambone suggests. This is not to say that the United States should not consider a new law; Cambone

simply needs to be aware that national security policy has never been, and most likely never will be, entirely devoid of politics.

Nonetheless, Cambone’s model for a new NSC is a logical one. Efficient and elegant, if implemented it would maximize the president’s power to influence the creation and accomplishment of national security policy—something that the NSC and the national security advisor are supposed to facilitate. Further, it would make maximum use of the entire executive branch of government and take the pressure off an understaffed and ill-equipped White House to oversee national security policy, development, and implementation. Yet the suggestion of a dual-hatted cabinet secretary as head of a national security “director” could prove disastrous. Cambone ignores Washington’s deeply entrenched organizational bureaucracies and their tendency to “socialize” appointed cabinet officials into their own particular cultures. It has long been axiomatic in the nation’s capital that the president’s worst political and bureaucratic enemies can reside in his own cabinet; in 1867 such a situation nearly drove an unpopular president (Andrew Johnson) from office. To make matters worse, most cabinet officials have rather short tenures in office. Thus the Washington bureaucracy knows full well that these political appointees will be moving on sooner or later; it waits them out. Finally, presidential cabinet officials are usually chosen not for their expertise but for political expediency. Therefore, it is very likely that the person who would serve as a “director” chair might be thoroughly unqualified for such a position of responsibility. Although the way that national security policy is

developed today is certainly not optimal, would Cambone's system be better?

Despite his failure to consider the second and third-order effects of enacting the system he proposes, Cambone provides the basis for a great academic discussion over future national security policy and how it is developed. It is a topic that needs to be discussed, and as the author has emphatically pointed out, the time is now. This point is hard to refute. As the world's sole remaining superpower, and as the debate and divergence over how policy gets developed becomes stronger, the United States must reflect on how to improve its national security decision making structure.

In sum, Cambone and his colleagues have provided a good point of departure for a debate on how the United States should develop and implement future national security policy. There are many things to consider, and this book will get us started.

CHARLES NEIMEYER  
*Naval War College*



O'Hanlon, Michael. *Technological Change and the Future of Warfare*. Washington, D.C.: Brookings Institution Press, 2000. 208pp. \$42.95

Over the past several years, the U.S. military has officially embraced the idea that rapidly evolving technologies soon will lead to a profound change in the conduct of warfare. The need to innovate in response to a prospective revolution in military affairs is the central theme of *Joint Vision 2010* and similar force-planning documents. Some studies, such as the congressionally mandated National Defense Panel, have concluded that only immediate and

radical transformation to new systems, new operational concepts, and new organizations will enable the U.S. military to retain its battlefield dominance.

Michael O'Hanlon, however, is not convinced. In his view, most calls for transformation lack any systematic or rigorous analysis of how emerging technologies might specifically change the character of combat in the coming decades. Thus the goal of this book is to provide realistic projections of technological possibilities that offer a better idea of how the U.S. military might best proceed in future research and acquisition.

O'Hanlon examines a wide range of militarily relevant technologies, in two broad categories: those primarily electronic (sensors, computers, and communications), and those primarily mechanical (vehicles, ships, aircraft, and weapons). From this survey he offers an evaluation of where evolving technologies are likely to provide new capabilities over the next two decades, and where significant force limitations are likely to remain.

In the realm of electronics, O'Hanlon expects continued advances in computers and communications but foresees no imminent breakthrough in sensors that will significantly improve one's ability to detect and track the adversary's activity. He specifically rejects the idea that the battlefield can be rendered "transparent." On the mechanical side, he sees no near-term developments that will allow maneuver and strike forces to become sufficiently light, fast, fuel efficient, or stealthy to allow profound improvements in speed of movement or lethality. Thus he concludes that proponents of transformation provide neither a compelling case for a near-term revolution in warfare nor any adequate idea of what the military should be transforming itself into.



O'Hanlon's general projections of future technologies appear reasonable. Yet the reader would be more assured of the author's conclusions if his technical evaluations did not rely so heavily upon articles in newspapers and popular periodicals. One can be justifiably skeptical that information drawn from *Army Times*, *Defense News*, or even *Aviation Week & Space Technology* fully reflects the broad range of scientific research and development throughout government, industry, and academia, both in the United States and abroad. Likewise, O'Hanlon's general dismissal of the future military challenges posed by China, Russia, and North Korea is somewhat cavalier. It would have been useful had O'Hanlon made clear his personal qualifications to provide an authoritative evaluation of such a wide range of technology projections and foreign military developments. He states that he presented his findings to "a number of weapons scientists and technology experts," but he does not identify them or indicate whether they agreed with his conclusions.

O'Hanlon uses his projections of future technology as the basis for a modernization strategy that is intended to promote "defense innovation" without increasing the defense budget. He proposes major reductions, up to two-thirds in such "expensive next generation platforms" as the F-22 and F/A-18E/F, in order to fund improvements to existing systems and a broad range of initiatives in research, development, and experimentation. However, most of his recommendations tend to be as vague as the assumptions he is challenging. For instance, O'Hanlon approves of the acquisition of "new fleets of unmanned aerial vehicles," because it "appear[s] generally sensible." He states that up to two billion dollars a year might be needed to outfit combat units with

"internet capabilities" but does not make clear whether he is referring to the commercial Internet, classified information networks, or some other type of equipment-interoperability initiative. Likewise, he makes a broad plea for the military to "avoid service parochialism and foster jointness" but does not elaborate on how best to balance the advantages of organizational unity (as distinguished from systems interoperability) against the important contribution of interservice competition to the process of military innovation.

O'Hanlon's basic thesis is certainly valid. As he points out, the fact that none of the military services has actually committed to major changes in its force structures, operational concepts, or organizations is evidence in itself that proponents of innovation have yet to articulate a compelling argument for a very different U.S. military. This book is far from the final word on military technology and transformation, but it may serve to stimulate the proponents of major change to engage in a more detailed debate.

JAMES R. FITZSIMONDS  
*Captain, U.S. Navy*  
*Naval War College*



Moskos, Charles C., John Allen Williams, and David R. Segal, eds. *The Postmodern Military: Armed Forces after the Cold War*. New York: Oxford Univ. Press, 2000. 286pp. \$45

Ask a soldier or military analyst to describe the "postmodern military," and you are likely to get an answer that includes high technology, precision weapons, information operations, and possibly (especially if he or she is associated with the Navy) network-centric warfare. Much of the recent literature on military affairs

concentrates on these technology issues, and an observer might be forgiven for believing that such operational and technical differences are what separate twenty-first-century military forces from their predecessors.

This collection of essays describing the current state of military affairs in the United States and twelve other Western-oriented democracies takes a very different and welcome approach. The editors, well known authorities in the fields of military sociology and civil-military relations, examine the nature of post-Cold War militaries from the point of view of how military forces are organized and how they relate to civilian society.

Some of the issues raised will be familiar to anyone who has followed the debate in recent years over a possible crisis in civil-military relations in America. This book, however, goes well beyond that issue to posit a general model of how militaries in Western democracies are changing in the post-Cold War world.

As distinct from the “modern” military organization, which the authors trace from the French Revolution to the end of World War II, and the “Late Modern” military that prevailed from 1945 to the end of the Cold War, the “postmodern” military is described as one in which military forces undergo a loosening of ties with the nation-state. Postmodern military forces are characterized by an erosion of traditional martial values, a decrease in their sense of an identity separate from civil society, and a change of purpose from fighting wars to nontraditional missions, often involving, or authorized by, international and multinational entities. Kosovo is described as “the first Postmodern war,” while the Gulf War, involving a conventional military invasion and state against state

conflict, is seen as a “throwback” to the late-modern (Cold War) era.

On the basis primarily of the American experience, the editors describe trends in postmodern militaries, including several hot-button topics. What are the missions of militaries today? What is the relationship between the military and the media, and what is the public attitude toward the military? How fully are women and homosexuals to be incorporated?

The virtue of this book is that it is not just another rehash of the arguments concerning familiar issues. The essays, all by prominent sociologists, review how well militaries in Australia, Canada, Denmark, France, Germany, Israel, Italy, the Netherlands, New Zealand, South Africa, Switzerland, and the United Kingdom reflect the postmodern model. The essays thus provide useful overviews of how those countries are adapting to many of the same forces that are shaping the American military. They may provide cautionary lessons for military officials and decision makers in the United States by underscoring, for instance, how terribly wrong things can go in “military operations other than war.”

In one extreme example of modern military disaster, the Dutch military still has not fully recovered from the failure of the Dutch 3d Air Mobile Battalion to defend the “safe area” of Srebrenica, Bosnia, in 1995. Bosnian Serb forces massacred thousands of Bosnian Muslims after the Dutch battalion allowed itself to be disarmed. At the other extreme, members of the Canadian Airborne Regiment deployed to Somalia in 1993 were later found to have tortured and murdered at least one Somali youth who had tried to infiltrate their camp to steal. Investigations revealed other abuses by the regiment, and eventually it was disbanded.

These examples underscore the challenges involved in postmodern military missions, and they may support the arguments of those who believe it is dangerous, if not impossible, to expect war-fighting troops to conduct “other than war” missions.

The limitation of this collection of essays is that it does not address the militaries of greatest interest to American military officers—those of potential adversaries to the United States. Because the editors are specifically proposing a theoretical model of how Western, democratic militaries are adjusting to a world with a dramatically reduced conventional threat, the reader must look elsewhere to discover whether or not such nations as China are experiencing the same trends.

Yet there is a great deal here to challenge those worried about the state of America’s military today, especially concerning social issues. One of the most interesting insights concerns the levels of integration of women and homosexuals in the American military, compared with the other countries surveyed. The case studies show that the United States is farther along than most in integrating women but lags behind the postmodern norm in allowing open homosexuals into its ranks.

The essay on Israel, for example, points out that the common perception of the “woman warrior” in the Israeli Defense Force is a myth. Although many women played active fighting roles in the Israeli war of independence, women today are less fully integrated into the IDF than in most other Western militaries.

On the subject of homosexuals, the success of Canada is cited as a possible guide for other nations. Homosexuals have been able to serve openly in the Canadian Forces since 1992, and the removal of previous restrictions is described as having had

“virtually no negative impact” on such matters as recruitment, retention, and morale. It is not clear if the Canadian experience is directly applicable to the United States, but the book suggests that perhaps it is. One of the editors writes that “if the full acceptance of openly homosexual service members is only a matter of time, given the increased tolerance for diversity of sexual orientation among the general population, it would be advisable for policy makers in countries where this is true to move beyond wishful thinking or abhorrence and consider how such a transition can be made with minimal negative impact on group cohesion and military effectiveness.”

Of course, case studies from other countries may do little to persuade those who have already made up their minds. The decision of Canadian Forces authorities in 1998 to approve financial support for a service member’s sex-change operation, for example, may provide ammunition for both sides in that particular debate. Whether or not the Canadian example is one to be feared or applauded, it does suggest how important it is to study closely the development of the postmodern military.

ERIK DAHL  
*Commander, U.S. Navy*  
*Naval War College*



Feiveson, Harold A., ed., *The Nuclear Turning Point: A Blueprint for Deep Cuts and Dealerting of Nuclear Weapons*. Washington, D.C.: Brookings Institution Press, 1999. 460 pp. \$52.95

Ah, ecstasy! A benign world for the next two decades. Power politics disappear. America leads the drawdown, with Russia following to achieve parity with China, Britain, and France at about two hundred nuclear weapons. Worldwide nuclear

verification becomes practically perfect. Permanent members of the UN Security Council agreeably limit their vetoes. It is all here in this book, the product of the “Deep Cuts Study Group.”

The authors make no secret of their advocacy for drastic nuclear weapons reductions by the United States and Russia, the dealerting or deactivating of all weapons to preclude launch on warning, and announcements of no-first-use policies. The thesis depends on extraordinary verification beyond today’s technology, open sharing of weapons storage data, ironclad control of fissile material, and an effective worldwide security system. An actual nuclear war with Russia is considered unthinkable, despite significant nuclear capability in that country; although Russia now makes no bones about its dependence on nuclear weapons, the authors believe intentions can change. The authors reject nuclear supremacy and deterrence for the unknown of utopian equality.

On the other hand, this book espouses a number of valid premises. “Military and political objectives should be achieved without use of nuclear weapons, if at all possible.” The Russian early-warning system has deteriorated since the breakup of the Soviet Union (hence recent U.S. overtures to share data). Any national missile defense system must be tested extensively against a host of decoys before the United States can certify its technical effectiveness. As a result of conventional weaknesses, Russia has placed great reliance on nuclear weapons in its military strategy. The Russian government has been unable to negotiate effectively on the issue during the past few years; significant problems remain in the transparency of weapons systems between Russia

and the United States, and fissile material stockpiles are hard to verify.

However, if you are looking for a balanced blueprint for the sizing, alert status, and verification of nuclear forces during the next two decades, you will not find it here. There are several bothersome aspects. The authors cite Article VI of the Nuclear Nonproliferation Treaty and chide the nuclear powers for failure to pursue more rapid reductions despite enormous changes in the 1990s. Except for one footnote on page 34, the authors fail to address the full provisions of Article VI, which calls for not only “cessation of the nuclear arms race at an early date and . . . nuclear disarmament” but also “a treaty on general and complete disarmament under strict and effective international control.” With international initiatives not in fact leading to “general and complete disarmament,” and with potential aggressors armed as they are today, the nuclear nations have no incentive to seek the reductions envisioned.

The authors place great stress on the premise that Russian command and control has dangerously deteriorated. In fact, the system seems to have functioned the way it was designed in the incident of the 1995 rocket launch from northern Norway. Assertions by the Russian defense minister indicate this fear is groundless.

A “no first use” declaration concerning nuclear weapons by the United States is not in its national interest. The United States reacts to specific circumstances. It need not specify how it would respond to aggression, particularly involving weapons of mass destruction. Aggressors should realize that the United States considers nuclear weapons an absolute last resort, but aggressors should not be certain how the nation will respond, or be offered a

protective declaratory policy. Current U.S. security assurances, including the “no first use” negative-security assurance of 1978 concerning the Non-Proliferation Treaty, serve its interests well.

Low numbers of nuclear weapons would affect the international security environment and American presidential policies. First, a limit of two hundred nuclear weapons almost certainly would necessitate targeting population centers rather than military facilities. Such a strategy violates international law. Second, the United States must understand the impact such a reduction would have on allies to whom it extends nuclear protection. These countries can and likely would develop nuclear weapons on their own; proliferation as a result of destroyed confidence in American nuclear deterrence is not in the nation’s best interest. Third, other powers may conclude that they can and should make the investment in nuclear weapons to match the United States. Today, they have little chance of succeeding.

The authors harp on the “hair trigger” readiness (alert) status of U.S. nuclear weapons without explanation that launch on warning is only one presidential option. The United States has already removed strategic bombers and dual-capable aircraft from alert, detargeted ballistic missiles, removed nuclear capability from carriers and surface ships, and improved technical means to ensure against unauthorized firing or use of nuclear weapons. Russia has taken similar measures to dealert selected forces. However, none of these measures are unequivocally verifiable. There are no magic wands for foolproof verification. Moreover, in a dealert world, a crisis could trigger the most precipitous, dangerous arms race to realert that the world has ever

seen—highly destabilizing and potentially disastrous.

Finally, the real issue is not just numbers of nuclear weapons, “no first use,” alert status, or verification but the preservation of the peace between international entities that might resort to warfare if the calculus did not involve nuclear weapons. From 1600 to 1945, wartime casualties of civilian and military personnel generally varied between 1 to 2 percent of the world’s population (2.6 percent in World War II). After 1945 the casualty percentage dropped significantly, and since about 1953 has consistently remained near 0.1 percent. Nuclear weapons have been a key aspect of the preservation of peace between superpowers for the last five decades. The United States must fully understand the impact on American leadership of any new arrangement before it trashes what has proven to benefit world democracy and freedom.

HANK CHILES

*Admiral, U.S. Navy (Ret.)*

*U.S. Naval Academy*



Gray, Colin S., *The Second Nuclear Age*. Boulder, Colo.: Lynne Rienner, 1999. 193pp. \$45

Readers of Colin Gray’s earlier works will not be disappointed by this new book, nor will his critics be surprised by his conclusions.

Gray argues that the end of the Cold War does not mean that nuclear weapons can be eliminated or forgotten. This book is indeed valuable for noting, and taking to task, the wide variety of academic trends and fashions that have drawn such optimistic conclusions since the collapse of the Warsaw Pact and the Soviet Union. Gray ably points to the many ways in

which nuclear weapons and other weapons of mass destruction will continue to cast a shadow over international relations, even if no single superpower confronts the United States as a possible enemy.

Gray certainly claims to be in step with rapidly changing events, while cautioning us against the missteps of others. Even while he asserts that the role of nuclear weapons will be substantially different in light of all that has happened in the years since the fall of the Berlin Wall, Gray, by stressing a *second* nuclear age, emphasizes that such weapons will still be very important.

However, one suspects that most of the advice offered here, now that the Cold War is over, is not really so different from the advice the author was offering during the Cold War, advice that did not have much influence on policy. Gray states that anti-missile defense is necessary, not merely desirable. Yet was not his message earlier that such defenses were desirable, almost to the point of being necessary?

Gray says that deterrence is not always reliable—the same message he often advanced with regard to the Soviet Union. He notes that the American advantage in conventional weapons, in conjunction with the enthusiasm over a “revolution in military affairs,” may be transitory and illusory; however, during the Cold War he believed that the advantage in conventional warfare rested with Moscow.

Gray scoffs at the analyses that emphasize preventing the proliferation of nuclear weapons, suggesting instead that such proliferation may be inevitable—a condition rather than a problem. But in the old days of the Cold War, Gray was ready to argue that one should not make too much of the Soviet-American cooperation

in pushing the Nuclear Non-Proliferation Treaty; such a joint interest was not nearly so important as the issues that divided Washington and Moscow—and they were dire.

In short, Colin Gray’s book may be right on many of the points it raises, but it is misleading to advertise it as heralding something so new as a “second” nuclear age.

As always, Gray displays a broad awareness of the contemporary literature, set against a deep familiarity with history. But notwithstanding Gray’s critical analysis of the foibles of those who prematurely think that any “nuclear age” has come to an end, his own prose at times comes across as wordy and convoluted, and his message has not changed.

In sum, the book might amount to what could have been said as well in one of the author’s journal articles.

GEORGE H. QUESTER  
*University of Maryland*



Bracken, Paul. *Fire in the East: The Rise of Asian Military Power and the Second Nuclear Age*. New York: HarperCollins, 1999. 186pp. \$25

The incorporation of Asia into the Western-dominated international system is critical for the United States. At present, the United States is reacting to events in Asia instead of shaping them. This is the fundamental message of *Fire in the East*, an important book by Paul Bracken of Yale University.

Asia, extending from Israel to North Korea, has become increasingly visible since the end of the (primarily Eurocentric) Cold War. Discussions of Asian strength, however, have been flawed. Japan has struggled economically for ten years, and

it still lacks political and military power. The intent of Chinese modernization and its impact on the world community remain subjects of controversy. The 1998 "Asian Flu" wracked the economies of the infamous "Little Tigers," thereby diminishing their statures.

Because globalization and nationalism provide the means and desire to develop nuclear, biological, and chemical weapons, and the ballistic missiles to deliver them, rising Asian power is increasingly important. As Bracken contends, globalization is about economics, not politics, yet it increases national military potential by providing multiple, inexpensive sources of weapons and military technologies. Consequently, proliferation in a globalized economy is a long-term process linked to rising global scientific and technological prowess. Add to this existing national security motivations for the development of these capabilities, and it is evident how and why Asian military power will grow.

These trends are particularly important because they constitute a second nuclear age. Recent evidence abounds; for instance, in the wake of the Gulf War it was discovered just how close Iraq had been to completing a deliverable nuclear weapon. Iranian missile and nuclear ambitions are clear, punctuated by a medium-range ballistic missile test in 1998. The governments of Pakistan and India conducted flight tests of similar missiles in April 1998 and May 1999, respectively, and each country detonated nuclear weapons in May 1998. China is actively modernizing both its nuclear capabilities and ballistic missiles, manifested by an August 1999 flight test of a mobile intercontinental ballistic missile. Much has been written about the nuclear potential of North Korea, which continues to

develop and test ballistic missiles, most notably in August 1998.

Bracken maintains that these trends portend the decline of Western military dominance, in part because Asia and the West are moving in different directions. For example, nationalism, considered by the United States to be an anachronism, remains a powerful force in Asia. In another case of strategic divergence, Bracken highlights different approaches to warfare. The U.S. prefers long-range, stealthy, and precise conventional attacks that allow conflict that is quick and bloodless (with respect to Americans), with less collateral harm to noncombatants and civilian resources. In the East, indiscriminate weapons and ballistic missiles encourage more destructive and decisive options.

American policy may encourage the growth of Asian political-military power. By preferring an antiseptic form of future war and by not preparing for casualties, the United States leaves itself vulnerable to, and provides incentive for, a nation that has a greater will to visit destruction upon its adversaries. This has the further result of straining the foundations of deterrence. In the first nuclear age, the United States sought to deter one opponent, the Western-oriented and largely risk-averse Soviet Union. Now, the United States must deter multiple powers whose values, belief systems, and strategic-cultural orientations differ greatly from those of the United States.

This is not merely an academic point. Although deterrence during the Cold War was dangerous, the Cold War never turned hot. The perils of the second nuclear age, however, have already been evinced: the Iraqi obstinacy in 1990 that led to war; the crisis-filled nuclear negotiations with North Korea between 1992 and 1994; the 1996 Taiwan Straits crisis

with China; and the 1998 Indian and Pakistani nuclear tests. These events illustrate a dynamic that pits increased Asian assertiveness against U.S. desire for the status quo.

Bracken argues these points persuasively. Historically, these kinds of systemic transformations have been the most dangerous. In the fifth century B.C., Thucydides asserted that the Peloponnesian War had begun due to Spartan fear of rising Athenian power. Thus, a greater discussion of how to integrate such diverse, assertive, and armed Asian nations would have been interesting.

It could be objected that Bracken incorrectly treats many dissimilar nations, governments, and cultures as if they were the same. Simply stated, it makes a difference what kind of government is in power. In addition, other variables are not accounted for, such as the disintegration of the Iranian theocracy (less than twenty-five years ago Iran was our staunchest ally in the Middle East). In North Korea, whether a “soft landing” or a more violent collapse occurs could fundamentally influence regional transformation. Last, the effect of potentially severe ethnic problems in China is not addressed.

Despite these shortcomings, Bracken deals convincingly with important topics. Footnotes are not to be found, and his bibliography is limited given the breadth of the subject, but he has integrated information from a variety of fields. Defense and foreign policy students and practitioners alike should read *Fire in the East*.

PHILIP L. RITCHESON  
Falls Church, Virginia



Lilley, James R., and David Shambaugh, eds. *China's Military Faces the Future*. New York: M. E. Sharpe, 1999. 356pp. \$29.95

This collection of high-quality essays by some of the leading experts on the Chinese military is the product of the 1997 Seventh Annual Conference on the People's Liberation Army (PLA), sponsored by the American Enterprise Institute. The authors, although inspired by different security and threat perceptions, present sober, straightforward, and reasonable assessments of PLA efforts to modernise itself in the 1990s and of its prospects for the immediate future. Evidence drawn from the essays shows that the PLA is increasingly modern, confident, and assertive but that it has not yet developed sophisticated theories and technologies comparable to those of the United States or relevant to fighting an American-style, high-tech limited war, or any war beyond its borders. The provocative variations on this theme, shaped by starkly different—seemingly contradictory, yet ultimately reinforcing—dynamics of Chinese and East Asian politics, are instrumental in defining the evolution and nature of the PLA.

This perceptive, informative, and well written book is divided into four sections: on the “New High Command,” “Doctrine, Strategy, and Weapons,” the “Support Base,” and “China's Northeast Asian Security Environment.” Each section has its strengths. After a careful but critical examination of biographical materials on new military leaders, the first provides unusual insight into the PLA's inner circle of decision making by identifying two fundamental changes in civil-military relations in the post-Deng era. First, none of the top party leaders has any military background or connections, whereas none



of the senior military commanders and political commissars has any experience in party politics. Second, professionalism and corporatism prevail in the PLA. This distinct disconnection between the party and the PLA challenges the traditional mind-set of the “interlocking directorate of the party and the military,” namely, that the party is the army, while the army is the party.

The second section gives readers a serious but enjoyable discussion of doctrinal, strategic, and weaponry issues reflecting different schools of thought among scholars and analysts. One school holds that the PLA would no longer squander human life by sending waves of peasants against Western firepower as Mao Zedong once did. Advocates of this way of thinking argue that high-tech weapons have become the PLA’s new hallmark but that it has a long way to go before it achieves the level of operational capability and technological sophistication its leadership desires. The fatal weakness lies in its strategy, doctrine, and weapons, which remain thirty to forty years behind those of the United States. The other school of thought insists that the PLA is in fact not so far behind the United States. Data offered here (the excellent bibliography in Chinese and the appendix) is empirical proof that the PLA actively studies the revolution in military affairs and is applying its lessons, developing sophisticated weapons, and acquiring advanced combat systems for asymmetric warfare. The modernized PLA could likely threaten the vital interests of the United States and its East Asian allies in the near future. Whether or not these concerns are justified, there is little doubt that the PLA is catching up with its regional counterparts.

The third section offers a professionally knowledgeable overview and analysis of the PLA’s budget, logistics, and technology, detailing some “contradictions” inherent in the support system. For example, the PLA’s modest defence budget is, at least for now, qualitatively different from those of industrialized countries; its essence is different, and its implications are different. For whatever reasons, the PLA has remained integrated within a larger socioeconomic composite that is able to provide unlimited resources for soldiers and to focus procurement priorities on items suitable for conflict scenarios with Taiwan.

A more troublesome issue, and one central to PLA logistics, is a continued debate on centralization and decentralization. Lack of consensus and resources often forces the central command to encourage units to find their own ways to survive economically or to upgrade their weapons and equipment, even while it tries to create a unified, reliable, and effective support system.

The PLA’s most vulnerable aspect remains its technological obsolescence. Even though the PLA closely watches developments in military technologies, progress in its key technologies is very slow, and technical difficulties make its military modernisation programs less than ideal. The resulting inconsistent policies and uneven development may eventually neutralize the effectiveness of its future operations.

The final section examines regional security issues with respect to the Korean Peninsula and Japan, areas of deep concern in Washington at a time when America’s presence there is already stretched thin. The analysis shows that China’s approach to Korea is rational. The most visible factor is that Beijing

does not want Pyongyang to collapse, politically or economically; at the same time, Beijing is pessimistic about the reunification of North and South Korea. Similarly, emerging nationalism in China and in Japan, and military modernisation in both nations, strengthen their threat perceptions. A confrontation between these two regional powers is possible, but a military one would appear to be highly unlikely in the near future. In short, regional stability and security hang on the joint efforts of all regional powers.

The book has two major flaws concerning PLA capabilities. First, the authors of these essays rely exclusively on their distinct assessments of PLA material power and terms of reference, and these leave unrecognized the role of Chinese spiritual power—that is, political indoctrination and nationalism—and of the incalculable advantages to the Chinese of fighting a war, whether high-tech or low-tech, on their homeland. Second, naval readers will regret the lack of an in-depth study of the Chinese navy. Also, there is no mention of recent developments in divesting the PLA of commercial enterprises, implementing the regulations of joint operations, or in introducing a joint support system.

All in all, the book is not only highly recommended for students of PLA studies but will undoubtedly also interest readers who have a general concern for Chinese and East Asian security.

JIANXIANG BI  
Kanata, Ontario, Canada



Kim, Duk-ki. *Naval Strategy in Northeast Asia: Geostrategic Goals, Policies and Prospects*. Portland, Ore.: Frank Cass, 2000. 261pp. \$57.50

The growing economic, strategic, and cultural importance of Asia calls for a U.S. foreign policy attuned to the unique environment of this diverse area. As this economic dreadnought emerges from the fog of uneven treaties, wars, and cultural misunderstanding, U.S. politico-military thinkers must recognize the pressures of history and geography that will dislodge any policy not firmly anchored in Asian realities.

Northeast Asia in particular, with its increasing importance in world trade, its potential for undersea resource development, archipelagic territorial disputes, and the possibility of environmental catastrophe caused by its rapid industrialization and nuclear-waste dumping at sea, is vital to U.S. geostrategic interests. These factors, coupled with historical regional animosities, a diminishing Russian and U.S. military presence, a naval arms buildup, and the associated ability to project power from the sea, highlight that security in Northeast Asia has assumed a decidedly maritime flavor.

Competing interests and local concerns abound. China desires to be a world power and regional leader, if not a full-fledged Asian hegemon. Japan quietly remilitarizes as it accepts a larger regional security role. South Korea desires unification of the peninsula under democratic rule, eagerly awaiting the collapse of the intransigent and Stalinist regime. Finally, the United States and Russia have growing regional economic and political interests, accompanied by a waning military presence brought on by budget constraints and defense retrenchments. Thus Northeast Asia, a bubbling cauldron that may boil over at any moment, is a focus of world attention.

This book is largely based on research for the author's doctoral dissertation.

Commander Duk-ki Kim, Republic of Korea Navy, has developed a wonderful primer for anyone desiring to understand the underlying factors of Northeast Asian international relations and emerging maritime issues. Kim's purpose for writing this book was to design a cooperative maritime security structure to enhance security throughout Northeast Asia.

In this scrupulously footnoted and documented work, Kim calls for bilateral and multilateral cooperative security among historically adversarial Northeast Asian nations. This framework for security will not only strengthen understanding of mutual security needs but also broaden the definition of security beyond the traditional approach of unilateral defense. Kim defines cooperative security as a system of security practiced with, rather than against, adversaries. His suggested maritime measures for security forums include: naval arms control to provide limitations and constraint; maritime confidence building measures to provide reassurance, confidence, and transparency; and maritime cooperation to introduce habits of cooperation.

Kim argues that the opportunity exists now for the regional powers to turn to cooperative security measures in order to lend stability to this historically unstable area. This cooperation, he believes, will go far in allaying fears of China's growing power-projection capability and Japan's acceptance of its growing regional security role. Cooperative security measures will also help in resolving resource and fisheries claims that threaten to erupt into open hostilities. By providing a vehicle for dialogue, cooperative security may serve as an acceptable alternative in the absence of any other formal institutional structure to manage growing disputes.

Kim's first three chapters make an excellent summary of the overarching maritime political and strategic concerns that undergird naval strategy in the region. Kim follows with chapters that describe U.S., Russian, and Japanese maritime strategies and concerns, and he concludes by showing how trying to amalgamate these diverse interests can be greatly eased by U.S. and Northeast Asian cooperative approaches on bilateral, regional, and international levels to provide stability through a framework of dialogue on peace and security.

As a naval officer intimately familiar with the region, Kim assesses the limitations of his proposals, such as Northeast Asian nations that are not yet ready for full-scale negotiations on reductions in naval forces. As these navies continue to grow, he sees a need for agreements to mitigate the inevitable high-seas misunderstandings. He also calls for more transparency through increased ship visits and high-level official exchanges, as well as cooperative development of offshore natural resources. As a further preventive measure, Kim suggests rules governing fishery violations, to help avoid dustups over fishing rights.

Although an excellent background read, this book contains two flaws that, while they do not detract from the central theme or lessen its value as a resource, may disconcert the reader. First, although much of Kim's work was completed before 1999, the copyright date is 2000. Thus in a number of places Kim refers to actions that should occur "by the next century," or "by the year 2000." Additionally, because of the dynamism of naval growth within Northeast Asia, much of the force structure he projects for the future already exists (e.g., the *Luhai*-class DDG alluded to on page 146

joined the Chinese South Sea Fleet in January 1999, and a *Sovremenny* DDG entered the Chinese order of battle in early 2000). Second, Kim does not treat the Republic of Korea Navy as a major regional actor, leaving it conspicuously absent from his chapters on strategy and concerns about cooperative maritime security. This is a significant omission. Korea is a growing naval power with extensive regional concerns, and it is possibly the nation most likely to find itself in armed conflict across its borders.

These gaps aside, this is a book worth having in a library on modern Asia. The extensive selected bibliography adds value to this work as a resource on Northeast Asian politico-military matters. It obviously should be required reading for those involved in Northeast Asian regional maritime issues, and it would also be of interest to anyone seeking to understand the unique problems of Northeast Asia and possible solutions to them.

ROBERT MARABITO  
Commander, U.S. Navy  
Naval War College



Weintraub, Stanley. *MacArthur's War: Korea and the Undoing of an American Hero*. New York: Free Press, 2000. 385pp. \$27.50

No figure of the Korean War looms quite so large as General of the Army Douglas MacArthur, simultaneously brilliant, arrogant, inscrutable, successful, and fallen—all the elements of a Greek tragedy. His military career, spanning the major portion of the twentieth century, also renders him appealing as a symbol of broader themes of that war and of American society. So we come to Stanley Weintraub's *MacArthur's War*, advertised on its dust

jacket as a “fascinating, well rendered history of the general who refuses to fade away,” a book based on “extensive research in primary and secondary sources and laced with colorful anecdotes.”

Unfortunately, the book is none of those things but rather a facile, cobbled-together mishmash of principally secondary sources, laced with myriad errors of chronology, fact, and interpretation—all poorly documented. When reading this book, one feels not unlike Vice Admiral James H. Doyle after reading a draft of a Korean War history sent to him in the late 1950s: “Your versions of the Inchon assault and Hungnam redeployment contain so many errors and distortions of fact and of emphasis that I am unable to assist you with my comment.” However, I would like to make note of a baker’s dozen of errors to provide specific evidence for my general assertions.

The author states on page 107 that the amphibious commander, Rear Admiral Doyle, “had been Richmond Kelly Turner’s operations officer in the final months of World War II.” In fact, Doyle served on Turner’s staff from August 1942 to March 1943; in the final months of the war, Doyle was commanding the cruiser *Pasadena*. These are not obscure facts but can readily be found both in George Dyer’s biography of Turner, *The Amphibians Came to Conquer*, and in Doyle’s official biography at the Naval Historical Center.

Weintraub writes that Rear Admiral Arleigh Burke explained to MacArthur the need to sail early for Inchon because of the typhoon season. “Although nearly a month remained before departure, the ship movement orders were issued immediately,” which would suggest that the conversation took place around 15 August. Burke was good, but probably

not that good. He did not arrive in Japan until 3 September 1950, twelve days before the operation. He *did* have such a conversation with MacArthur, but only several days before the scheduled sailing, and with respect specifically to Typhoon Kezia. This is all described in Burke's oral history, which is available at the U.S. Naval Institute, and which apparently Weintraub consulted.

We also learn that during World War II the 1st Marine Division "had stormed the beaches of Guadalcanal, New Guinea, New Britain, Peleliu, and Okinawa." The 1st Marine Division did not assault any beach or conduct any operation in New Guinea, although several other smaller Marine units did. That was an Army show.

Weintraub contends that Inchon was largely possible only because a World War II study conducted for the Joint Chiefs of Staff assessed Inchon as a possible landing site: "Without such detailed earlier data, MacArthur could not have carried out Chromite on such a short fuse." None of the principals involved have, to my knowledge, made reference to such a study. Poor institutional memory is not unusual. Little was known about Inchon in 1950, but someone recalled that Vice Admiral Thomas Kinkaid, commander of the Seventh Fleet, had accepted the Japanese surrender there in 1945. The U.S. Army had run the port for a time. At Doyle's insistence, a "frantic search turned up an Army warrant officer, W. R. Miller, who had lived on Wolmi Do and operated Transportation Corps boats over Inchon Harbor. . . . [He] forthwith joined Admiral Doyle's staff." (The reader can refer to Robert Debs Heinl, Jr.'s *Victory at High Tide* [Lippincott, 1968].)

In chapter 8, the author quotes from James Alexander's *Inchon to Wonsan*:

"On the destroyer *Borland*, accompanying the escort carrier *Badoeng Strait* as the Inchon flotilla moved north[,] . . . Marine and FEAF [Far East Air Force] pilots could be picked up on ship's radio." There has never been a U.S. Navy destroyer *Borland*, which one can confirm in the *Dictionary of American Naval Fighting Ships*, volume 1. Better yet, simply read the publisher's description of Alexander's book: "Alexander has created a fictional destroyer, the USS *John J. Borland*, and he records through this single ship the actual experiences of a number of real destroyers through their logs and diaries."

At one point, Weintraub has Lewis B. Puller commanding the 1st Marines, which he did. Later in the book, however, the author has Puller commanding the 5th Marines; this would have undoubtedly surprised Ray Murray, who actually did command the 5th Marines. Also, Homer Litzenberg is given the 11th Marines—he commanded the 7th Marines—and Ray David, who won the Congressional Medal of Honor at Chosin, will be pleased to learn that, according to Weintraub, he became a Marine Corps commandant.

During the delay in landing X Corps because of land mines, Weintraub writes, MacArthur "insist[ed] that the amphibious operations proceed but with the 7th Division now to make an alternative assault at Iwon." That decision was mutually made by the X Corps Commanding General (CG), Major General Edward Almond, with Doyle and Struble, aboard the USS *Mount McKinley* on 24 October 1950. The reader can refer to the Naval Historical Center's Operational Archives.

Weintraub also tells us on page 169 that "for Wonsan, Admiral Struble hastily assembled a twenty-one minesweeper

flotilla, including nine ships from the impounded Imperial Japanese Navy.” This short sentence contains three errors of fact. Struble, as Commander, Joint Task Force, did not assemble the minesweeping force. Captain Richard Spofford, commander of Mine Squadron 3, in fact reported to Vice Admiral Turner Joy as Commander of Naval Forces Far East. Joy intentionally kept control of the “sweeps.” Burke requested the Japanese minesweepers on 2 October. These were not impounded Imperial Japanese Navy ships but Japanese Maritime Safety Agency (JMSA) vessels that had been actively sweeping the Inland Sea since the end of World War II. On 6 October, the JMSA quietly authorized twenty minesweepers, four patrol boats (to act as mother ships), and one other vessel, to deal with magnetic mines. Some went to Korea’s west coast, and ten or twelve went to Wonsan, as stated in Burke’s oral history.

It is in its discussion of Hungnam, however, that the book really shines. On page 287, Weintraub blithely writes that “stowage diagrams for troops and equipment were ignored daily as troops filled whatever ships were available.” This statement implies a willy-nilly process of outloading at Hungnam. Nothing could be farther from the truth. Burke began to hold shipping in Japan in mid-November; Doyle issued Operation Order 19-50 on 29 November, for planning purposes; his control and loading plan was issued on 11 December; and he issued Operation Order 20-50 on 13 December. Doyle’s action report describes an expeditious but well organized movement of shipping in and out of Hungnam Harbor. Loading officers quickly developed an ability to estimate loading capacities without diagrams. The author’s casual assertion not only is inaccurate but does a disservice to those who did the job. One need

only read Doyle’s article “December 1950 at Hungnam,” in the April 1979 U.S. Naval Institute *Proceedings*, to understand this.

The author then puzzles over why Chinese forces did not put more pressure on the Hungnam perimeter. He concludes it was “as if a gentlemen’s agreement were in force.” Major General O. P. Smith, CG 1st Marine Division, had a different notion. In a 12 December letter to his wife Esther (which can be found in his personal papers at the Marine Corps University Research Archives, Quantico), the general observed that “six Chinese divisions will not bother anyone for a while”; the Marines, assisted by “old man winter,” had already taken a terrible toll on their attackers. Organic X Corps artillery was used for close support. Doyle had used two heavy cruisers, four to seven destroyers, and three LSMRs (medium landing ships equipped with rockets) throughout (augmented on “Dog Day” by the battleship *Missouri*) for naval gunfire support, area harassment fire, illumination, and deep support. Doyle also had the 1st Marine Aircraft Wing at Yongpo and Task Force 77 aircraft on call. From 9 to 24 December, 2,932 eight-inch high-capacity, 14,491 five-inch proximity-fuzed, and 3,741 five-inch illuminating rounds were fired at Hungnam.

Weintraub also errs in his summary of the outloading statistics for Hungnam, which are among the most widely published figures from the Korean War, asserting that “550,000 estimated tons of bulk cargo” were lifted. The actual figure was “350,000 measurement tons” (refer to the Operational Archives, Naval Historical Center).

The caption for a photograph of MacArthur and other officers on *Mount McKinley*’s flag bridge on the morning of the Inchon landing mislabels one of the

officers as Vice Admiral Struble; it was actually Rear Admiral Doyle. Struble was aboard his own flagship, the cruiser *Rochester*. According to protocol, MacArthur should have been aboard Struble's ship; however, he elected to go with Doyle instead. The irony is that Doyle and Struble enjoyed a strong mutual antipathy.

It would have been useful to be able to refer to Weintraub's sources to trace the origins of his errors, but unfortunately, he condescends that "endnote numbers are eschewed as intrusive, as are most footnotes." He believes that "extensive back matter notes" on each chapter's sources would suffice. (It is worth mentioning that the Marine Corps Fleet Marine Force Manual 1-0, *Leading Marines*—primarily intended for young enlisted Marines—shows there as FMFM 101.) It is impossible to ascertain from his back-matter notes where specific material originated, unless one compares the text line by line with each source mentioned. I tried to do that for the dialog the author offers for the famous 23 August 1950 "showdown" meeting regarding the Inchon landing. Parts comport with published accounts and participants' recollections, but some of it I have never seen before. Perhaps it came from sources unnamed, but without notes one cannot be certain.

Notes are not a luxury or, to use Weintraub's word, an "intrusion." The author must know that. Notes are at the heart of rigorous scholarly research. Research is a social process, and its linchpin is the ability of other scholars to check the validity of reported findings. Ultimately, *MacArthur's War* contributes little to our understanding of the Korean War. It is so fraught with errors that it cannot be taken seriously.

It is a regrettable book.

DONALD CHISHOLM  
*Naval War College*



Cable, James. *The Political Influence of Naval Force in History*. New York: St. Martin's, 1998. 213pp. \$59.95

Sir James Cable is a noted writer on naval affairs. His *Gunboat Diplomacy, 1919–1991* is a well regarded classic on the role of naval force.

His latest work is a historical survey of the political purposes for which governments have made use of naval force. Cable defines "naval force" as that "exercised by fighting ships manned by disciplined sailors at the direction of a central command responsible to the political leadership." His definition is necessary to distinguish naval force as we understand it today from the force exercised by pirates, privateers, adventurers, and users of "landing craft" (such as those that brought Roman soldiers to Britain in 55 A.D.) or galleys, which served merely as conveyances to bring soldiers together for seaborne hand-to-hand combat.

Cable examines the extent to which naval force furthered the political purposes of the governments that used it—the scale and nature of the force employed are not otherwise considered relevant. He focuses on examples of the use of force "for political purposes in which the naval element is significant, the facts are reasonably well established, and the degree of success or failure and the durability of the result are clear enough for useful conclusions to be drawn."

This definition thus largely excludes consideration of fighting at sea before the 1500s, because standing navies were rare, thus precluding the presence of disciplined officers and sailors. Portugal in the sixteenth and the Netherlands in the

seventeenth century first used naval force for political purposes, with great success in founding large empires. The establishment of global empires and expanded seaborne trade fostered the emergence of significant national navies (as opposed to privateers and pirates).

Cable surveys various instances when the use of naval force had profound, long-lasting political effects. Obviously, victories in major sea battles like Trafalgar or Tsushima, the ultimate use of naval force, could have significant political fallout. Yet the uses of naval force did not have to be that dramatic to have such effect. Cumulative efforts—such as those of the British to attain command of the seas in the eighteenth century; of the British (and others) to stamp out the slave trade in the nineteenth century; of the Union navy to blockade the Confederacy during the Civil War; of the German submarine campaigns to interdict sea traffic to Great Britain; and of the Japanese campaign to conquer Southeast Asia—all had long-lasting political consequences, even if the eventual outcomes were not always intended.

Discrete exercises of noncombat naval forces have also had huge political consequences. For instance, the Dutch navy's successful landing of William of Orange in England enabled the Glorious Revolution and all that followed from it in Britain (and Ireland). French naval intervention off Yorktown in 1781 was critical in ending the American Revolution. ("Indeed, we can scarcely expect to encounter any result of the use of naval force for political purposes that is larger or more lasting than the independence of the United States.") The U.S. Navy's "opening of Japan" had profound effects on that nation's development and thus Japan's impact on subsequent world

history. More recently, the Royal Navy's attack on the French navy in July 1940 was intended in part to influence American political opinion concerning British resolve to resist Nazi Germany.

Political influence from naval force can be latent as well. German construction of its High Seas Fleet, as well as British contemplation of "Copenhagening" that fleet in the decade before World War I, negatively affected the political environment of that era. The rise of the Soviet Navy in the 1970s and 1980s significantly affected U.S. political debate about national security; arguably, "the growth [in the 1980s] of the U.S. Navy probably caused greater harm to the Soviet Union than all the confrontations at sea put together."

Cable does not really address "dogs that did not bark"—that is, the *absence* of naval force, or more properly, the failure to use it. A counterfactual argument is usually difficult to make convincingly. However, the Royal Navy's failure to stop Italy from using the Suez Canal in 1935 during the Ethiopian campaign, and the impact of that failure on the European political scene, would appear to be a good case in point. It has been thought that the absence of strong Royal Navy forces in Singapore in 1941 played into Japanese political calculations. This would seem a good area for inquiry as the United States enters the Quadrennial Defense Review season. The Navy, like the other services, generally makes affirmative arguments for what it provides the nation; the possible consequences of *not* having the capability to be engaged is less often argued, yet may be even more compelling.

Cable ends with some "lessons and speculations." These are, unfortunately, not sharply focused. As he admits, it is hard



to discern any real patterns from his historical survey, and even if any exist, the stockbroker's warning that "future results cannot be predicted from past performance" applies. At best, "if anything approaching a principle emerges from the confused record of the past it may be that the natural political environment for navies, their *raison d'être*, is the unforeseen. . . . Warships allow choice, naval force is a flexible instrument."

The book is a good short summary of the political uses of naval force, both intended and unintended, over the past fifty years. However, it is of limited value in helping today's defense analysts and policy makers think through the requirements for tomorrow's naval forces.

JAN VAN TOL  
Commander, U.S. Navy  
CNO Executive Panel Staff



Lambert, Nicholas. *Sir John Fisher's Naval Revolution*. Columbia: Univ. of South Carolina Press, 1999. 364pp. \$39.95

This is a very good book and a very important one. Nicholas Lambert has followed in the path of Jon Sumida's *In Defense of Naval Supremacy* to present a lucid, compelling, and comprehensive analysis of the policies of Admiral Sir John Fisher and the Royal Navy in the decade before 1914. This work is based upon Lambert's doctoral study of the development of the submarine, but it goes much farther than his original work in explaining the fundamental elements of Fisher's naval policies and their effects on the Royal Navy.

Lambert's command of the primary sources is remarkable. He supplements grand strategy, national financial policy, and politics with the details of

operational and tactical concepts with a skill that illuminates the linkages between the various levels and gives them all sufficient and appropriate weight. His treatment not only lays bare the superficial nature of much previous historical research in this era but also indicates the degree to which that superficiality has caused our understanding of the period to be profoundly flawed.

The book is not an easy read, but Lambert's solid prose and grasp of his narrative allow the reader to follow his way through the labyrinth that was British naval policy in the Fisher era. To detail all its facets would take up an entire issue of the *Naval War College Review*, but some explanation is worthwhile.

Lambert makes clear that Fisher was installed as First Sea Lord in 1904 primarily to cut spending at a time when the British government desperately needed to achieve economies in its budget. He shows that Fisher developed extraordinary schemes to utilize emergent technology to maintain Britain's naval dominance when that dominance was being increasingly challenged and the country's ability to pay becoming ever more dubious. He shows too that Fisher's ideas of dominance always focused on Britain's worldwide requirements, particularly in the protection of sea communications (the threat from Germany was not the primary motivation of British naval policy until much later).

Lambert shows the devious way in which Fisher operated, often concealing his true motivations from politicians and naval colleagues alike, but he also maps out the logic behind the admiral's approach. To Sumida's explanation of the origins of the battle cruiser as the worldwide instrument of commerce protection, Lambert adds the concept of the "flotilla," by which small craft—both surface and

submersible—with torpedoes would close the “narrow seas” around the British Isles and the Mediterranean to the operation of enemy battle fleets and protect Britain and its possessions from attack. “Flotilla defence” would effectively replace the capital ship as the primary element in Britain’s naval strength.

Lambert shows how Fisher always returned to these ideas as the best ways for Britain to utilize both its technological advantages and its strategic geography to achieve affordable naval supremacy. Even in retirement Fisher continued his efforts, and Lambert has discovered incontrovertible proof that in 1914, when the overseas building rates of battleships had become more than British finances could match, Fisher persuaded Winston Churchill, the young First Lord, to cancel the construction of at least two battleships and divert the funding to submarines and destroyers. In other words, the British in 1914 were on the point of stopping battleship construction altogether.

Lambert’s mastery of detail is apparent throughout this volume, but there are four aspects that are most important for the readership of the *Naval War College Review* and for the challenges ahead.

The first is Lambert’s exposition of the issues that the Royal Navy faced as an organisation, some of which will have a particular resonance for the contemporary audience. Finance was always a fundamental concern, but there were other factors as well. Cutting construction to save money jeopardised the existence of the industrial capacity on which Britain’s latent supremacy at sea rested. Much of Britain’s power derived from the fact that it could, in the final event, construct and arm more warships more quickly than any rival; it was essential that this ability be maintained. The “We Want Eight”

crisis of 1909 may thus have had Fisher’s desire to sustain that capability as its primary cause, rather than his fears of German expansion.

The British also faced a crisis of manpower. Not only was the Royal Navy hard pressed to recruit sufficient personnel to man the increasing numbers of battleships and armoured cruisers entering service in the first years of the century, but retention was poor, particularly amongst the more highly skilled ratings vital to their operation. Even if the government provided the funds, the Navy did not have the human capacity to expand indefinitely to match increases in foreign naval capability. The primary focus of the redeployment process, which saw the removal of ships from overseas stations and the apparent concentration of forces in British waters, was not the German threat but the need to employ manpower more efficiently; perhaps, also, by retaining ships in home waters rather than keeping them semipermanently overseas it would improve the quality of life of the ships’ companies. The peacetime deployment of the fleet therefore did not necessarily reflect the intentions for its operations in a conflict.

A corollary to this is the fact that the primary focus of the Admiralty’s effort was the defence of the empire as a whole; the force that it sought to create was always intended to have worldwide responsibilities. The fleet that fought the 1914–18 war in the North Sea, the “Grand Fleet of Battle,” was an attempt to use resources that had been created the previous decade to the greatest effect within a theatre that was much more confined than had been expected only a few years earlier. The enemies that Britain faced in 1914 did not include Italy or any other power with the

potential to interfere with British maritime communications to the degree Russia or France could have. As it was, the problems of organising the Grand Fleet to be an effective tactical entity were such that many in the Royal Navy did not regard it as a practical offensive force. The results of Jutland show they had a point.

Thus we see the importance of Lambert's careful inclusion of what was going on in the fleets at sea in terms of operational innovation and development. *Sir John Fisher's Naval Revolution* makes it absolutely clear that whatever their failings in critical thinking, staff work, and analytical method, the senior officers of the Royal Navy were not operating in an intellectual vacuum, and that those in seagoing command were energetically attempting to exploit the emergent technology to the full. Because these officers were responsible for the fighting efficiency of the Royal Navy, however, they were required to work with what they had. As with the aircraft carrier in the 1920s and 1930s, this reality explains the contemporary logic of many decisions that seem misguided in retrospect. It also explains a good part (though not all) of the opposition to Fisher's ideas, even amongst his erstwhile supporters, and thus a good part (though not all) of Fisher's deviousness. At the same time, Lambert does not neglect the effects of personality and party in his description of the controversies that raged over Fisher and naval policy. There are human beings in this book.

Lambert's mastery of context is, above all, why this work should be read by all who are involved with naval policy. He analyses the elements of British decision making and its consequences in terms of contemporary conditions, not hindsight. Lambert clearly explains the ways in which solutions and makeshifts were

developed to answer, in the time available, the problems that the Royal Navy faced. He places clear and necessary emphasis on the British need to maintain warfighting capabilities year by year, in spite of all the stresses on the budget and the "stop-go" nature of so many of the new capabilities, such as the submarine and long-range gunnery fire control. In the uncertain strategic environment of the opening years of the twentieth century, the Royal Navy could not afford to surrender existing or immediately available battle power in favor of unproven systems. Nor could it permit the deterioration of the industrial capacity that allowed it to outbuild rivals in an emergency, or continue to seek "more of the same" at the expense of national finances. However ambitious Fisher's ideas, all of what he did was influenced by these imperatives, as he sought to position the navy to exploit new possibilities.

Lambert's story of the Royal Navy before 1914 presents a picture completely different from the accepted one, but it is a picture that is solidly founded in primary sources. Equally to the point, it is one that is wholly convincing in total and represents a more satisfying explanation of what happened, and why, than we have ever had before. It is a study that should sound a familiar note for those who have themselves had to struggle with the same sort of problems in other navies and defence forces in recent years.

As one who has written on the operational history of the Royal Navy in the opening months of the First World War, I now believe that such history, and indeed the entire history of the war at sea, needs to be approached anew. I also believe that Lambert's work proves that we should look again at more of the history

of twentieth-century navies with the same comprehensiveness.

JAMES GOLDRICK  
*Captain, Royal Australian Navy*



Maffeo, Steven E. *Most Secret and Confidential: Intelligence in the Age of Nelson*. Annapolis, Md.: Naval Institute Press, 2000. 355pp. \$32.95

In *Most Secret and Confidential*, Steven Maffeo has written an exceptional study of how intelligence was collected and used during the French Revolutionary Wars and the Napoleonic Wars of the late eighteenth and early nineteenth centuries. To limited degrees, the intelligence activities of the United States, Spain, Russia, Denmark, and several other European nations are described. More detail is provided concerning the excellent French intelligence efforts under Napoleon. The bulk of the text, however, deals with the use of intelligence by the British government, especially the Admiralty, during the years between 1793 and 1815.

Maffeo, who is a commander in a naval reserve intelligence unit, has combined his intelligence expertise with the skills of an accomplished historian to write this informative and most enjoyable history of British intelligence efforts during this period. His knowledge of the history of intelligence operations is excellent, and his grasp of the British navy of this era is unsurpassed. He uses not only primary sources (government papers and personal letters) to document his work but also the books of such novelists as C. S. Forester and Patrick O'Brian to make his points.

The opening chapter describes how the British government collected intelligence. It has been clear that Lloyd's of London, by means of its agents located

around the world, was able to provide a continuous flow of intelligence to the government, but it is fascinating to learn that by virtue of opening diplomatic and personal mail, the British Post Office became the largest intelligence-gathering branch of the government.

Subsequent chapters treat other aspects of the British intelligence effort. The Admiralty's collection and use of intelligence is discussed in depth, and so is the transmission of information. The difficulties are shown of sending any type of message, especially when the usual form of communication at sea was signal flags, which were useless at night or in limited visibility, such as in battle. The subject of several chapters is the commander as his own intelligence officer. Some commanders, such as Nelson, were expert intelligence officers; others were not. However, all commanders had to sort through whatever information was available to them and make the best decisions they could—they were literally on their own. Communications between detached fleets and the Admiralty often took weeks, if not months. Commanders, therefore, without knowledge of the current government policy, would ultimately decide on courses of action. The fact that they were fully supported by the Admiralty and the government demonstrates the high level of intelligence skills among the officers of the Royal Navy.

The concluding chapters are case studies that show what role intelligence, or the lack thereof, played in three naval engagements. They are remarkable summations of the Indian Ocean action of Pulo Aur in February 1804, the Copenhagen expedition of December 1800–April 1801, and the Nile campaign of March through August 1798. These three chapters form an excellent conclusion.

This is a must read for every intelligence officer, and for any member of the military who is interested in the history of intelligence. It should also be on the reading list of every military and naval historian, most history buffs, and fans of naval fiction of this period. It

substantiates that such fictional characters as Horatio Hornblower and Jack Aubrey are soundly based on historical fact, and that their activities, especially concerning intelligence, are authentic.

MICHAEL RIGGLE  
*Naval War College*

## FROM THE EDITORS

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### SPECIAL RECOGNITION

Professor Donald Chisholm, of the Naval War College's Joint Military Operations Department, has been selected for "Special Recognition" in the Surface Navy Association's 2000 Literary Award competition, for his "Negotiated Joint Command Relationships: Korean War Amphibious Operations, 1950," in the Spring 2000 *Naval War College Review*. Congratulations!

### "THE CONFERENCE ROOM"—OUR ON-LINE FORUM

To facilitate and stimulate exchanges of views between our readers, authors, editors, and the Naval War College research faculty, we have established a forum on our Website—find links on the Press homepage (<http://www.nwc.navy.mil/press>) and on the homepage of the *Review* itself, <http://www.nwc.navy.mil/press/review.htm>. We hope you will use the Conference Room as a vehicle for pursuing substantive issues raised in the journal itself—by posting, reading, and replying to bulletin-board comments; and posting and commenting on drafts of papers-in-progress.

### BOOK REVIEW INDEX

The beginning of a comprehensive index of our book reviews, review essays, and "Recent Books" notices has been posted on our Website—visit the Press or *Review* homepage and click on "Indexes." The entries, organized by subject, will soon be expanded (with links) to all on-line *Review* issues, and thereafter in stages to earlier issues.

### TO OUR SUBSCRIBERS

Every two years, as the U.S. Postal Service requires us, in order to maintain our Periodicals Postage privilege, to "validate" our mailed circulation. Each year we do half, and in 2001 it will be the turn of individual subscribers—those who receive their copies in their own names, vice those of institutions. (None of this applies to U.S. Navy, Marine, or Coast Guard readers who receive it at their standard distribution list addresses.) Individual subscribers should watch in the Spring 2001 issue for a tear-out card, to fill out and return to us (remember to

add a stamp). We will need to hear from you by 30 September 2001 or we will be obliged to drop your subscription as of the Winter 2002 issue.

#### IF YOU VISIT US . . .

Our editorial offices have moved from Luce Hall to a suite on the second floor of Pringle Hall, south wing (rooms 244–250). All our telephone numbers, e-mail addresses, and postal addresses are the same, *except for our fax*, which is now (401) 841-1071.

#### ERRATUM

Our heading to the review of *The Paths of Heaven: The Evolution of Airpower Theory*, edited by Phillip S. Meilinger, in the Summer 2000 issue gave incorrect publication data: the publisher is Air University Press, Maxwell Air Force Base, Alabama; the price is \$39 (free for military).

#### STATEMENT OF OWNERSHIP, MANAGEMENT, AND CIRCULATION

Statement of ownership, management, and circulation (required by 39 U.S.C. 3685) of the *Naval War College Review*, Publication Number 401390, published four times a year at 686 Cushing Road, Newport, R.I., 02841-1207, for 1 October 2000. General business offices of the publisher are located at the Naval War College, 686 Cushing Road, Newport, R.I., 02841-1207. Name and address of publisher is President, Naval War College, 686 Cushing Road, Newport, R.I., 02841-1207. Name and address of editor is Dr. Thomas B. Grasse, Code 32, Naval War College, 686 Cushing Road, Newport, R.I., 02841-1207. Name and address of managing editor is Pelham G. Boyer, Code 32A, Naval War College, Newport, R.I., 02841-1207. Owner is the Secretary of the Navy, Navy Department, Washington, D.C. 20350-1000. Average number of copies of each issue during the preceding 12 months is: (A) Total number of copies: 8,554; (B) Requested circulation, mail subscriptions (in Newport County): 197; outside Newport County: 4,755; (C) Total requested circulation: 4,952 (D) Free distribution by mail: 2,413; (E) Free distribution outside the mail: 965; (F) Total free distribution: 3,378; (G) Total distribution: 8,339; (H) Copies not distributed (office use, leftovers, spoiled): 215; (I) Total: 8,554; Percent requested circulation: 59. The actual number of copies of single issue published nearest to filing date is: (A) Total number of copies: 9,247; (B) Requested circulation, mail subscriptions in Newport County: 198; outside Newport County: 5,062; (C) Total requested circulation: 5,260; (D) Free distribution by mail: 2,408; (E) Free distribution outside the mail: 1,379; (F) Total free distribution: 3,787; (G) Total distribution: 9,047; (H) Copies not distributed (office use, leftovers, spoiled): 200; (I) Total: 9,247; Percent requested circulation: 58. I certify that all information furnished is true and complete.

Pelham G. Boyer, Managing Editor

## OF SPECIAL INTEREST

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### ANNOUNCEMENT: SIXTEENTH SIENA COLLEGE WORLD WAR II SYMPOSIUM

The sixteenth annual Siena College multidisciplinary symposium on World War II, for the sixtieth anniversary of the war, will be held 31 May and 1 June 2001. The focus for papers to be delivered embraces fascism and Naziism; literature, art, popular culture, and film; diplomatic and military history; and women's and Jewish studies. Pearl Harbor, Japanese expansion and occupation, Greece, Yugoslavia, the Soviet Union, North Africa, and collaboration are of particular relevance. Pertinent Asian, African, Latin American, and Near Eastern topics are also encouraged.

### CALL FOR PAPERS: SEVENTEENTH SIENA COLLEGE WORLD WAR II SYMPOSIUM

The seventeenth annual Siena College multidisciplinary symposium on World War II will be held 6–7 June 2002. The focus for papers will be 1942. Topics welcomed include, but are not limited to, fascism and Naziism, Midway, New Guinea, Guadalcanal, North Africa, the North Atlantic, literature, art, popular culture, film, diplomatic and military history, and women's and Jewish studies dealing with that year. Papers on collaboration and collaborationist regimes, the home front, conscription, and dissent are encouraged as well. Inquiries from persons wishing to chair or comment are also invited. Deadline for submissions (brief outline or abstract, with c.v.) is 15 November 2001. Final papers are due 15 March 2002.

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*Replies and inquiries, for either symposium, to Prof. Thomas O. Kelly II, Department of History, Siena College, 515 Loudon Road, Loudonville, N.Y., 12211-1462, tel. (518) 783-2512, fax (518) 786-5052, e-mail [legendziewic@siena.edu](mailto:legendziewic@siena.edu). Website <http://www.siena.edu/sri>.*



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