Naval War College Review

Volume 53
Number 2 *Spring*

Article 1

2000

Full Spring 2000 Issue

The U.S. Naval War College

NAVAL WAR COLLEGE REVIEW

SPRING 2000

The editorial offices of the *Naval War College Review* are located at the Naval War College, Newport, R.I. (address: Code 32, Naval War College, 686 Cushing Rd., Newport, R.I., 02841-1207). Published quarterly, its distribution is limited generally to commands and activities of the U.S. Navy, Marine Corps, and Coast Guard; regular and reserve officers of the U.S. Navy, Marine Corps, and Coast Guard, and military officers of other U.S. services; foreign officers and civilians having a present or previous affiliation with the Naval War College; selected U.S. government officials and agencies; and selected U.S. and international libraries, research centers, publications, and educational institutions.

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For editorial office telephone numbers, etc., see page 124. For permissions, indexing, etc., see page 207. The *Naval War College Review* is on the World Wide Web at http://www.nwc.navy.mil/press.

Periodicals postage paid at Newport, RI. POSTMASTERS, send address changes to: *Naval War College Review*, Code 32S, Naval War College, 686 Cushing Rd., Newport, RI, 02841-1207. ISSN 0028-1484

NAVAL WAR COLLEGE REVIEW

Volume LIII, No. 2, Sequence 370 Spring 2000

OUR COVER: "Mediterranean Deployment: USS *Ontario* Leading Decatur's Squadron, 1815," by Geoff Hunt, RSMA. Mr. Hunt's work appears on the covers of the late Patrick O'Brian's Aubrey/Maturin novels. For more on the sloop *Ontario* and on the artist, see page 39.

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Courtesy Mystic Seaport, Mystic, Connecticut

The need for transformation—driven by the changing geostrategic environment, advancing technological opportunities, cost trends, and guidance from the Joint Chiefs of Staff—is undeniable, but the strategy for transformation is just now beginning to receive the investment of intellectual capital it deserves.

President's Forum

STRATEGY DEVELOPMENT—WHETHER FOR THE design of a future Navy or the focus of a business—implies making predictions about the future. The problem, of course, is that we've never been particularly good at predicting the future. The universe as we know it is an integrated system of systems, made up of many parts that dynamically interact with each other. The future behaviors of such systems are difficult or impossible to predict. So how do we cope with the security requirements of an unpredictable future?

Eric D. Beinhocker, writing for the Massachusetts Institute of Technology's *Sloan Management Review*,* suggests that we take our cue from nature—relying less on our ability to make accurate predictions and more on our ability to adapt to the situation that does occur. Beinhocker suggests that rather than having one strategy,

*Eric D. Beinhocker, "Robust Adaptive Strategies," *Sloan Management Review*, Spring 1999, pp. 95–106.

optimized for a single predicted future, responsible management teams should go about "cultivating and managing populations of multiple strategies that evolve over time." He notes that "a robust population of strategies will produce positive results under a wide variety of circumstances, even though it may not be optimal in some circumstances. . . . Such an adaptive population of strategies keeps an array of options over time, minimizing long-term and irreversible commitments."

While Beinhocker is drawing an example from evolutionary biology to address strategies for successful business, the requirement for flexibility, robustness, and adaptability is nowhere more important than it is for the Navy. The Navy we build for tomorrow must be a balanced force capable of adapting to a wide range of uncertain futures. It must have a good balance of weapons and sensors, of quantity and quality, and speed and stealth. It must be able to adapt to the less likely scenarios while dominating the more likely ones. Also, it must not be too dependent on a single technology, platform, mission, or strategic environment.

Evolutionary biologists often use an imaginary grid called a "fitness landscape" to visualize patterns of evolution in nature. Fitness landscapes also provide useful models for thinking about the types of strategies that ensure survival in a complex and unpredictable future. In its most common incarnation, a fitness landscape is essentially a dynamic, three-dimensional grid. The points on the grid represent various gene combinations, and the height of each point represents the fitness of a specific genetic combination for survival.

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.

The evolution of a species or of an organization can be thought of as a search for high points in fitness landscapes that are continually changing.*

Fitness landscapes can take a variety of shapes, from a single peak to a random topography with many peaks and valleys. The landscape is not fixed, as a mountain range appears to be, but is constantly in flux, in response to interactions with its inhabitants and with the external forces acting upon it. As the environment changes, the fitness of any particular inhabitant or strategy will also change. What works today may not work tomorrow.

Beinhocker suggests there are three elements vital for success on any fitness landscape: keep moving, conduct parallel searches, and mix long and short jumps across the landscape. The more you explore, the greater your chances of finding new peaks. Even if you are fortunate enough to be on a high peak, you can't afford complacency—at some point your dominant peak will collapse, as the environment changes or competitors' actions deform the landscape.

Detailed case studies of successful companies find that those that have remained successful for many years have created cultures of restlessness, discomfort with the status quo, and constant striving for improvement.** They innovate and evolve. They don't sit still. So it must be with the Navy.

Over the past summer, the Naval War College was tasked by the Secretary of the Navy to develop a set of recommendations for transforming our current and programmed Navy into the "Navy after next"—a fully networked force capable of dominating the sea and decisively influencing events ashore . . . anytime . . . anywhere. The need for transformation—driven by the changing geostrategic environment, advancing technological opportunities, cost trends, and guidance from the Joint Chiefs of Staff—is undeniable, but the strategy for transformation is just now beginning to receive the investment of intellectual capital it deserves.

Successful transformation has traditionally required radically different approaches to doing business. The attendant cultural and

* For a general discussion of fitness landscapes, see Stuart A. Kauffman, *At Home in the Universe: The Search for Laws of Self-organization and Complexity* (New York: Oxford Univ. Press, 1995).

** J. C. Collins and J. I. Porras, *Built to Last: Successful Habits of Visionary Companies* (New York: HarperCollins, 1994).

structural changes to an organization are often dramatic, and quite painful. It is likely to be no different for the Navy. For instance, the requirements of transformation may ultimately challenge one or more of the Navy's traditional core competencies. Old priorities will have to give way to the new. There is likewise little doubt that we must develop new personnel policies, organizational approaches, doctrine and training, and acquisition structures and processes to adapt ourselves to the rule set of the information age. A certain amount of disruption will be inevitable. So, how do we begin?

Obviously, a transformation strategy must start with a mutually held goal—a clear vision of where we want to go and what we need to become. The vision of the future Navy, painted in broad strokes by the Chief of Naval Operations, describes the conceptual mountain that must be climbed. It does not specify the route to the top, but it does provide us with both a starting point and a focus for the transformation that must occur. It asserts that the Navy after next must be able to fight and dominate in the complex environment of the littoral against an enemy with steadily improving sensors and weapons. We know that our approach must be both network-centric and innovative. Finally, we know that we must be informed by the realities of the past and present, but not held hostage by them.

A guiding vision is a necessary precursor for transformation but not a sufficient impetus. To move forward, we must articulate and define the vision. We must create an institutional commitment to the keystone concept of network-centric warfare and establish a sense of excitement and urgency about the opportunity—and necessity—for change.

Our initial priority must be establishing the competitive space that the Navy is uniquely qualified to fill. In other words, how will the Navy define, or redefine, its core competencies in the future? In which technological and warfare areas should the Navy take the lead? In which should it follow? What should it ignore? Where should it reserve the right to play later? For example, should the Navy shift focus from strike against fixed targets to taking the lead in rapid strike against moving, mobile, and other time-critical targets? Should we lead or follow in the area of space-based sensors? Answers to these questions and others like them will frame the Navy after next and guide us as we prioritize our investment decisions.

A successful transformation strategy must focus on tangible gains. This requires disaggregating the vision into its essential elements and translating them into action items. These elements must be specific enough to fuel concept development and to support a rigorous program of experimentation, modeling, simulation, and gaming. Such a program is critical to sharpening our vision, identifying emergent warfare challenges, testing our concepts, and defining how we need to change today's operations to meet tomorrow's challenges. Parsing the vision into specific and measurable objectives will also provide us with an opportunity to gain the early victories necessary to sustaining momentum in our journey to the Navy after next.

Only a comprehensive, integrated, innovative, and holistic strategy is likely to result in the successful transformation of an organization. In a recent study that included both traditional research and a series of conferences with experts in transformation strategies, we developed a set of recommendations covering four areas—personnel, organization and administration, programs and acquisition, and the concept development and experimentation that drive doctrine and training. These four pillars form the structural components of a Navy transformation strategy. They build upon and support one another. Taken as a package, they can combine the power of innovative ideas with the strengths of both the Navy of today and the programmed Navy to forge the Navy after next.

Personnel. In the information era, workers have a different value from the days when skill was defined by the ability to operate a machine or perform a repetitive task. The number of unskilled workers has fallen to less than 20 percent of the nation's workforce. People are the heart and soul of any successful organization. If the Navy is to continue to prosper in the highly dynamic environment of the information age, we must be able to recognize, attract, nurture, and retain enough innovative individuals with the specialized skills necessary to dominate in this highly competitive arena. These will be the same people and skills that are in high demand in our increasingly information-dependent civil economic sector. To compete successfully for them we must ensure that our personnel management practices are consistent with the realities of the twenty-first century. For example, we should review and perhaps revise practices to encourage our most experienced people to stay and to provide them a vital,

growth-oriented environment. Everyone should expect new practices to disrupt the old.

Organization and Administration. Proponents of information-age structures point out that by and large, organizations that have been able to leverage fully the power of information and of information technologies have dominated their competitive domains. But what do these organizations look like, and how relevant are those structures to the military? We understand that military organizations optimized for the information age may look much different than they do today, but at this juncture we don't really know what the optimal organizational arrangements should be. We do know, however, what qualities they must possess: they must be informed, agile, and adaptive. For the present we should look at every source, including the business world, for the best it has to offer and adapt it where applicable in the Navy.

Program and Acquisition. The most important consideration for the Navy's acquisition strategy in the next millennium is ensuring proper balance between sensors, communications, and weapons. In particular, we need to invest in the sensors and communications necessary to take full advantage of the weapons we have already procured. Additionally, if we are to exploit fully the speed at which new technology develops we must have a commensurate increase in the speed with which new systems, and the operational concepts necessary to exploit them, are introduced into the fleet for evaluation. We must find a way to encourage rapid prototyping.

One innovative way to proceed is a strategy known as "spiral acquisition." Spiral acquisition begins with a promising high-risk, high-payoff concept. Because the concept is on the fringes of the achievable, there is little likelihood that it will succeed entirely in the short term. Instead, contractors are asked to prepare estimates of what they think they can produce in one or two years, and the most promising proposal is funded. By the end of the contract period, the Navy will have acquired enough of the product for experimentation and use by the operational forces. The Navy then refines the concept, adapts it, or remains with the original, and once again opens the process for bids, using the latest product as a starting point. The process continues until the final objective is achieved or the program is

terminated. Such an approach would speed development, encourage rapid experimentation and adoption by the fleet, and preserve competition by keeping a number of contractors in the game.

Doctrine and Training. How the Navy trains and fights in the future will largely be determined by the kinds of precursor activities it participates in today. As noted above, the Navy's vision for the future has matured to the point that we need now to turn our attention to disaggregating that vision and translating it into measurable operational tasks so that we may begin the serious business of experimentation, simulation, and analysis. Only through these activities can we enrich the detail and scope of promising but untried concepts. It is impossible to overstate the importance or urgency of this effort. A group of Institute for Defense Analyses researchers highlighted the importance of experimentation, especially in peacetime, by summarizing thousands of pages of scholarly work on military innovation in one short paragraph:

> History shows that in peace technology and doctrine develop somewhat separately. First battle experiences expose, at high cost, the lack of alignment. Experimentation should provide the first battle experience and ensure that doctrine is capable of fully exploiting available technology. Furthermore, first battle experiences expose fallacies in thinking and mismatches between available and needed capability. Experimentation must confront conventional wisdom. Lacking a specific threat we lack a unifying focus for doctrinal and technological development. Instead, we must plan for a wide array of threats. Experimentation should provide the breadth of experience needed to deal with the unexpected.*

A successful experimentation program will accept failure at a certain level. Despite every effort to design well-thought-out experiments to test equally well-considered concepts and hypotheses, a number of our experiments will fail, and many of our concepts and hypotheses will be proven unsound or untrue. That is as it should be in an experimentation program. That is how we learn. If everything we do succeeds, we're not pushing the edge of the envelope hard enough.

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* D. Robert Worley, Dennis Gleeson, and John Kries, "What Does Military Experimentation Really Mean?" (briefing by Institute for Defense Analyses, 30 September 1999, from work sponsored by the Joint Staff [J-8]).

The Evolution of the Revolution. I've spelled out in the broadest terms the necessary components of a transformation process that supports creative people, provides opportunities to excel, ensures resources for transformation, promotes changes in culture and structure, guarantees that the next generation of leadership is open to innovation, and institutionalizes the innovation process. Much work remains to be done on the details.

Some of the more pressing issues will be explored at the Naval War College in the spring 2000 intersessional conference on innovation in the Navy. Others will be hammered out in fleet battle experiments, war games, and a variety of decision-support events. A few solutions will offer themselves quickly, others will require extensive analysis. It is clear that real transformation will not be easy. Ultimately, advantage will be gained not by optimizing on the fringes of the known but by imperfectly seizing the unknown. In a fiscally constrained environment, to fund the new we will have to do away with the old. That will be painful for many of us. Centuries ago, Machiavelli wrote, "There is nothing more difficult to take in hand, more perilous to conduct, or more uncertain in success, than to take the lead in a new order of things. Because the innovator has for enemies all those who have done well under the old conditions, and lukewarm defenders in those who may do well under the new."* There is no doubt that many of the programs and organizations of the current and programmed navies have much of value to offer the Navy after next. Other dearly held models, no longer of value in the information age, must fade, like many cherished traditions before them, into the Navy of history.

ARTHUR K. CEBROWSKI
Vice Admiral, U.S. Navy
President, Naval War College

* Niccolò Machiavelli, *The Prince*, trans. W. K. Marriot (London: J. M. Dent & Sons, 1968), p. 29.

The Military Response to Terrorism

Captain Mark E. Kosnik, U.S. Navy

OVER THE PAST THIRTY YEARS, INTERNATIONAL state-sponsored terrorism has emerged as a concern for the United States. Although the number of terrorist acts varies from year to year, even during periods of minimal activity terrorism remains a frequent topic in the media and an issue for policy makers. The 1998 bombings of two embassies in Africa, resulting in over two hundred deaths, reminded the American leadership and public that terrorism remains a danger in an increasingly unstable world.

Of all the tools used by the United States to contain terrorism, none has been more controversial than military force. Skeptics argue that military force does not deter terrorism and in fact only results in more violence, when the terrorist retaliates. Certainly, collateral damage, casualties to innocent civilians and U.S. servicemen, damage to international alliances, and other undesirable outcomes can result from any military operation. Nonetheless, the record supports the view that military force can be a valuable part of the U.S. strategy to contain terrorism: under certain conditions, the political and strategic gains justify employment of military force against terrorism, as a complement to efforts in the political, economic, and law enforcement arenas.

This article presents three historical cases: the U.S. air strikes in Libya in 1986, the cruise missile attacks on Iraq in 1993, and the cruise missile strikes against Sudan and Afghanistan in 1998. We will examine the military, political, and strategic outcomes from each of these incidents, asking in each case exactly what the use of military force accomplished.

Why were these particular cases selected? There are few from which to choose; the United States has seldom used military force to counter terrorism. The Iraqi case is somewhat problematic, because

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although the U.S. military action was specifically a response to a terrorist threat, it is more properly viewed as part of the larger confrontation between the United States and Iraq, unrelated to terrorism; the Sudan and Afghanistan strikes are very recent, and their long-term results are yet to unfold. Nonetheless, these uses of military force were responses to three of the most significant terrorist acts committed against U.S. interests in the past thirty years, and they are among the clearest examples available.

Case One: Libya, 1986

Colonel Muammar Qaddafi rose to power in Libya by a coup, overthrowing King Idris I in September 1969. Almost from the beginning, Qaddafi extended support to terrorist or guerrilla groups across the globe that were anti-Western or anti-American. Throughout the 1970s, Qaddafi sponsored terrorists as diverse as the infamous "Carlos," the Red Brigades of Italy, the Red Army in Germany, Direct Action in France, FP-25 in Portugal, neo-Nazi activists in Spain, and right-wing terrorists in Italy and Germany.[1] He also built a highly effective terrorist organization within Libya, responsible for the 1973 attack on the Information Service installation at the American consulate in Morocco and for the seizure (in which two Americans were killed) of the U.S. embassy in Khartoum, Sudan.[2] Qaddafi developed ties with the most extreme and violent terrorist groups of the day, including Abu Nidal, Hezbollah, Islamic Jihad, and state-terrorist organizations in Syria and Iran.[3]

Ronald Reagan's administration saw Libya as the primary terrorist threat. Qaddafi was contributing to a new and increasingly more

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Captain Kosnik is a member of the Navy Staff (N865, Theater Air Warfare). He prepared the original draft of this article as a fellow at the Weatherhead Center for International Affairs, Harvard University, during the 1998–99 academic year. Captain Kosnik's operational experience includes assignments in command of USS *Arleigh Burke* (DDG 51) from 1996 to 1998 and as Executive Officer, USS *Antietam* (CG 54), from 1991 to 1993.

The views expressed in this paper are those of the author and do not necessarily reflect the views of the Department of Defense or any of its agencies.

violent wave of terrorism, and he was openly calling for attacks on the West, and praising even the most brutal actions. Qaddafi had become both the personification and symbolic leader of an emerging international terrorist threat.

For the Reagan administration, the increasingly frequent and violent terrorist acts of Middle Eastern groups took center stage. There was clear evidence that three countries—Libya, Syria, and Iran—were responsible for this wave of violence. It appeared, however, that Iranian and Syrian activities were for the most part limited to the Middle East itself, while Libyan terror had a more international orientation. Iran and Syria tried to distance themselves officially from terrorism. Libya, in contrast,

> provided the bulk of funding for the hard-line Palestinian groups, while Syria was comparatively poor and therefore expended far less money on terrorism; the two countries shared the arming and training; Syria played host to the headquarters of most of these groups after the Israeli invasion of Lebanon in 1982; and Syrian intelligence apparently tended to work more closely with these groups than did Libyan intelligence, whose technical expertise was no match for that of the Syrians. Libya's contribution to the overall infrastructure of international terrorism was greater than [those of] Syria and Iran and possibly of any other country. The Qaddafi regime was the closest thing in existence to a missionary society for world terrorism; the role of Syria and Iran with terrorism outside the Middle East was much smaller.[4]

In the mid-1980s, Libyan terrorism grew more public and threatening. For instance, in 1984 personnel inside the Libyan embassy in London fired upon anti-Qaddafi demonstrators, killing a policewoman and injuring several other people. Later that year, Libyan responsibility was established for the laying of mines that had damaged nineteen ships in the Red Sea.[5] In retrospect, the Reagan administration may have overestimated the danger from Libyan terrorism in comparison to that which Iran and Syria represented, but the likelihood of a Soviet reaction to any operations against either Iran or Syria made it easier to focus on Qaddafi.

On 21 December 1985, as the White House was struggling with options for how to deal with Libya, simultaneous attacks by

Palestinian extremists using AK-47 assault rifles and grenades at Rome's Leonardo da Vinci Airport and Vienna's Schwechat Airport killed nineteen people, including five U.S. citizens. The brutality of the attack was made particularly vivid to the American public: "One of the American victims was eleven-year-old Natasha Simpson, who after being blasted to her knees [had] received an additional burst of gunfire aimed directly at her head; she became a symbolic martyr of terrorism. . . . Vivid television footage showed corpses and huge pools of the victims' blood on the airport floors, and President Reagan and the American people were enraged."[6] Libya's state news agency praised the attacks. The U.S. government gathered information that, although never made fully public, led it to believe that Libya may have sponsored them.[7]

The American people were becoming increasingly convinced that Qaddafi was responsible, and many voices demanded a response. The administration considered military options but put them on hold, hoping instead to generate European support for economic sanctions and political initiatives; these began with the freezing of a billion dollars in Libyan assets in the United States. Deputy Secretary of State John Whitehead went to Europe seeking commitments to, among other initiatives, a reduction in the importation of Libyan oil and a halt in sales of military equipment to Libya. His mission was unsuccessful.[8]

The United States then revisited its military options. In March 1986, the aircraft carrier USS *America* (CV 66) was sent to join the carriers USS *Saratoga* (CV 60) and USS *Coral Sea* (CV 43) in the Mediterranean. The three carriers, with twenty-seven other warships, were ordered to operate north of Libya to intimidate Qaddafi and demonstrate U.S. resolve. In a mission designated PRAIRIE FIRE, U.S. naval forces entered the Gulf of Sidra and sent aircraft toward the coast, where they were fired on by Libyan SA-5 missiles. Several hours later, when the same missile fire control radar tracked other U.S. planes, two Navy A-7 attack aircraft fired antiradiation missiles at the site, and the emissions ceased. Later that evening, two Libyan patrol boats were destroyed and one damaged as they approached a surface action group in the Gulf of Sidra.[9] There were no more aggressive movements by Libyan military forces, and the U.S. fleet withdrew from the Gulf of Sidra without damage.

Tensions between Libya and the United States, however, were at an all-time high. The U.S. armada had done little to intimidate Qaddafi, who now ordered the "People's Bureaus" (Libyan embassies) in East Berlin, Paris, Rome, Madrid, and other European capitals to undertake terrorist acts against American targets.[10] Less than two weeks later, on 5 April 1985, the La Belle Discotheque in Berlin was bombed, killing two American soldiers and a Turkish woman. There were 229 additional casualties, including seventy-nine Americans, most of them soldiers. Independent communication intercepts by U.S., British, and German intelligence groups immediately confirmed Libyan sponsorship of the bombings.[11]

The Reagan administration decided that the attack demanded a response. Having been unable to generate the European support necessary to implement meaningful economic or political sanctions, President Reagan turned to what he deemed his only remaining option—unilateral military action.

The Strike. Nine days after the La Belle disco bombing, U.S. military forces conducted Operation ELDORADO CANYON, a night air strike against five targets in Libya. Eighteen Air Force F-111s from the 48th Tactical Fighter Wing bombed three targets in Tripoli, while a force of over seventy Navy and Marine Corps strike, fighter, and support aircraft from the carriers *Coral Sea* and *America* simultaneously struck two targets in Benghazi.

The F-111s, flying 2,500 miles from their base at Lakenheath, in the United Kingdom, had been assigned three targets in downtown Tripoli: the Azziziyah military barracks, the Sidi Balal terrorist training camp (near the harbor), and the military section of the Tripoli airport. These targets had been selected because of their suspected involvement with Qaddafi's terrorist organization.[12] The aircraft arrived over Tripoli in the early hours of 14 April; nine F-111s attacked Azziziyah, six the airport, and three Sidi Balal.[13] The raid caught the Libyan military by surprise, but surface-to-air missile and antiaircraft artillery fire increased as the raid progressed. At the same time, carrier aircraft were attacking their targets at Benghazi. Six A-6 bombers attacked military targets at Benina Airport, while another six dropped ordnance on the Jamahiriyah military barracks.[14]

In several respects, ELDORADO CANYON was a remarkable testimony to the capabilities of the U.S. military: it was a highly complex

mission, involving elaborate coordination between the Navy and Air Force, extreme ranges for the F-111s (which flew what was then the longest combat mission in the history of military aviation, in terms of both time and distance), and precise air strikes at night against substantial defenses.[15] Judging, however, by the actual damage inflicted on the five targets, the strike was only marginally successful. In Tripoli, all three targets were hit, but the damage achieved was less than had been anticipated, and many of the specific "aimpoints" were missed entirely. Many of the planes suffered equipment or navigation problems, and only two of the nine F-111s that flew against Azziziyah actually delivered ordnance.[16] Apparently only four of the eighteen aircraft actually hit their assigned targets.[17] Additionally, one of the Air Force aircraft was lost (presumably shot down) during the raid, and both crewmen were killed.

Results at Benghazi were only slightly better. Although both targets were hit, the damage done was also below expectations. The Jamahiriyah barracks were heavily damaged, and many of the targets at the Benina Airfield were damaged;[18] however, as in Tripoli, many of the aircraft did not deliver their weapons. Rear Admiral Jerry C. Breast, commander of the *Coral Sea* battle group, speculated that only about 10 percent of the assigned aircraft actually got weapons on target.[19]

Disappointment in the military effectiveness of the strikes was deepened by the collateral damage they caused. In the Benghazi region, bombs fell on a gas station and a dispensary, killing innocent civilians. At Jamahiriyah, a warehouse that was not on the target list was destroyed. In Tripoli, the collateral damage was substantial; bombs falling in the city's Bin Ashur region damaged the French embassy and numerous other structures. Reports varied, but the raids killed approximately thirty-seven people and injured ninety-three, most of them civilians.[20]

The Libyan regime wasted no time in using the collateral damage in an attempt to generate sympathy for Libya and condemnation of the United States. Within hours of the strike, foreign journalists were taken to the scenes of the damage and to hospitals to witness the death, injury, and destruction inflicted on innocent civilians.[21] These unintended human costs were to become a major part of later criticisms of Reagan's decision to use armed force against the Libyan regime.

The raid did appear to have had a personal impact on Qaddafi, who is believed to have been in the Azziziyah compound when the bombs fell. He was not injured, but Libyan sources reported that his adopted fifteen-month-old daughter had been killed and two of his sons seriously injured.[22] Qaddafi did in fact seem distracted for a period of time following the strikes; he made few public appearances and considerably reduced his terrorist rhetoric.

> Colonel Qaddafi [was] seen only fleetingly in the weeks afterward, and even then only in controlled situations. He canceled public appearances and, to all intents and purposes, seemed to vanish into the desert for days at a time. According to some observers who saw him after the mission, he seemed extremely quiet, distracted, and even "unhinged." No Western reporter was granted an interview until over two months had passed.[23]

The Results. ELDORADO CANYON is perhaps the most valuable of the three case studies, because enough time has elapsed to discern its long-term effects. From that perspective, the clearest and perhaps most important outcome of the U.S. military action was that it weakened Qaddafi's ability to intimidate through terrorism. After almost sixteen years of violence and bluster, his image as a feared and powerful adherent of international terrorism had been challenged.

The strike aggravated, or helped expose, a weakness that previously had been latent or not apparent to outsiders. The bombing did not cause the Libyan people to rally around their leader; rather, in the months following the raid many Libyans began to question openly Qaddafi's authority for the first time. There were reports that force had to be used to put down rebellious Libyan military units. It appears that Qaddafi's hold over both the military and intelligence establishments was weakened in the aftermath of the strike;[24] additionally, the U.S. attack put the Libyan terrorist apparatus on the defensive, less able to focus on new activities.

Libyan isolation on the international scene also became apparent. The strike had exposed Qaddafi's vulnerability, and his credibility and influence on the world stage began to erode. There was little public sympathy for him in Arab capitals. Most moderate Arab nations had apparently tired of Qaddafi's extremist views and his campaign of terror. The U.S. raid may have helped convince some of

these nations that it was time to distance themselves. In addition, the Soviet Union—previously one of Libya's closest allies—began to back away. The Libyan-Soviet political and military cooperation that had existed prior to the raid now slowly deteriorated, and it would never again be as strong. It would be difficult to prove that the strike, by itself, left Qaddafi broken and isolated. Clearly, however, it was an important first step in the eventual erosion of his agenda.

After almost sixteen years of violence and bluster, his image as a feared and powerful adherent of international terrorism had been challenged.

A third major result of the air strike was the emergence of a new degree of cooperation between America and Europe in diplomatic and economic measures against Libya. Whether out of a genuine desire to take strong action against Libya or of fear that failure to cooperate would result in additional U.S. military action, European nations now supported nonmilitary options that they had earlier rejected.[25] In the days following the bombing a number of nations, including Germany, Great Britain, Spain, and Ireland, placed restrictions on Libyan diplomats and employees of the Libyan embassies. In the next months, over a hundred Libyan diplomats and four hundred other Libyan citizens were expelled from Europe.[26] The removal of these individuals, who had long been suspected of supporting terrorism throughout Europe, severely hampered the operation and effectiveness of Qaddafi's international terrorist apparatus. Also, in a distinct reversal, most Western European countries ended airline service with Libya, and some took strong steps to reduce trade. During the summer of 1986 several European nations began to reduce imports of Libyan oil and to cut off financing they had previously extended to that country.[27] Many believe that this new cooperation with Europe, stimulated by the American air strike and extending across a broad spectrum of political, diplomatic, and economic fronts, was to have a most positive impact on the war against terrorism.[28]

In the United States, there was staunch support on Capitol Hill, and polls found that 77 percent of the public approved the raid.[29] The importance of these polls should not be overstated, but they did

suggest that the American public saw Qaddafi as a growing danger and that Americans generally felt that military force could be an acceptable response to a terrorist threat.

Notwithstanding, the immediate reaction overseas was negative. President Reagan received intense international criticism, particularly from Europe.[30] Europeans opposed the strikes, fearing they would incite an escalation of terrorism, with the European Community (as the European Union was then known) a likely target. However, as time passed and the expected escalation never developed, European outrage waned.

This strike, then, had demonstrated American resolve to take strong action against terrorism and had not permanently damaged European relations. Fundamentally, however, it had been aimed at Qaddafi as a terrorist. Did these military strikes deter or encourage Libyan terrorism? Even today this issue is subject to considerable debate. Cause and effect are extremely problematic; in the wake of the strike, several influences—the military effects, diplomatic action, and economic sanctions—were acting simultaneously.

The conventional wisdom had been that military action against Libya would only lead to further terrorism in reprisal. What actually happened provides little support to that theory. In the weeks following the raid there were in fact shootings involving American and British citizens in Sudan, Yemen, and Lebanon, apparent reprisals for the air strike; thereafter, however, there was a sudden and dramatic decline in Libyan-sponsored terrorism.[31] The U.S. State Department assessment was that "although detectable Libyan involvement in terrorist activity dropped significantly in 1986 and 1987 after the U.S. air raids in April 1986, Qaddafi shows no signs of forsaking terrorism."[32] Ultimately he would indeed resume it, but in far more covert and less confrontational ways. Libya was to be involved, for instance, in the 1988 bombing of Pan Am flight 103 over Lockerbie, Scotland, killing all 259 persons aboard and eleven on the ground. Some contend that this particularly shocking act was a direct retaliation to the U.S. strike and is in itself sufficient proof that the use of force against Qaddafi was a mistake. It is essential to remember, however, that Qaddafi was already a committed terrorist; the historical record suggests that his attacks against innocent civilians would have continued even had the United States not acted militarily. As it was, the trend of escalating Libyan terrorism had been

broken; after the strike, that threat was neither as severe nor as pervasive as it had been.

The view that the U.S. raid actually reduced Libyan terrorism has not received universal assent. It has been argued, on the basis of a complex empirical approach known as vector-autoregression-intervention analysis, that the strike actually resulted in an increase in Libyan terrorism. However, the data set used is questionable, because it counts verbal threats as "terrorist acts"; the reported increase in terrorism is directly accounted for by more such threats.[33] The conclusions of that particular study are therefore suspect.

Whether the U.S. air strike actually decreased the number of Libyan terrorist acts, it definitely did not lead to a spiraling escalation of violence between the United States and Libya. As one observer sees it, "Over against the rigid assertion that military force cannot possibly accomplish anything against terrorism, and in fact will only create a cycle of worse violence, it appears that the U.S. attack may have helped break the cycle of accelerating Middle Eastern terrorism dating from 1983."[34]

In summary, ELDORADO CANYON stands as a significant event in the U.S. war against terrorism. For the first time, U.S. military force was employed in direct retaliation to state-sponsored terrorism. Despite the only moderate military effectiveness of the attack, the accompanying severe collateral damage, and the initial condemnation by European allies, the Air Force and Navy bombing challenged Qaddafi's standing as an international terrorist, exposed and exacerbated his domestic weakness and international isolation, and left him less willing to encourage international terrorism openly. Most significantly, it did all this without producing a new cycle of terrorism against Americans, thereby dispelling a myth widely held in the West disparaging the value of military force against terrorism.

Case Two: Iraq, 1993

The Persian Gulf War left unresolved a number of important differences between the United States and Iraq. Iraq viewed the United States as responsible for the death and destruction inflicted by the coalition in 1991. Saddam Hussein, who remained in power, nursed a great personal hatred for the country that led the coalition that had just defeated him in battle. In turn, the United States viewed

Hussein as an irrational despot who threatened the security of the entire Gulf region, and it argued in the United Nations for the maintenance of economic sanctions, a no-fly zone, and a rigorous weapons inspection regime. All these were viewed by Iraq as primarily U.S. initiatives, further deteriorating relations between the two nations.

Within this context the United States and its newly elected president, Bill Clinton, were again faced with the question of how to respond to terrorism. In May 1993, just months after Clinton had assumed office, reports began to surface that Iraqi terrorists had plotted to assassinate former president George Bush. The Kuwait government arrested sixteen individuals, including eleven Iraqi nationals, on charges that they had conspired to assassinate Bush with a car bomb during his visit to Kuwait City on 14 April 1993. The Kuwaitis also seized two cars with remote-control devices and several hundred pounds of explosives.[35] The Kuwaiti government announced that at least one of the suspects had confessed to being an officer of the Iraqi intelligence service. There was also evidence that the bomb to have been used was of Iraqi design and origin.[36]

The White House initially expressed caution, declaring that direct Iraqi sponsorship had not been established and that it would review all the evidence before deciding what action to take. The administration immediately sent investigators from the Secret Service and Federal Bureau of Investigation to conduct an independent investigation.[37]

Almost immediately, pressure was put on the new president to take action. Although the Kuwaiti government had foiled the plot and Bush had never been in any real danger, many Americans perceived the threat of violence against a former U.S. president as so egregious as to require a swift and condign response. Several members of Congress urged President Clinton to take military action if the Iraqi government were found to be responsible for the assassination plot.[38] It was the first serious foreign policy crisis faced by the Clinton White House.

For the next two months, law enforcement experts examined the evidence. The administration began to believe the allegation, on the basis of two pieces of evidence. The first was the confessions of the conspirators themselves. There had been suggestions that the Kuwaiti authorities had coerced the confessions, but subsequent interviews by U.S. agencies had reduced the administration's skepticism

and strengthened the view that Iraq had sponsored the plan. (Details of these interviews have never been released, but U.S. sources reported at the time that more than one of the suspects admitted to working for Iraqi intelligence and that other members of the group had also received Iraqi government assistance.)[39] Secondly, American investigators became convinced that the design of the bomb indicated Iraqi involvement.

However, the evidence of Iraqi involvement in the assassination attempt was far from the proof needed before opting for military retaliation. A final decision was therefore delayed until the FBI could examine all the evidence, interview the suspects, and provide a final assessment to the president. Indeed, this case highlights how difficult it can be to establish culpability in cases involving terrorism; evidence may be either circumstantial or difficult to obtain quickly, if it is available at all. In this case, many would later question whether the evidence had been sufficient.[40]

By late June 1993 the FBI had concluded that Iraqi intelligence had indeed been responsible for the assassination plot. Still facing domestic pressure to take strong action, President Clinton's options were limited: Saddam Hussein was already isolated, there were no diplomatic measures that would punish him meaningfully, and severe economic sanctions were already in place. Finally, although the agents who were actually to have carried out the plot would be tried by the Kuwaiti courts, there was no legal recourse with respect to the Iraqi leadership. Faced with the choice between doing nothing and using force, President Clinton approved a retaliatory cruise missile attack against the Iraqi intelligence service headquarters.

The Strike. On 27 June 1993 the destroyer USS *Peterson* (DD 969) in the Red Sea and the cruiser USS *Chancellorsville* (CG 62) in the Arabian Gulf fired a total of twenty-three Tomahawk cruise missiles at the headquarters, in downtown Baghdad.[41] Twenty of the missiles hit and heavily damaged the headquarters complex; the other three missed the target and struck in the neighborhoods around it, damaging homes and killing eight civilians.[42]

From a military perspective, the missile strike was highly effective. All the major aimpoints were hit, and the headquarters building was heavily damaged; in fact, its main wing was totally destroyed. As Secretary of Defense Les Aspin put it, "Damage was very extensive.

There is no question that the strike was a success. . . . It is definitely out of business when you see the photographs."[43]

The success of the military operation was tempered, however, by the extent of collateral damage. Military planners had been given direction by the civilian leadership to make the minimization of collateral damage a priority. Now, although the collateral damage did not approach that inflicted in Tripoli in 1986, the White House quickly began a public-relations campaign to make the case that every reasonable step had been taken to lessen civilian casualties. For instance, administration officials declared that the attack had been conducted in the middle of the night for that reason.[44] On the other hand, the White House attempted to minimize its own domestic political risks in another important way: cruise missiles, spokesmen emphasized, had been selected for the operation specifically to ensure that there would be no casualties to U.S. servicemen. As one Pentagon official acknowledged, "The military chose the missile to avoid risks to U.S. pilots even though manned bombers generally have greater accuracy."[45]

The day after the strike, in a gesture aimed at winning international support, the American delegate to the United Nations, Madeleine Albright, presented to a special session of the UN Security Council the evidence that the United States had been legally justified in conducting the strike.[46] Albright argued that the U.S. action had been an act of self-defense, permissible under Article 51 of the UN Charter. The Reagan administration had also appealed to Article 51 after the Libyan raid, although in a far less formal and public way. The decision by the Clinton White House to present its case before the UN was a clear attempt to seize the political high ground and preempt international criticism.

The Results. The impact of this Tomahawk strike with respect to terrorism was less dramatic or obvious than that of the air raid on Libya in 1986. There was near unanimous support from America's European allies for the missile strike.[47] There was some criticism from Arab governments, but opposition quickly evaporated. The U.S. strike generated little sympathy for Saddam Hussein. It did not enhance his standing in the Arab world, nor did it alienate the United States from either its European allies or the Arabs. However, the strike cannot be said to have had much impact with respect to

international terrorism, for Iraq had not been perceived as an international terrorist threat. The strike did not stimulate an Iraqi reprisal, but there had never been active Iraqi terrorism against Americans. The Iraqi intelligence service had surely been involved in violent acts, but mostly against the Iraqi people themselves.

The American public supported the strike. Initial polls showed 66 percent approval of the president's decision to use military force against Iraq, and the decision drew bipartisan support from Congress.[48] Although these poll numbers were not as strong as those following ELDORADO CANYON, they did suggest that a majority of Americans continued to support the notion that military force is an appropriate response to significant acts of terrorism. In this case, the general feeling was that the United States could not stand by and ignore an assassination plot on a former president.

Case Three: Sudan and Afghanistan, 1998

In the 1990s a new terrorist threat to U.S. interests emerged, actions sponsored by an Islamic extremist, Osama bin Laden. The son of a Saudi billionaire, bin Laden had gone to Afghanistan in the 1980s to fight the Soviets alongside the mujaheddin. Over time, bin Laden had built up a quasi-military organization that had become militant and dedicated to driving Western influences out of the Arab world. The group, which became known as "al Qaida," the Base, remained in the shadows, but its cells operated throughout the Middle East.

Although Osama bin Laden returned to Saudi Arabia following the war in Afghanistan, he was exiled in 1991 after he began his radical campaign against the United States. With his group of guerrilla fighters and his considerable wealth, estimated by some at over $300 million, bin Laden quietly began a war of terrorism against the United States.[49] Operating primarily out of the rural regions of Afghanistan and Sudan, he provided funding, support, and training for groups willing to strike out against the United States. He allegedly assisted terrorist groups in buying weapons, equipment and computers, and he financed terrorist training camps in Sudan. He was also suspected of having provided support to the terrorists arrested in the 1993 bombing of New York's World Trade Center and of

funding the warlords in Somalia that battled U.S. military troops in 1993.[50]

Bin Laden was different from other state-sponsored terrorists. Personally secretive and seldom seen, he exerted a terrorist influence that was far less public than Muammar Qaddafi's. He had come to the attention of U.S. law enforcement agencies, but the American public knew little about him before 1998. His terrorist organization was not dependent on, or concerned with achieving the aims of, any single state; instead, it was driven by fundamentalist religious objectives. A former CIA official wrote that Osama bin Laden's group,

> such as it is, is unlike any other. It has no real headquarters and no fixed address to target. It is a coalition of like-minded warriors living in exile from their homes in Egypt, the Sudan, Pakistan and other Islamic nations riven by religious and political battles. The bin Laden organization is global and stateless, according to the United States intelligence analyses, more theological than political, driven by a millennial vision of destroying the United States, driving all Western influences from the Arab world, abolishing the boundaries of the Islamic nations and making them one, without borders.[51]

In 1996, frustrated by the continued presence of U.S. forces in Saudi Arabia, bin Laden called for a holy war against them.[52] He is suspected—although he has not yet been formally charged, and the cases are still being investigated—of having supported the 1995 bombing of a building in Riyadh used by the American military, killing seven people, and the 1996 Khobar Tower bombing in Dhahran, which killed nineteen American airmen.[53]

In February 1998, bin Laden issued a *fatwa*, a religious edict, calling on Muslims to kill Americans. During an interview with a London-based Arabic newspaper, bin Laden was quoted as saying, "We had thought that the Riyadh and [Dhahran] blasts were a sufficient signal to sensible U.S. decision-makers to avert a real battle between the Islamic nation and U.S. forces, but it seems that they did not understand the signal."[54] He told ABC News in June 1998, "We do not differentiate between those dressed in military uniforms and civilians; they are all targets."[55]

Despite these threats, Americans were unprepared for the simultaneous bombings of the U.S. embassies in Nairobi (Kenya) and Dar

es Salaam (Tanzania) on 7 August 1998. The damage was horrific. In Nairobi, the bomb "brought down half the embassy" and left several square blocks of downtown Nairobi in shambles;[56] in Dar es Salaam, most of the embassy building and some adjacent buildings were destroyed.[57] The loss of life was substantial; the final count, which took months to produce, was 224 people killed in the two bombings, including twelve Americans. More than 4,800 persons had been injured.[58]

The Clinton administration quickly found evidence that bin Laden was responsible. The details of this evidence remain closely held. At the time, the chairman of the Joint Chiefs, General Hugh Shelton, would announce only, "As many of you are aware, our intelligence community has provided us with convincing information based on a variety of intelligence sources, that Osama bin Laden's network of terrorists was involved in the planning, the financing and the execution of the attacks on U.S. embassies in Kenya and Tanzania."[59] Secretary of Defense William Cohen would say only, "There's been a series of reports that we have analyzed, statements by Osama bin Laden himself, other information coming in as recently as yesterday about future attacks being planned against the United States. We are satisfied there has been a convincing body of evidence that leads us to this conclusion."[60]

The president was soon convinced that Osama bin Laden was responsible for the bombings and that additional terrorist acts were being planned by his organization.[61] Again, Clinton had few alternatives. Because Osama bin Laden was not a head of state, there were no political, diplomatic, or economic recourses available. Law enforcement agencies were already doing all they could to find and arrest members of his organization, and those efforts would take time. Finally, the bombings of the embassies were seen as direct assaults on U.S. sovereign territory and as therefore requiring a strong unilateral response. Ultimately, Clinton decided bin Laden's terrorism was a clear threat to U.S. national interests and for the second time in his presidency decided to use military force to counter a terrorist threat.

The Strikes. On 20 August 1998, less than three weeks after the embassy bombings, Operation INFINITE REACH was carried out.[62] U.S. Navy surface ships and a submarine in the Arabian Gulf and Red Sea fired approximately seventy Tomahawk cruise missiles against

terrorist targets in Khartoum and Khost (in Afghanistan).[63] The administration emphasized operational security, with the result that unlike previous cases, few details of the operation or about its outcome have been released.

It is known, however, that the missiles arrived over targets in both countries nearly simultaneously. In Afghanistan, they damaged a series of buildings in four different complexes that constituted a terrorist training camp and bin Laden's main operational base. Reports in the Pakistani press claimed that the camp "had been leveled";[64] the Taliban regime in Afghanistan reported that twenty-one people had been killed and an additional thirty injured.[65] Months later, in January 1999, defense officials would release satellite reconnaissance photos showing massive damage.

The conventional wisdom had been that military action against Libya would only lead to further terrorism in reprisal. What actually happened provides little support to that theory.

The camp, they said, was a known terrorist area and far from any civilian population center; in fact, the national security adviser, Sandy Berger, was to explain that the attack had been conducted on 20 August precisely because intelligence sources had predicted a meeting of bin Laden and several of his key deputies at the camp that day. Therefore, all reported deaths and injuries were considered casualties to terrorists and not collateral; "Collateral damage was just not an issue in Afghanistan."[66] Reports later emerged that bin Laden had indeed been at the camp at the time of the attack, although he was not injured. One official stated, "The Tomahawks wiped out the guards, drivers, vehicles and electrical and water supplies. Bin Laden was there, but he was underground along with others in the terrorist leadership. The attack left him with a ringing head, and he had to walk to the nearest highway to make his way out."[67] American officials believed about a hundred "terrorists in training" had been killed and that at least one of bin Laden's top lieutenants was among the dead.[68] Their assessment as of January 1999 was that "the capability to sustain terrorist operations from these facilities for the near term [had been] significantly reduced."[69]

In Sudan, the missiles struck a pharmaceutical factory, known as El Shifa, in downtown Khartoum. Sudan's state-run television

broadcast images immediately after the raid indicating that the plant had been leveled; it reported that ten people had been injured but that there had been no deaths.[70] One missile had apparently struck a nearby candy factory, causing light damage.[71]

In the aftermath of the raid, White House officials justified the attack on the factory in Khartoum by claims it had been a secret chemical-weapons factory financed by bin Laden.[72] In support they cited soil samples taken from the plant indicating the presence of Empta, a "precursor" substance used in the production of the nerve gas VX.[73] However, in the weeks after the strike many began to question the adequacy of the administration's evidence. Several critics argued that the evidence both that bin Laden had been associated with the plant and that it had been producing chemical weapons was circumstantial at best.[74] Seymour Hersh, a well known investigative reporter and author, asserted that the administration's evidence had not justified the attack on the Sudanese plant, that the decision had been a mistake, "a by-product of the secrecy that marked all the White House's planning for the Tomahawk raids—a secrecy that prevented decision makers from knowing everything they needed to know."[75]

The Sudanese government asked the United Nations for an independent investigation to prove or disprove the allegations that the factory had been involved in chemical weapons. Even former president Jimmy Carter would call for an independent technical investigation of the evidence.[76] However, administration officials continued to argue, without releasing details, that the evidence had justified the raid, and they were able to convince the UN Security Council to shelve discussion of an independent investigation.[77]

The calls upon the Clinton administration to make public its evidence on the Sudanese factory exemplifies one of the difficulties with using military force against terrorism. On one hand, the White House wished to convince the American people and U.S. allies of the legality and legitimacy of the raids; on the other hand, releasing too much information could compromise operational security or intelligence sources. Bin Laden and his group remained a threat, and it was important not to disclose how the United States could detect and thwart their plans for future terrorist attacks.

The Results. It is not possible, so soon after the event, to assess the long-term effects of the August 1998 strikes on Osama bin Laden's terrorism. Nevertheless, the U.S. strikes do appear to have put bin Laden's terrorist organization on the defensive. Instead of focusing resources and attention on planning or executing new attacks, the group must have had to step back and regroup. The United States had threatened it in a new and substantial way. The strikes may not have ended bin Laden's terrorist operations, but they appear to have limited his ability to carry out whatever attacks were being planned to follow the embassy bombings.

A second result of the strikes was in the area of international law enforcement. Just as new cooperation on the diplomatic and economic fronts emerged following the strikes against Qaddafi in 1986, the attacks on bin Laden seem to have generated a higher level of international collaboration against terrorism. For example, within days of the strikes, foreign law enforcement organizations, with support from U.S. agencies, arrested bombing suspects in Pakistan, Kenya, and Tanzania.[78] In the weeks that followed, several terrorists, including a number of key figures in the bin Laden network, were arrested in Great Britain, Germany, and across Africa.[79] Most importantly, this new international effort apparently prevented bombings that bin Laden operatives had planned against the U.S. embassies in Tirana, Albania, and in Kampala, Uganda.[80] These arrests substantiated the administration's claims at the time of the strikes that the group had been planning additional terrorist attacks against American targets. "The FBI has enjoyed unprecedented cooperation from authorities in Kenya, Tanzania and more than a dozen other countries that have assisted in the probe, a sharp contrast from some of its previous investigations of terrorism on foreign soil."[81]

The reasons for this new vigor and cooperation are not clear, but perhaps the strikes, by exposing bin Laden's vulnerability, encouraged other nations to overcome the fear of reprisal and to take strong action against bin Laden's organization. In any case, the cruise missile attacks demonstrated that the United States was serious; support, action, and cooperation that had not previously existed within the international law-enforcement community soon followed. Its importance, however, must not be overstated. The missile strikes could only be an opening salvo against bin Laden; it is up to law enforcement to continue the war.

The new collaboration has kept bin Laden's group on the run. By January 1999 international law enforcement efforts had led to arrests of Islamic extremists linked to bin Laden and, perhaps more importantly, to trials against these operatives in eleven countries.[82] As the campaign against bin Laden continues, senior U.S. officials suggest, the worldwide effort has stopped at least seven bombing attempts by the bin Laden group—against an air base in Saudi Arabia and the

In each of the three cases, military force against terrorism was either the last resort or the only useful choice.

U.S. embassies in Albania, Azerbaijan, the Côte d'Ivoire, Tajikistan, Uganda, and Uruguay.[83] Cooperation between Indian officials and the FBI has led to arrests of a seven-member cell, believed to be funded by bin Laden, that was planning to bomb the U.S. embassy in New Delhi and two consulates elsewhere in India.[84]

The strikes generally received support from the American public. Over 75 percent of the public approved of the attack at the time, and President Clinton's job-approval rating rose to 65 percent.[85] A few Republican members of Congress questioned the timing of the strikes, suggesting that they may have been used as a distraction from the president's domestic troubles; overall, however, Clinton received bipartisan support as having taken strong action against terrorism.[86] A majority of Americans still supported military force as an appropriate response to terrorism. The El Shifa controversy that followed did not debate the legitimacy of using military force against terrorism but simply whether that specific factory had been an appropriate target.

Bin Laden's involvement in the embassy bombings has never been questioned. In November 1998, a federal grand jury in New York issued a 238-count indictment against him for acts of terrorism.[87] Soon after, the U.S. State Department offered a reward of up to five million dollars for bin Laden's capture.[88]

The Tomahawk strikes received strong support from Europe. Most Western European countries, including Great Britain, Germany, France, Spain and Austria, issued statements upholding the right of the United States to defend itself against terrorism.[89] Russia, which had strongly criticized the use of U.S. military force against

terrorism in the past, now sent confused and mixed signals. President Boris Yeltsin criticized the attacks publicly, but a spokesman later downplayed his remarks. Prime Minister Sergei Kiriyenko called the attacks unacceptable but added that "international acts of terrorism cannot go unpunished."[90]

In Kabul, protesters converged on the American embassy, and large street demonstrations were held in Khartoum.[91]Angry protests were voiced in Sudan, Afghanistan, Pakistan, and Libya. In contrast, most Arab governments remained "silent or equivocal about their views on the missile strikes."[92] What public condemnation there was quickly faded. By October, less than two months after the strike, the Sudanese government had dropped calls for an investigation into the bombings and had initiated high-level talks with Washington in hopes of improving relations.[93] In February 1999, American representatives met with the Taliban to discuss bin Laden's status in Afghanistan; the Taliban was not willing to extradite bin Laden, but it restricted his access to communications and banned him from making public statements while in Afghanistan.[94] It would seem, therefore, that the military response did not damage American standing in the international community or substantially change relations with the Arab world or Central Asia.

Finally, there is the question of whether the Tomahawk strikes increased or decreased bin Laden's terrorist activity. There were a few minor incidents immediately following the strike. For instance, an Italian army officer and a French political-affairs officer working for the United Nations were attacked in Kabul. The Italian was killed and the Frenchman wounded in what appeared to be an act of retaliation.[95] A few days later, a group calling itself "Muslims against Global Oppression" claimed responsibility for bombing the Planet Hollywood Restaurant in Cape Town, South Africa, killing one woman and injuring twenty-four other people. The group said it had carried out the bombing to avenge the U.S. missile strikes.[96] Neither of these attacks may have been associated with the bin Laden group, and since then there have been no terrorist acts attributed to it. It would be naive to assume that the strikes put bin Laden out of business; in fact, as recently as December 1998 U.S. intelligence agents received indications that he was planning new terrorist attacks against American interests.[97] Despite such periodic warnings, however, as of early 2000 there have been no new terrorist acts

attributable to bin Laden. It would appear that for the short term, at least, the missile attacks and law enforcement have put bin Laden on the defensive without igniting a new cycle of terrorism.

A Powerful Tool

A study that does not include analyses of cases in which the United States *did not* respond to terrorism with force can offer no definitive conclusions regarding its efficacy. However, these cases constitute evidence that in some circumstances the use of force can provide the United States with leverage in the war on terrorism and support its national interests, and that it does so in several ways. First, such strikes limit a terrorist's power and influence. In two of our case studies, military attacks left the terrorist isolated and on the defensive (Saddam Hussein was already in that condition). The physical damage itself leaves the targeted group cut off from its resources and distracted from new acts of terrorism; also, military strikes tend to erode the terrorist's standing by exposing him as vulnerable. The evidence is that they tend at least to curtail the actions of the targeted group, for the short term at any rate.

Second, and relatedly, a military counterterrorism response can underscore the fact that under certain conditions the United States is willing to take strong action. Force is not a wise or practical choice against every terrorist threat, but it can be a powerful tool when a terrorist threat seems about to become unmanageable. In such cases, *not* taking strong action can have devastating ramifications, leaving terrorists with the notion that violence and intimidation are effective.

Third, military force encourages international antiterrorism measures in nonmilitary areas, such as diplomatic and economic sanctions and law enforcement. Whether strikes expose the weakness of the terrorist and thereby reduce fear, or create a "vacuum effect" that draws other nations into the cooperative effort, or even because allies fear that failure to cooperate will result in further U.S. military action, these cases show that international cooperation can result and that such cooperation can limit terrorism.

Finally, it appears, perhaps surprisingly, that the use of force against terrorists does not result in a cycle of new violence. A common argument against the option of military force, then, is invalid. While there is nothing to suggest that military strikes have forced

Muammar Qaddafi, Saddam Hussein, or Osama bin Laden to abandon terrorism, the attacks provided the United States some leverage without waves of reprisals.

An argument against the use of force as an option to limit terrorism is that it is counterproductive in a strategic sense, alienating allies and eroding U.S. credibility. In this view, the use of force creates an image of the United States as a "cowboy," much more willing to employ the military than diplomacy to resolve differences, and this image damages the nation's standing as a superpower. Indeed, the air strikes on Libya in 1986 certainly created tension between the United States and Europe. Once it became clear that there would be no immediate reprisal from Qaddafi against Europe, however, criticism quickly faded; in 1993 and 1998 there was overwhelming European support for the strong U.S. action. Similarly, the lack of a strong condemnation from Arab capitals following U.S. strikes in both 1993 and 1998 implied tacit approval. Ironically, not even relations with Sudan and the Taliban regime were permanently damaged following the 1998 strikes. The cases suggest that, under certain circumstances, resorting to military force may actually enhance U.S. leadership in the international war against terrorism.

Still, it is critical to recognize that if the United States intends to use military force to modify the behavior of a terrorist group or a state sponsoring it, the group or state must have something to lose. It is in part for this reason that the ability of military force to modify the behavior of a terrorist group, with little targetable infrastructure, is transitory; military force cannot stop terrorism. In contrast, states do have something to lose from military retaliation; not surprisingly, the case studies provide evidence that military force can strike directly at the state sponsorship of terrorism. Without such sponsorship, terrorist groups become less effective.

In each of the three cases, military force against terrorism was either the last resort or the only useful choice. But when employed in the proper context, with due precautions and limitations, and under the right conditions, military force can limit the influence of the terrorist. Military force can demonstrate U.S. resolve to punish those who engage in terrorism; it can keep the terrorist isolated and on the defensive; it can support antiterrorism action in other areas; and it can pressure states from sponsoring terrorism. It can do all this without making the violence worse than it was before. The use of military

force can contribute to the containment of terrorism and support U.S. national interests. It is not without risk, and it is not appropriate for every terrorist threat, but given the right situation and the proper conditions, military force can provide a powerful option. The war on terrorism continues, and the United States will need every resource and option it has.

Notes

1. Brian L. Davis, *Qaddafi, Terrorism, and the Origins of the U.S. Attack on Libya* (New York: Praeger, 1990), p. 12.
2. Ibid., pp. 11–3.
3. Ibid., pp. 67–70.
4. Ibid., p. 71.
5. David C. Martin and John Walcott, *Best Laid Plans: The Inside Story of America's War on Terrorism* (New York: Touchstone Books, 1988), p. xviii.
6. Davis, p. 78.
7. Ibid., p. 80; and Martin and Walcott, p. 268.
8. Robert Kupperman and Jeff Kamen, *Final Warning* (New York: Doubleday, 1989), p. 129; and Geoffrey M. Levitt, *Democracies against Terror* (New York: Praeger, 1988), p. 73.
9. Davis, p. 105.
10. Martin and Walcott, p. xx.
11. Davis, p. 116.
12. Tim Zimmerman, "Coercive Diplomacy and Libya," in *The Limits of Coercive Diplomacy*, ed. Alexander L. George and William E. Simons (Boulder, Colo.: Westview Press, 1994), p. 213.
13. Robert E. Venkus, *Raid on Qaddafi* (New York: St. Martin's Press, 1992), p. 89.
14. Davis, pp. 137–8.
15. For the F-111s, Venkus, p. 2.
16. Marrin and Walcott, p. 309.
17. Venkus, p. 146. Colonel Venkus had been the deputy commander of the 48th Tactical Fighter Wing.
18. Davis, p. 138.
19. Martin and Walcott, p. 311.
20. Ibid., p. 310; and Davis, pp. 139–43.
21. Davis, p. 140; and Martin and Walcott, p. 310.
22. Davis, pp. 141–2.
23. Venkus, p. 153.
24. Neil C. Livingstone, "The Raid on Libya and the Use of Force in Combating Terrorism," in *Beyond the Iran-Contra Crisis*, ed. Neil C. Livingstone and Terrell E. Arnold (Lexington, Mass.: Lexington Books, 1988), p. 78; and Venkus, p. 156.
25. Kupperman and Kamen, p. 143; and Brent J. Wilson, "The United States Response to International Terrorism," in *The Deadly Sin of Terrorism*, ed. David A. Charters (Westport, Conn.: Greenwood Press, 1994), p. 192.
26. Zimmerman, p. 216.
27. Davis, p. 161.

28. Alexander L. George, *Forceful Persuasion* (Washington, D.C.: U.S. Institute of Peace Press, 1991), pp. 57–8; and Zimmerman, p. 216.
29. Davis, p. 145.
30. Ibid., pp. 145–6.
31. Zimmerman, p. 217.
32. U.S. State Dept., *Patterns of Global Terrorism: 1987* (Washington, D.C.: Office of the Secretary of State, August 1987), p. 36.
33. Walter Enders and Todd Sandler, "The Effectiveness of Antiterrorism Policies: A Vector-Autoregression-Intervention Analysis," *American Political Science Review*, December 1993, pp. 835–9. For contrary empirical analyses, see U.S. State Dept., *Patterns of Global Terrorism: 1987*, p. 36; Martin and Walcott, p. 314; Livingstone, p. 74; and Zimmerman, p. 217.
34. Davis, p. 169.
35. Douglas Jehl, "U.S. Convinced Iraqi Saboteurs Plotted to Kill Bush," *New York Times*, 8 May 1993, p. A5.
36. Douglas Jehl, "U.S. Cites Evidence in a Plot on Bush," *New York Times*, 9 May 1993.
37. Jehl, "U.S. Convinced Iraqi Saboteurs Plotted to Kill Bush."
38. Stephen Labaton, "Congressmen Urge Action If Iraq Hatched Plot to Assassinate Bush," *New York Times*, 10 May 1993.
39. Douglas Jehl, "Iraqi Tells F.B.I. He Led Attempt to Kill Bush, U.S. Officials Say," *New York Times*, 20 May 1993.
40. See, for example, Seymour M. Hersh, "A Case Not Closed," *New Yorker*, 1 November 1993, pp. 80–92.
41. Gwen Ifill, "U.S. Fires Missiles at Baghdad, Citing April Plot to Kill Bush," *New York Times*, 27 June 1993; and David Von Drehle and Jeffrey Smith, "U.S. Strikes Iraq for Plot to Kill Bush," *Washington Post*, 27 June 1993.
42. Norman Kempster and Melissa Healy, "Clinton Calls Iraq Strike a Success," *Los Angeles Times*, 28 June 1993.
43. Ibid.
44. Drehle and Smith.
45. Kempster and Healy.
46. Richard Bernstein, "U.S. Presents Evidence to U.N. Justifying Its Missile Attack on Iraq," *New York Times*, 28 June 1993.
47. Craig Whitney, "European Allies Are Giving Strong Backing to U.S. Raid," *New York Times*, 28 June 1993.
48. Richard Benedetto, "U.S. Blow 'Very Damaging'; Iraq Scoffs at Evidence of Bush Plot," *USA Today*, 28 June 1993.
49. Raja Mishra, "Osama bin Laden: Terrorists' Rich Backer," *Philadelphia Inquirer*, 21 August 1998.
50. Ibid.
51. Milt Beardon, formerly of the Central Intelligence Agency, quoted in Tim Weiner, "After the Attacks: The Outlook," *New York Times*, 23 August 1998.
52. Mishra.
53. Benjamin Weiser, "U.S. Charges Bin Laden Suspect in Larger Plot," *New York Times*, 1 October 1998.
54. Mishra.
55. Ibid.
56. Marjorie Miller and Dean Murphy, "The U.S. Embassy Bombings," *Los Angeles Times*, 9 August 1998.
57. Ibid.

58. Associated Press, "US Embassy Bombing Death Toll Drops," *New York Times*, 8 October 1998; and Miller and Murphy.
59. "Text of Cohen, Shelton Briefing on the Strikes," *USA Today*, 20 August 1998.
60. Ibid.
61. James Bennet, "U.S. Cruise Missiles Strike Sudan and Afghan Targets Tied to Terrorist Network," *New York Times*, 21 August 1998.
62. Bryan Bender, "Poor U.S. Intelligence May Have Led to Sudan Strikes," *Jane's Defence Weekly*, 2 September 1998.
63. Steven Lee Meyers, "Attack Aimed 70 Missiles at Targets 2,500 Miles Apart," *New York Times*, 21 August 1998.
64. Barry Bearak, "After the Attacks: In Pakistan," *New York Times*, 23 August 1998.
65. Steven Lee Meyers, "After the Attacks: The Overview," *New York Times*, 22 August 1998.
66. An administration official, quoted in Richard J. Newman, "America Fights Back," *U.S. News and World Report*, 31 August 1998.
67. Paul Mann, "Bin Laden Betrayed," *Aviation Week and Space Technology*, 12 October 1998.
68. Cable News Network [CNN], "'Moderate to Severe' Damage Seen at Suspected Bin Laden Camps," *CNN Interactive*, retrieved 13 January 1999 from the World Wide Web: http:/www.CNN.com.
69. Ibid.
70. Meyers, "After the Attacks."
71. Russell Watson and John Barry, "Our Target Was Terror," *Newsweek*, 31 August 1998.
72. Tim Weiner and James Risen, "Decision to Strike Factory in Sudan Based on Surmise," *New York Times*, 21 September 1998.
73. Tim Weiner and Steven Lee Myers, "Flaws in U.S. Account Raise Questions on Strike in Sudan," *New York Times*, 29 August 1998.
74. Weiner and Risen; Weiner and Myers; Bender; and Colum Lynch, "Allied Doubts Grow about the U.S. Strike on Sudanese Plant," *Boston Globe*, 24 September 1998.
75. Seymour Hersh, "The Missiles of August," *New Yorker*, 12 October 1998, p. 35.
76. "Carter Urges Inquiry into U.S. Raid on Sudan," *New York Times*, 18 September 1998.
77. Ibid.
78. Brian Duffy and Richard J. Newman, "The Price of Payback," *U.S. News and World Report*, 7 September 1998; Benjamin Weiser, "Two Suspects Linked by U.S. to Terror Case," *New York Times*, 18 September 1998; Rodrique Ngowi, "2 Charged with Murder in Tanzania," *Washington Post*, 22 September 1998; and Michael Grunwald and Vernon Loeb, "U.S. Is Unraveling Bin Laden Network," *Washington Post*, 20 September 1998.
79. William Drozdiak, "Bin Laden Aide Denies Link to Embassy Bombings," *Washington Post*, 21 September 1998; and James Risen, "U.S. Directs International Drive on Bin Laden Networks," *New York Times*, 25 September 1998.
80. James Risen, "U.S. Attacks Based on Strong Evidence against Bin Laden Group," *New York Times*, 21 August 1998; and Michael Grunwald, "CIA Thwarted Bomb Plot against Embassy in Uganda," *Washington Post*, 25 September 1998.
81. Grunwald and Loeb.
82. Vernon Loeb, "Has the U.S. Blunted Bin Laden?" *Washington Post*, 17 February 1999.
83. Associated Press, "Report: 7 Bin Laden Attacks Stopped," *New York Times*, 24 February 1999.
84. Loeb.
85. "U.S. Strikes Back/Poll: U.S. Attacks Justified," *Newsday*, 24 August 1998.
86. Bennet.

87. Benjamin Weiser, "Saudi Is Indicted in Bomb Attacks on U.S. Embassies," *New York Times*, 5 November 1998.
88. Bill Gertz, "Official Certain of Terrorist's Capture," *Washington Times*, 6 November 1998.
89. Edmund L. Andrews, "Backing in Europe," *New York Times*, 22 August 1998.
90. Michael Wines, "After the Attacks: The Reaction—U.S. Raids Provoke Fury in Muslim World," *New York Times*, 22 August 1998.
91. Meyers, "After the Attacks."
92. Jehl, "After the Attacks: The Reaction."
93. Colum Lynch, "Sudan Working for Better Ties with U.S.," *Boston Globe*, 7 October 1998.
94. Associated Press, "Restrictions Placed on Bin Laden," *New York Times*, 12 February 1999.
95. Reuters, "After the Attacks: In Afghanistan," *New York Times*, 23 August 1998.
96. Chris Erasmus, "Bomb Explodes in S. Africa Restaurant; Group Says Blast Avenges U.S. Strikes," *USA Today*, 26 August 1998.
97. Steven Lee Myers, "U.S. Warns Terrorism against Americans May Be Imminent in Mideast," *New York Times*, 16 December 1998.

Ψ

This Issue's Cover

The sixteen-gun sloop of war *Ontario*, Master Commandant Jesse D. Elliott commanding, arrives in the Mediterranean as part of a squadron under Commodore Stephen Decatur formed to suppress depredations upon American merchantmen by corsairs of Tripoli and Algiers. *Ontario* would soon assist in the seizure of an Algerian frigate and thereafter in the blockade of Algiers until a peace was signed later in 1815. The ship would remain on the Mediterranean station until 1817. In 1818, under Captain James Biddle, it would become the first U.S. warship to visit the future states of California, Oregon, and Washington. Built in 1812, *Ontario* would see almost continuous active service, deploying frequently to the Mediterranean and Caribbean, until 1843, when it became a receiving ship; the sloop would be sold in 1856.

Geoff Hunt has been a freelance artist and designer, art editor of the journal *Warship*, and a designer of books on maritime subjects. He is today a full-time painter and a member of the Royal Society of Marine Artists. Aside from the covers of the O'Brian novels, which have made his paintings known to and admired by millions, his work is found in the Royal Naval Museum, the Royal Naval Submarine Museum, the Mystic Maritime Gallery, and private collections worldwide. The artist resides in Wimbledon, England.

Deciding on Military Intervention

What Is the Role of Senior Military Leaders?

John Garofano

DELIBERATIONS ON THE POSSIBLE USE OF FORCE have usually failed to provide U.S. leaders with the information and advice necessary to make informed decisions. In Korea, Vietnam, the Dominican Republic, Panama, and Kosovo, among other interventions, decision makers were enlightened about certain political and military realities only after the fact of military involvement. Even in cases where intervention was avoided, such as Laos in 1961, or where it achieved significant success, as in the Gulf War, historical inquiry shows that policy makers labored in various shades of darkness about the costs and risks of various courses of action. How can this be improved?

The counsel offered by senior military leaders has long been recognized as central to making informed decisions on using force. Yet for both analysts and policy makers, prescriptions hinge to a great extent on transient historical interpretation rather than on a durable conceptual framework. The John F. Kennedy and Lyndon B. Johnson administrations concluded from the Bay of Pigs invasion and the Cuban missile crisis that senior military officers ought to view national security issues through the same lens political leaders use. After Vietnam, it was argued that the military leadership should instead focus on winning wars and on making clear what they need to do so. This view was boosted by the experiences in Beirut and Grenada, and it was partly realized with the 1986 Goldwater-Nichols Act. Kosovo, the 1998 readiness hearings, and revisitations to the Vietnam War are once again stirring the pot. H. R. McMaster's *Dereliction of Duty* (reportedly required reading among military leaders and staffs in Washington) argues that the Joint Chiefs of Staff never made clear

Naval War College Review, Spring 2000, Vol. LIII, No. 2

what they knew to be necessary for victory in Vietnam, in part due to personal failures and in part because scheming politicians outwitted them. During the Kosovo war, some commentators thought the book's message was relevant but was being ignored.

In fact, the performance of the American military leadership in advising the president has varied considerably. In some cases, its views were ignored, and in others it failed to make them known—the Joint Chiefs were not taken into the process as true counselors. In yet other cases, the advice military leaders gave was defective—based on unsound information or faulty analysis. In still other cases, one side of the civil-military equation misunderstood the assumptions and concerns of the other—advice was bound to be ineffective. Among this trio of problems—the military voice, the quality of military advice, and miscommunication—the first has received the most attention.

This article discusses the importance of these problems and how each might be corrected, by examining several cases of deliberations on military intervention. The cases are analyzed in a rudimentary framework based on a Clausewitzian dilemma and on literature suggesting how information and advice is best used by decision makers facing complex tasks. We seek to answer such questions as: How can the military leadership ensure that it provides accurate and effective advice to senior policy makers? At what stages should it be more or less forceful in providing advice? What is the proper balance between making recommendations and providing information and options? By examining pre-1965 cases, we can view decisions on Vietnam and subsequent deployments in a different light than do most current interpretations.

The analysis suggests that we may need to move beyond Goldwater-Nichols requirements in several areas. First, senior military opinion must be given greater autonomy from the bureaucratic-political process. To some extent this can be accomplished by formulating guidelines regarding the nature, form, content, and timing of the advice provided by military leaders. Second, the views of the chiefs—and perhaps other military experts—should be more readily available to political decision makers. Thus, the exclusive nature of the chairman as principal military advisor should be redressed. Third, the services—or, if they fail, the Congress—must commit themselves to excellence in the quality and content of senior military counsel. To this end the services need to take a longer-term

view of the training, education, and selection of their senior leaders and military staffs. In sum, high-quality decisions are a function of both the quality of the individuals making the decisions and of a variety of structural and procedural conditions.

The military does not bear sole or even primary responsibility for the quality of the overall decision-making process. Senior military leaders do, however, play a critical and relatively under-studied role in that process. It is important to debate these matters now, as evolving security issues will place senior military leaders in new and unfamiliar roles. As the use of force is considered for terrorist, humanitarian, and alliance-driven tasks, such issues as the balance between informational and advocacy roles or the point at which senior military leaders should "fall on their swords" and resign will only increase in complexity. As the military is asked to depart from its traditional war-fighting roles, for example, its leaders may tend to move from a passive, consultative role to one of recommending specific courses of action (this may explain in part General Colin Powell's preference for intervention in Somalia over Bosnia). Conversely, future experiences with alliance operations like Kosovo may push military leaders toward an informational or general advisory role. Neither of these trends should be allowed to determine the essential nature of military advice and how it is provided.

Dr. Garofano is a research professor of national security affairs at the U.S. Army War College in Carlisle, Pennsylvania. He previously taught in the Department of National Security and Strategy at the Army War College, at Mount Holyoke and its Five College affiliates, and at the University of Southern California's School of International Relations. Dr. Garofano received an M.A. and Ph.D. in government from Cornell University, an M.A. from the Johns Hopkins School of Advanced International Studies, and a B.A. in history from Bates College. His main research interests are civil-military relations, military intervention, Southeast Asian security, and international relations theory. During the 2001 academic year he will be a fellow at Harvard's John F. Kennedy School of Government while completing a book on intervention decisions since 1945.

The views expressed herein are those of the author and do not necessarily reflect the views of the Department of the Army, the Department of Defense, or the U.S. government.

The first section of this article discusses what the proper role of senior military leaders should be in strategic decisions, viewing the issue from a Clausewitzian perspective—which continues to frame debate today but has reached the limits of its utility. The article then outlines the components of a healthy foreign-policy decision process and deduces the characteristics of military advice that are conducive to such a process. Then three broad categories that are useful for illustrating problems and pitfalls in the offering of military advice are presented, in brief discussions of decisions on Korea, Laos, Vietnam, and Dien Bien Phu. The article concludes by suggesting directions for study and organizational change that would allow the military to play a more vital and appropriate role in strategic decisions.

The Nature and Proper Role of Military Advice

There is little agreement, within or outside of the military, on the proper role of senior military leaders in counseling political decision makers. Clausewitz explored the issue in Book Eight, chapter 6, of *On War;* he began with the well-known argument that war, as a continuation of politics with the addition of nonpolitical means, must be determined by policy. Policy, he argued, should not extend to operational details, such as the posting of guards or the employment of patrols, two examples that today would be considered clearly in the "tactical" realm. On the other hand, political considerations do shape the "planning of war, of the campaign, and often even of the battle." Thus policy intrudes deeply into military affairs.[1]

The only question, Clausewitz maintained, is whether the political point of view should disappear and be subjugated to the military, or the other way around. For Clausewitz it was one or the other—leaders cannot consider the military, then the administrative, then the political points of view. There is only one vantage point from which the essential truth of a problem can be known, and for Clausewitz on the problem of war, that vantage point was *political.* Policy is and must be "the guiding intelligence" and war only its instrument. "No other possibility exists, then, than to subordinate the military point of view to the political." Yet from this argument flowed his somewhat paradoxical conclusion that there is no such thing as a "*purely military* opinion" that can helpfully serve policy. Indeed, such opinions are "unacceptable and can be damaging."

> Nor indeed is it sensible to summon soldiers, as many governments do when they are planning a war, and ask them for *purely military advice*. But it makes even less sense for theoreticians to assert that all available military resources should be put at the disposal of the commander so that on their basis he can draw up purely military plans for a war or a campaign. . . .
>
> No major proposal required for war can be worked out in ignorance of political factors; and when people talk, as they often do, about harmful political influence on the management of war, they are not really saying what they mean. Their quarrel should be with the policy itself, not with its influence. If the policy is right—that is, successful—any intentional effect it has on the conduct of the war can only be to the good. If it has the opposite effect the policy itself is wrong.[2]

Political imperatives only make for bad policy when they ask military operations to accomplish things "foreign to their nature." The fact that this had occurred repeatedly in history led Clausewitz to conclude "that a certain grasp of military affairs is vital for those in charge of general policy." How is one to make war in a way that follows its essential logic and yet is "fully consonant with political objectives"? He presented two options: combine the soldier and statesman in one person, who presumably will make the decision; or "make the commander-in-chief a member of the cabinet, so that the cabinet can share in the major aspects of his activities."[3]

Clausewitz wanted military views to be known during deliberations but not to determine their outcome. He supported the point with historical examples of disasters that had befallen countries whose war policies were decided upon by generals. He added that the European leaders of the late eighteenth century had failed to understand the revolutionary changes in warfare then emanating from France: they had viewed the elements of warfare through military lenses, whereas political developments in France had been generating a "revolution in military affairs" through the harnessing of nationalism for military purposes. Politicians had relied heavily on military advice, but military leaders had missed the political bases of revolutionary changes in warfare; military advice had been therefore "no corrective" to the "errors of policy" that resulted. This

transformation of war based on political developments, and the politico-military misreading of it, Clausewitz argued, shows that military and political views are deeply and irrevocably connected.[4]

The Clausewitzian ideal of shared political-military wisdom in conjunction with military subordination, then, is exceedingly difficult in the contemporary world.

From our point of view, Clausewitz raises several critical issues and leaves several others open to interpretation. Military action must be subordinated to policy, but the knowledge required for wise policy consists of both military and political wisdom. Furthermore, both kinds of wisdom must somehow reside in the body that makes the ultimate decision. How this balance between *shared wisdom* and *military subordination* is to be worked out in a modern democracy is the heart of the matter. A related problem is how to guarantee the requisite wisdom in senior political and military leaders in the first place.

Clausewitz's argument also raises contradictions, both a potential human one and one imposed by contemporary conflict. The human problem is how military leaders—who presumably understand the "essence" of the military problem—can ensure that this essence is fully appreciated in the minds of political decision makers and yet follow orders—political decisions—that violate purely military logic. In effect, Clausewitz leaves this problem unresolved. Notions of ultimate "civilian control" do not address the problem head-on, for these simply force military leaders who feel misunderstood either to follow a foolish policy or resign. In other words, the traditional civil-military *problématique*, focused as it is on control rather than knowledge, does not address the fundamental issue.[5]

The second problem is a more practical one. Terrorism, humanitarian intervention, limited missile strikes, precision weapons, and a host of other technology-driven developments make it unlikely that the "essence" of a political-military problem can be fully understood—at least not across a wide diversity of situations—by the small number of individuals who happen to be members of the National Security Council at any given point. While war has in many ways retained its essence since Clausewitz's and indeed since Thucydides' time, in other ways it has changed; at the very least, it

has become much more complex. It is foolhardy to assume that the nation will be so fortunate as always to enjoy service chiefs of staff, their chairman, a secretary of state, a secretary of defense, and (most importantly) a president who can grasp—all in fundamentally the same way—the essential military and political logic of all of today's national security challenges. The failure of political, analytical, and academic circles to produce an overarching strategy; the severe political divisions that have arisen on issues as fundamental as isolationism versus engagement, and on such decisions as national missile defense or a test ban treaty; continuing disagreement over whether American lives should be spent on humanitarian causes; the emergence of threats from weapons of mass destruction, international crime, and terror organizations; and worry about factors still largely unforeseen—all point to the difficulty of locating a Clausewitzian combination of politico-military wisdom in a few individuals whose tenures in office seldom exceed a few years.

"Good" Strategic Decisions: Theory and Organization

The Clausewitzian ideal of shared political-military wisdom in conjunction with military subordination, then, is exceedingly difficult in the contemporary world. We are left with the problem of how the uneven and conflicting stores of knowledge possessed by military and civilian advisors can best be combined to make reasonable policy and strategic decisions. The answers sometimes suggested for the Vietnam and Kosovo cases—"give the military the means to do the job"—is as inapplicable today as it was in the 1860s or 1960s; helpful solutions have not yet been put forward. We may begin to understand the proper role for senior military leaders, however, if we examine what a healthy decision process should look like and then compare this to actual cases.

The Ideal "Type" of a Healthy Decision Process. Foreign policy decisions are said by analysts to be "complex" in that two or more values are affected by the decision; the deciders must make trade-offs between the values, meaning that a gain in one implies a loss of the other; there is uncertainty and ambiguity in the correspondence between information and the environment; and the power of decision is dispersed among a group of individuals.[6]

The study of foreign policy decisions has led to certain conclusions about what constitutes a healthy decision process in such situations of complexity. When confronted with a challenge to important interests, the decision-making group seeks out advice from experts or constitutionally mandated advisors in order to assess the nature of the environment, the interests at stake, the threat to those interests, and the available means of dealing with the challenge. Alternative courses of action are laid out, and the likely outcomes of each are assessed. As the search for information continues, the initial assessment and policy options are revised as appropriate. When a decision is required, deciders are expected to choose the course of action that offers the greatest advantage to the national interest. The decision should be based upon a free and fair hearing of all views as to which course of action should be pursued. The process may be said to fall into five stages: the *diagnosis* of the essential situation; the *search* for relevant information; the *revision* of initial views in response to the information gathered; the *evaluation* of possible courses of action and their outcomes; and the *choice* of a single course of action.[7]

In reality, few administrations have lived up to this ideal in crisis situations. The national command authorities operate collectively as an organic being rather than as a machine performing sequential functions. Personal shortcomings, relations between the president and his advisors, competition among advisors (for intellectual, personal, or bureaucratic reasons), and domestic and alliance politics all impinge on the ideal of a rational decision process. Nevertheless, the ideal type described above offers a useful breakdown of the stages through which foreign policy choices are made, even if the stages are not executed explicitly or efficiently. Even if, for example, a decision-making body expends little effort diagnosing a war on which it is about to embark, we do well to recognize that this step is desirable and that military leaders have a role in seeing that it is taken seriously.

In an ideal world, military opinion should have a role at each stage. While the national leadership diagnoses the situation, military experts would give a rough outline of the dimensions of the problem, the order of battle of opposing forces, the prospects for major changes in the near future, and a sketch of courses of action as possible responses to each foreseen eventuality. The initial estimates would be updated as new information flows in to the

decision-making group. As that group evaluates the likely outcome of each course of action, military leaders would project their costs, risks, and requirements. In the final stage, military leaders should advise which course of military action is most likely to achieve national goals if adequate resources are provided. In sum, the military should make its views clear as options are formulated; ensure that the costs, risks, and requirements of each course of action are as clear as they can be made; and do what they can to ensure that the ultimate choice is a fully informed one.

Again, the reality is always different. In some cases, political leaders choose not to listen to the military. In others, the military is overly politicized, in the sense that it loses independence of thought on strategic or operational matters. In still others, the military is ill equipped to provide the information necessary for informed decisions in the national interest. Reasons may include poor training of leaders, lack of time to perform the necessary background work, and overreliance on individuals' views to the detriment of in-depth staff studies.

Implications for Senior Military Counsel. Nevertheless, the ideal type described above is a useful starting point for discussing how accurate advice can be generated by the military and then provided to decision makers when it is most needed. In particular, the ideal type suggests four characteristics of military advice that should be better institutionalized: its *nature, form, content,* and *timing.*

By *nature* of advice we mean whether military leaders provide objective-informational, policy-option, or subjective-advocacy assessments. These may be viewed on a continuum from the most general and passive (basic data) to the most active and specific (recommendation of a preferred course of action). The advice of the chiefs during the Cuban missile crisis, for example, clearly fell into the advocacy category, stating clearly that a full blockade, air strikes, and invasion of Cuba constituted the only proper course of action. Otherwise General Curtis LeMay would not have told President Kennedy that his preferred blockade-only option was "almost as bad as the appeasement at Munich."[8] By contrast, during the months of DESERT SHIELD General Powell appears to have moved from initially advocating the use of sanctions to a more objective presentation of options and associated costs and risks.[9]

By *form* we mean the way in which information and advice is communicated to political authorities. Does the principal military advisor whisper in the ear of the president or secretary of defense? Is a clear estimate of the situation and courses of actions produced and given the imprimatur of the chairman? Are the views of the combatant commander used explicitly? The one example of a high-quality decision process discussed below suggests the need for a written, authoritative *strategic estimate* that plainly lays out the costs, risks, and assumptions of various policy options. Seldom produced, strategic estimates may serve as useful correctives to political pressures that can otherwise skew decisions.

The quality of the *content* of advice may also be made better by committing it to writing. By content we refer to the accuracy with which the military authorities understand the political as well as military aspects of the proposed intervention. Political factors include the readiness of U.S. and "target country" citizens to support their respective governments. Military factors include such issues as determining whether the war is essentially a conventional, guerrilla, or otherwise unconventional one, and anticipating the ability of the enemy to utilize asymmetric strategies.

Finally, the *timing* of advice and counsel can be critical. Particularly for political leaders with fairly little knowledge of military fundamentals, early and frequent advice is important for setting the tone of deliberations and the parameters of possible military action. The longer national policy planning proceeds without strong and clear input from the military, the more difficult it will be to imbue any intervention with military realism, should that be lacking.

Current Organization for Senior Military Counsel. The responsibilities of the chairman of the Joint Chiefs of Staff are specified in Section 153 of Title 10 of the U.S. Code, derived from the Goldwater-Nichols Department of Defense Reorganization Act of 1986. They include strategic, logistical, mobility, and contingency planning; net assessments of the United States and major potential enemies; the identification of deficiencies, requirements, programs, and budgets for combatant commanders; the development of doctrine for joint training and education; and periodic reports on changing roles and missions due to altered threat environments.

The *advisory* roles of the chairman, on the other hand, are described only superficially. The 1986 law designates the chairman as the principal military advisor to the president, secretary of defense, and National Security Council. Service chiefs may submit divergent opinions to the chairman, who must forward them along with his own advice; the chiefs may also respond individually, with advice or opinions, to requests from the president, secretary of defense, or the National Security Council. The chairman and individual chiefs are also to provide advice on request from the president, secretary of defense, or (after informing the latter) from Congress.

The intent of the law was to remove the reputed civilian filter represented by the secretary of defense and to prevent the suppression of dissenting opinions. Success in this regard and the net benefits of the arrangement are debatable. What is clear is that the law does not describe the nature, form, content, or timing of advice to be expected from the military when the use of force is being considered. It turns out that these aspects of advice matter, sometimes critically, to the outcome of deliberations.

Good, Bad, and Ugly Intervention Decisions

In this section, we will focus on the process itself, in three categories of decisions—the palpably poor, the ambivalent, and the successful.

The Ugly. A truly defective decision process would be one that risked American lives and treasure without satisfactorily fulfilling most of the four stipulations noted above—appropriate nature, form, content, and timing of military advice. Such a decision would involve, at its worst (that is, in its purest, "ideal" form): policy advocacy at the total expense of the presentation of options or contrary information; verbal opinion, perhaps unrecorded, given and accepted at the expense of formal studies of a more objective nature; inaccurate or misinformed assessments; and late input into the decision.

The decisions to intervene in Korea in 1950 and not to intervene in Laos in 1961 roughly match such a model. The commitment of land forces to a war that eventually claimed some forty thousand American lives was made after a decision process characterized by poor military advice and repeated refusal, on the part of civilians, to

secure the best advice that was available. The same conclusion holds for the passive, de facto "decision"—a failure to make any decision at all—to allow General Douglas MacArthur to order UN ground forces to march north and unify Korea.

Twice since 1947, the Truman administration and the Pentagon had concluded that American troops should be withdrawn from the Korean Peninsula. With the fate of Europe and the possibility of general war with the Soviet Union its primary concerns, the administration concluded that the peninsula was of no strategic value. It surmised that the North would probably attempt an invasion and the South would not be able to withstand it; nevertheless, there is no evidence of thinking about, much less serious planning for, the deployment of American forces should that happen.[10]

. . . Prescriptions hinge to a great extent on transient historical interpretation rather than on a durable conceptual framework.

Once confronted in June 1950 with a blatant challenge to the U.S. position in Asia, the Truman administration decided in rapid succession to ease restrictions on the Commander in Chief, Far East (General MacArthur, in Tokyo), to use air and sea power, and, within a week, to commit ground forces to combat. The decision to send ground troops was based on a bold but unrealistic assessment by MacArthur, who claimed that a single regimental combat team, along with a "possible" buildup to two divisions, would allow him to launch an "early counteroffensive" and drive the North Koreans back across the thirty-eighth parallel. The North Korean People's Army was already pouring across the Han River and approaching Suwon, routing the Republic of Korea army in its path. In Japan, there was no regimental combat team in a state of combat readiness, and there were insufficient aircraft to airlift supplies and weapons, which meant they would have to be moved by sea. Equipping and landing a full two divisions, which would be green when they arrived, would take even longer. Between 27 June and 9 July MacArthur doubled his estimates twice, eventually claiming that up to eight divisions would be necessary to drive the enemy from South Korea. The Army consisted of ten active divisions altogether, several of them understrength, protecting Europe, or otherwise unsuitable for early

combat in Korea. The initial assessment, however, was what mattered.[11]

The original estimate, moreover, had been communicated during a brief teleconference between MacArthur and the Chief of Staff of the Army, J. Lawton Collins, who passed it along to the Secretary of the Army, who in turn telephoned the president, who immediately made the final decision—while shaving, before 5 A.M. There were no civilian or military "second opinions" or independent assessments of the request for ground troops. Not until 28 June—two days before the decision to send troops—had the Army undertaken a study resembling a net assessment of theater forces. The National Security Council did not convene to discuss the introduction of ground troops; the council had met in the previous days, but as was to be the case in 1964 and 1965, the implications of employing air and naval power had not been considered explicitly. Moreover, MacArthur's opinions were not far from those of the air and naval chiefs, who early on told the president that "a terrible pasting from the air" and a blockade from the sea would end the North Korean invasion.[12]

Only a few weeks later, the administration realized that it was in uncharted territory. In the words of Secretary of State Dean Acheson, it had "bought a colt," and it had now to readjust its views of the military and financial requirements of the war it had undertaken. In the months that followed, the approval of MacArthur's plan for the invasion at Inchon, the passive decision to enlarge the war aims to include the unification of the peninsula, and the decision to march American troops to the Chinese border were to be made with equally bad input from senior military leaders, and equally bad use of what was offered.[13]

The problems with such decisions are to be distinguished from what caused the problems. Political decision makers may choose not to listen to military advice, or they may make decisions so quickly that the military has little opportunity to act. There was, in the spring of 1950, a lack of appreciation for the political impact of such military developments as an attack on a country that was a symbol of the U.S. presence in Asia. This precluded adequate planning, which in turn made likely excessive reliance on a single individual when time was short. There was the added problem that no one—even his seniors in the military chain of command—was willing to challenge MacArthur's judgment.[14] The point is not primarily to lay blame but

to describe a bad process, so that the sources of the defects can be addressed. In this case, the nature, form, content, and timing of military advice were all inadequate.

Occasionally, as noted, a bad process leads to propitious results. This may be claimed either for the ultimate result of intervention in Korea or for nonintervention in Laos a decade later. Laos was the first major foreign-policy crisis of the newly installed Kennedy administration. By some accounts and readings of the primary documents, prior to January 1961 outgoing president Dwight Eisenhower had warned president-elect John Kennedy that American credibility was on the line in Laos and that he must intervene alone if allies would not go along.[15] Military intervention was considered throughout the spring of 1961, with the chiefs recommending actions ranging from the movement of troops into Thailand to the deployment of a hundred thousand combat troops to Laos, South Vietnam, and Thailand.

Military advice was unimpressive during this crisis and appeared to perplex the new president, who was "appalled" at the "lack of detail and unanswered questions." The chiefs once recommended sending troops, at the maximum rate of a thousand per day, to two airstrips in Laos surrounded by five thousand guerrillas. The president learned after questioning them that the landing zone was only usable by day and that it would take a week for troops to reach the area by land. When asked what would happen if the enemy allowed troops to land for two days and then attacked, the military gave the appearance of not having thought of the possibility. On other occasions, when the chiefs reverted to their then-common claim that they could guarantee victory if given the right to use nuclear weapons, they were unable to provide a meaningful definition of "victory."[16] Primary sources reveal little evidence that senior military leaders even thought in terms of clearly assessing costs and risks of intervention, much less that they conveyed this to policy makers.

In the event, it was not the careful weighing of advice but rather the Bay of Pigs adventure in mid-April that precluded the intervention. The administration's official historian would record that shortly after the failed invasion the president came to a meeting waving cables from the chairman of the Joint Chiefs of Staff regarding an invasion of Laos and remarked, "If it hadn't been for Cuba, we might be about to intervene in Laos. . . . I might have taken this advice

seriously."[17] The chiefs appeared to be in disarray, even after Cuba. On the 1st of May, McGeorge Bundy advised the president that that morning the chiefs had been unanimously in favor of a military operation to secure the Laotian panhandle; he noted, however, that just two days before they had been evenly split, with the Navy and Air Force in favor and the Army and Marine Corps opposed.[18]

This was not the finest hour of the uniformed Pentagon leadership. Its advice was irresolute and at times unclear, qualities compounded by the administration's moves from crisis to crisis. This period, together with what the administration concluded was aggressive and faulty advice in the second Cuban crisis, produced in the Kennedy administration and its holdovers in the Johnson era a deep-seated distrust of the nation's senior military advisors.[19]

Although the decision processes in themselves had been ugly in the cases of Korea and Laos, the decisions themselves can be appraised separately—ugly processes can have attractive outcomes. Yet one ought not to rely on luck when deciding whether to commit the nation to war.

The Bad. Although evidence is limited, due to the destruction in the early 1970s of virtually all documentary evidence of JCS meetings during the Vietnam period, the 1964–65 Vietnam decisions appear to constitute a less egregious case of low-quality decision making. The military had sufficient time and access to thrash out a position and to make its case to the president, the national command authority, and Congress. Meetings between civilian and military leaders were regular and frequently frank. Senior military leaders believed the chairman accurately represented their views and opinions to the president and that he listened. Consequently, the individual chiefs consciously chose not to exercise their legal right to see the president.[20]

Senior military leaders failed to capitalize on this early and continual involvement. The roots of their failure lay in their inability to articulate an agreed-upon, viable alternative to the limited war advocated by civilian policy makers. In particular, they were unable to pierce the argument that a larger commitment of force would inevitably be met with a larger opposing force and produce a geographically wider battlefield, that such a battlefield could not be sealed,

and that the chances of a conflict with China would be much higher.[21]

In the face of this fundamental and irresolvable difference of opinion over the likely response of the enemy and the acceptance of risk of a major Asian conflagration, senior military leaders failed to make their case explicitly by presenting clearly the costs and risks of all courses of action. "There was no recommendation that I can recall for the total force," according to the Chief of Staff of the Army, General Harold K. Johnson. Instead, there were two "comments," one by Johnson and the other by General Wallace Greene, Commandant of the Marine Corps, that between 500,000 and 750,000 troops and five to seven years might be required.[22] We know that when such respected advisors as George Ball and Clark Clifford later used such figures, the general response was that they were "crazier than hell." Had senior military leaders staffed and presented their case more clearly, the response may have been different.

But the military produced no strategic estimate evaluating the costs, risks, and benefits of various courses of action and tying a preferred course to broader national security strategy. The closest thing to a strategic estimate was a study by the director of the Joint Staff, General Andrew J. Goodpaster, entitled "Intensification of the Military Operations in Vietnam: Concept and Appraisal." Commissioned by verbal order from the chairman on 2 July 1965 and completed by an ad-hoc group on 14 July, its purpose was to "assess the assurance the United States can have of winning in [South Vietnam] if we do 'everything we can.'" Its conclusion was a marginally qualified affirmative. Up to seventy-nine battalions might be required to quell the insurgency, but as few as fifty-one might suffice.[23]

Unfortunately, the report confined itself to what Clausewitz would have called "purely military analysis." It made accurate assessments and predictions about the deficiencies of the army of South Vietnam, as well as about Chinese and Soviet support, regional and United Nations political developments, and the evolution of force ratios for all involved parties. It also correctly recognized that political will was required to win. However, the study did not analyze the effect of national will on the war effort, nor did it consider the time necessary to win the war even under its own assumptions, or the impact on U.S. force levels with and without a reserve call-up. Underlying the analysis was the view—wholeheartedly

supported by the service chiefs at this time—that the enemy would fight large-unit battles. Finally, the report exaggerated the effectiveness of airpower, even as it recognized its general limitations.[24]

If the nature and form of military advice was lacking in the Vietnam decisions, the content of that advice was the final failure. In short, the advisors misunderstood essential aspects of the nature of the conflict. Civilians and military officers alike overestimated the efficacy of airpower, were convinced that the conflict was moving into a Maoist "third phase" in which the enemy would fight large-scale conventional battles, and neglected the importance of domestic support for the insurgency. They believed the enemy would not match the U.S. buildup and that external infiltration and support were the primary problems.[25]

How is one to make war in a way that follows its essential logic and yet is "fully consonant with political objectives"?

These beliefs and a general sense of, if not optimism, then can-do-ism, characterize the preponderance of military advice in the spring and summer of 1965. It is found in the weekly summaries of the Commander, U.S. Military Assistance Command, Vietnam, which made their way to the White House; in General Johnson's March 1965 report following his trip to Vietnam; in the April 1965 Honolulu Conference; and most of all during the July plenary meetings, at which senior military leaders had an open floor with the president.[26] This may explain why a concept of operations was not even agreed upon for the deployed forces until after the critical decisions.

The inability to articulate an alternative strategy, the absence of a strategic estimate, and the failure to comprehend or convey essential aspects of the war must be kept in mind when we read, for example, *Dereliction of Duty, On Strategy, The Key to Failure,* and such vignettes as "The Day It Became the Longest War."[27] For some of these authors, it was largely a matter of guts and guile—personal and moral failures on the part of the chiefs to stand up to the bullies and manipulators in the White House and present the proper, winning strategy. This accusation may be satisfying in a certain way, but vilification for lack of courage presupposes that a solution was known to exist but was not bravely put forward. The chiefs pressed

sporadically for more force but did not have a clear solution at the "theater-strategic" level, where political and military realities meet.[28]

In *On Strategy II: A Critical Analysis of the Gulf War*, Summers quotes General Johnson as saying that he would go to his grave with the knowledge of the "lapse in moral courage" of having failed to tell his president what was necessary to win the war.[29] Yet in oral histories shortly after his retirement, Johnson referred instead to two mindsets that afflicted both civilians and military. One was the unexamined assumption that a display of American power would cause the enemy to run; the other was that none of his "acquaintances wanted to trigger a conflict with the Russians. No one wanted the Chinese to come moving out of South China." The threat may have been "overstated, but nevertheless in many people's minds it was real, because unconditional surrender in World War II had prolonged that war in the minds of many people."[30]

The military had a set of divided and debatable preferences rather than a communicable or convincing plan. Yet had the senior military leaders presented even their competing, possibly flawed preferences in terms that laid out their costs and risks, the outcome may have been different. For regardless of their shortcomings and motivations, neither Lyndon Johnson nor any of his advisors wished to destroy the Great Society, ruin the prospects for the Democratic Party, or tear the very fabric of American society. Confronted with the likely costs of various courses of action, they may have made different decisions. Requirements for continual written estimates may help to overcome civilian stubbornness or divisions within the military by confronting both with the stark facts of worst-case scenarios.

The Good. In 1954, the Eisenhower administration pondered sending air, naval, and ground forces to save the French garrison at Dien Bien Phu. Since at least 1950, official policy had held that a noncommunist Vietnam was a vital U.S. interest. At stake were a significant population and territory, prospective strategic resources and minerals, and the image of the West as able to resist all forms of communist expansion. The United States also had made a clear public commitment, in that it had supported France in its war against the communists since the end of World War II. Thus the French could be

optimistic when they came to the United States in the winter of 1954–55 to request military intervention.[31]

The administration ultimately chose not to become involved in either an air or a ground war. Over several months of deliberations, decision makers came to believe that any use of air power would be inconclusive and would so engage U.S. prestige that ground troops would inevitably follow. A ground commitment would require several hundred thousand troops for years. It was decided that the interest, however "vital," was not worth the cost.

The role of the military's information and advice in this decision is still debated. In his memoirs, General Matthew B. Ridgway, Army Chief of Staff at the time, stated (contra General Johnson) that he could go to his maker knowing he had saved a great number of lives that would have been sacrificed through muddy thinking. Eisenhower later stated that he did not recall Ridgway's main briefing; nonetheless, the Army's behavior in this case is a useful model. Ridgway sent a large team of specialists, representing every branch of the Army, on an extended visit to Indochina. The result was a comprehensive report stating that success in Indochina would require well over three hundred thousand U.S. troops, high rates of casualties for five to seven years, and an expansionist fiscal policy that would reverse the constraints Eisenhower had placed on the budget and in particular on the military.[32] Ridgway registered his amazement that policy makers were seriously considering a major war without taking due account of the costs and risks. By placing such estimates in writing and forcing their presentation to the National Security Council (NSC) and the president, Ridgway had a major impact on the key political decisions—or would have, had the president been inclined toward intervention.

General Ridgway's behavior was only an extension of his views up to that time. On several occasions he had prodded the NSC to face the fact that if Indochina was a vital interest and the council truly believed in the domino theory, the resources necessary to securing this interest had to be procured. Unfortunately, neither his actions nor his critical attitude toward facing squarely the costs of living up to major commitments were institutionalized. Indeed, defense reforms in 1958, and even more notably the Kennedy administration's selection of a new senior military leadership, served to rein in such

independence of thought and action. The Goldwater-Nichols Act does not help and may in fact even hinder it.[33]

To what extent can and should the 1954 Ridgway model be institutionalized? The question points to the double-edged nature of healthy civil-military relations with respect to intervention decisions. On the one hand, Ridgway pushed the logic of military action as far as possible and clearly stated the costs and risks. He stayed "within his box," fulfilling what he saw as the requirements of a military-strategic assessment. He studiously avoided stepping over the line and advocating policy in any direction—and openly scolded his peers, including the chairman of the Joint Chiefs, when they recommended specific strategic-level policies. On the other hand, Ridgway did not avoid the political aspects of his strategic assessment, tackling head-on the difficult questions of how long the war would take (and by implication the need for domestic political support), the number of troops, expected casualties, operational rules and conditions, and wider fiscal requirements. It is precisely this combination of hard military analysis with an understanding of political relevancies that senior military leaders should emulate today.

Where Are We Now?

Recent experiences are no less indicative than these historical case studies of the need to improve the rules and norms concerning how and when the senior military leadership provides advice on the use of force. According to a widely read account, General Colin Powell as chairman of the Joint Chiefs of Staff failed to offer options to President George Bush just after Saddam Hussein's August 1990 invasion of Kuwait, or in October, when the president wanted a more offensively oriented strategy.[34] Neither, it appears, did General Powell develop options for coercive diplomacy in Bosnia, claiming that no clear political objectives had been developed.[35] American military leaders (including retired admiral Jonathan Howe, acting as the UN emissary in charge) appeared also to misunderstand the fundamentals of clan structure and clan warfare in Somalia, contributing to the mission creep that ultimately led to the fruitless hunt for Mohammed Aideed. The war for Kosovo revealed not only an utter lack of planning for a ground option but also a Vietnam-like unwillingness to face the realities of ideationally motivated warfare.

None of these failures should be blamed exclusively on the military leaders themselves, of course. At least during the Bush administration, the political elites shared the military's basic premises on Bosnia and did not wish to become involved more deeply. Later, during President Bill Clinton's two terms (as in the Vietnam years), the Pentagon followed the White House's lead. Ideally, civilians would know what questions to ask and would understand the uses and limits of military force.

It is precisely these unhealthy symbiotic or subservient—as opposed to subordinate—relationships that legislation superseding the Goldwater-Nichols Act should preclude. I offer four suggestions to further debate.

First, the senior military leadership should be required by law to generate a *strategic estimate* that describes the likely costs and risks of several *strategic options*. These options should not be limited to those already under consideration by the White House. Thus, for example, if the White House does not wish to consider a ground war but the military considers one a strong likelihood, the costs, risks and requirements of that ground war should be analyzed and presented formally. The costs and risks would include matériel, casualties, and funding. Estimates of each option's duration should always be added to these factors, as well as appraisal of the domestic support it might enjoy. Together these building blocks point to the need for a "joint strategic capabilities plan" for use-of-force decisions—standardized procedures designed to guarantee consideration at the highest levels of the most important issues.

Second, an independent body of advisors should be established at the executive level (comparable to the Foreign Intelligence Advisory Board) for decisions on the use of force. Some such boards work well in Washington, though the overwhelming majority do not. We lack studies on the factors bearing upon the effectiveness of such independent bodies. However, the value of such an independent advisory body, composed of retired military officers and diplomats, academics, and policy analysts, would probably be widely acknowledged after it participated in its first successful use-of-force decision.[36]

Third, some of the central tenets of Goldwater-Nichols need to be revised. Especially in the post–Cold War world, the notion of a single individual as the principal military advisor to the president is

outdated. The merits of this arrangement have not been demonstrated—it was not responsible for victory in the Gulf War, for the initial accomplishments in Somalia, or for the limited achievements of Kosovo. The drawbacks are great, however, and obvious. It prevents a multiplicity of military views from reaching the president. More importantly, it prevents the development of those views, which must be diluted if they are ever to see the light of debate. The power of the chairman over the vice chairman and the Joint Staff needs to be decreased if a strategic estimate is to be effective.

Fourth, the selection and education processes for senior military leaders, including the service chiefs and the chairman, need to be reexamined. The present politicization of the selection process should be decreased. Professional military education must also be focused on areas relevant to tomorrow's struggles: regional security studies, the spread of technologies of mass destruction, the nature of international criminal and terrorist organizations, ethnic conflict, nuclear and conventional deterrence, the advisory and decision-making processes and the ethics involved in them, and the evolution of international norms and law. Mastery of any of these requires a serious commitment to higher education, including the necessary time and incentives; how this is to be squared with existing incentives for promotion is the greatest challenge.[37]

These and related changes will not be fully effective unless comparable analysis and progress are made in the civilian realm. We have relied so heavily on the principle of civilian control that we have neglected to consider the need for civilian leaders and bureaucrats knowledgeable about military power. That, however, is the subject of another argument.

The goal of the nation's military leadership in use-of-force decisions should be to provide, in an effective way, useful advice to political decision makers whatever their strengths and limitations. "Effectiveness" refers to the ability to inject counsel concerning military implications into the thinking of political decision makers. This requires the communication of military perspectives on the costs, risks, and benefits of various options. "Usefulness" refers to the extent to which information and advice promote decisions that further the national interest as political decision makers define it—or ought to define it, could they see more comprehensively. This requires of senior officers a deeper understanding of the political, geographical,

and technological bases of military issues than has previously been evident except in a handful of individuals. Finally, they must bring this advice together at the nexus of the operational and strategic levels. If they choose instead to adhere to "purely military" advice or to color their advice with the perspective of politicians—in any branch of government—senior military leaders will provide neither effective nor useful counsel.

The emerging strategic environment requires a rethinking of the civil-military relationship at the upper levels. The present obsession with control needs to be replaced with an emphasis on advice, counsel, and information, so that military and political institutions can better collaborate in assuring the nation's security.

Notes

1. Carl von Clausewitz, *On War*, ed. and trans. Michael Howard and Peter Paret (Princeton, N.J.: Princeton Univ. Press, 1989), p. 606.

2. Ibid., pp. 607–8.

3. Ibid., p. 608.

4. Ibid., pp. 609–10.

5. For a good summary of the traditional view of the problem, see Peter D. Feaver, "The Civil-Military Problématique: Huntington, Janowitz, and the Question of Civilian Control," *Armed Forces and Society*, Winter 1996, p. 149.

6. John D. Steinbruner, *The Cybernetic Theory of Decision* (Princeton, N.J.: Princeton Univ. Press, 1974), p. 16.

7. John Elster, "Introduction," in *Rational Choice*, ed. John Elster (Oxford, U.K.: Basil, Blackwell, 1986), pp. 34–59; Steinbruner, pp. 32–5, 65; Alexander L. George, *Presidential Decisionmaking in Foreign Policy: The Effective Use of Information and Advice* (Boulder, Colo.: Westview Press, 1980), p. 10; Graham T. Allison, "Conceptual Models and the Cuban Missile Crisis," *American Political Science Review* (September 1969), pp. 689–96; and Janice Gross Stein and Raymond Tanter, *Rational Decision Making: Israel's Security Choices* (Columbus: Ohio State Univ. Press, 1980), pp. 11–6.

8. Ernest R. May and Philip D. Zelikow, *The Kennedy Tapes: Inside the White House during the Cuban Missile Crisis* (Cambridge, Mass.: Belknap Press of Harvard Univ. Press, 1997), p. 178. See p. 188 for a candid expression of how far apart were the chiefs and the president.

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

10. See James F. Schnabel and Robert J. Watson, *History of the Joint Chiefs of Staff*, vol. 3, *1950–1951, The Korean War, Part One* (Washington, D.C.: Office of the Chairman of the Joint Chiefs of Staff, Office of Joint History, 1998), pp. 1–24. See also, John Lewis Gaddis, *The Long Peace* (New York: Oxford Univ. Press, 1987), ch. 4, "Drawing Lines: The Defensive Perimeter Strategy in East Asia, 1947–1951." For the CIA assessment that withdrawal would result in invasion by the North and collapse of the South, see "Consequences of U.S. Troop Withdrawal from Korea in Spring, 1949," OFE 3-49, 28 February 1949, in *CIA Cold War Records:*

The CIA under Harry Truman, ed. Michael Warner (Washington, D.C.: Central Intelligence Agency, Center for the Study of Intelligence, 1994), pp. 265–74.

11. James F. Schnabel, *Policy and Direction: The First Year--The United States Army in the Korean War* (Washington, D.C.: Office of the Chief of Staff of the Army, Chief of Military History, 1972), pp. 83–9. The original message is in Schnabel and Watson, pp. 48–9. See Clay Blair, *The Forgotten War: America in Korea, 1950–1953* (New York: Anchor Books, 1989), pp. 82–3. See also Glenn Paige, *The Korean Decision* (New York: Free Press, 1968), pp. 120–8, 190–205.

12. Schnabel and Watson, p. 34; Joseph Goulden, *Korea: The Untold Story of the War* (New York: Times Books, 1982), p. 67.

13. For the "colt" quotation, Dean Acheson, draft letter to "Paul," 12 July 1950, Acheson Memos, box 65, Harry S. Truman Library. For analyses of this phase, see Richard Ned Lebow, *Between Peace and War* (Baltimore: Johns Hopkins Univ. Press, 1981), pp. 148–84, 193–216; Irving Janis, *Groupthink*, 2d ed. (Boston: Houghton Mifflin, 1982), pp. 48–71; and George, pp. 69, 75, 125, 128.

14. For Admiral Sherman's hesitance to question the decision, see Schnabel and Watson, p. 50. On the more general problem see Dean Acheson, *The Korean War* (New York: W. W. Norton, 1971), pp. 68–72.

15. See, for example, Clark Clifford memorandum to the president, 29 September 1967, on Memorandum of Conference on 19 January 1961, *The Pentagon Papers*, Senator Gravel Edition (Boston: Beacon Press, 1971), vol. 2, pp. 635–7. Memoranda and notes on the transition meetings relating to Laos are found in *Foreign Relations of the United States, 1961–1963*, vol. 14, *Laos Crisis* (Washington: U.S. Govt. Print. Off., 1994), pp. 1–27, see esp. nn. 3 and 5, pp. 24 and 25, respectively. Clifford indicates that Eisenhower thought the United States should intervene alone if necessary. For a discussion of the controversy surrounding the issue, see Fred Greenstein and Richard Immerman, "What Did Eisenhower Tell Kennedy about Indochina? The Politics of Misperception," *Journal of American History*, vol. 29, no. 2, 1992, pp. 568–88.

16. Arthur Schlesinger, Jr., *A Thousand Days* (Boston: Houghton Mifflin, 1965), p. 338.

17. Ibid., p. 326.

18. McGeorge Bundy note, 5/1/61, POF, CF Laos 1961, box 121, John F. Kennedy Library, Boston, Mass.

19. See, for example, McGeorge Bundy, "Some Preliminary Administrative Lessons of the Cuban Expedition" (draft, 24 April 1961), in James G. Blight and Peter Kornbluh, eds., *The Bay of Pigs Reexamined* (Boulder, Colo.: Lynne Rienner, 1998), par. 4, p. 266.

20. See, for example, Oral Histories of General Earle G. Wheeler, 21 August 1969, Military History Institute, Carlisle Barracks, Penna., pp. 24–5, and 7 May 1970, also pp. 24–5; General William C. Westmoreland, *A Soldier Reports* (New York: Da Capo, 1989), pp. 131, 159–60; and Oral History of General Harold K. Johnson, Military History Institute, Carlisle Barracks, Penna., 1 August 1974, pp. 17–8. Citing Hanson Baldwin, Harry Summers blames the paucity of meetings between the Chief of Staff of the Army and the president on the latter. See Harry G. Summers, *On Strategy: A Critical Analysis of the Vietnam War* (Novato, Calif.: Presidio Press, 1982) p. 48, n. 16.

21. This section relies on declassified documents from the Papers of the Chairman, Joint Chiefs of Staff (National Archives) and Office of the Historian of the Joint Chiefs of Staff (Pentagon), Washington, D.C.

22. Oral History of General Harold K. Johnson, 1 August 1974, p. 8.

23. Report of Ad Hoc Study Group, 14 July 1965, NSF Country/Vietnam, box 20, Lyndon B. Johnson Library, Austin, Texas.

24. I am indebted to Colonel Tom Maffey on this point.

25. See Andrew F. Krepinevich, Jr., *The Army and Vietnam* (Baltimore: Johns Hopkins Univ. Press, 1986).

26. On 20 April 1965, McNamara, with John T. McNaughton (deputy secretary of defense for international security affairs) and McGeorge Bundy (special assistant to the president for national security affairs) met in Honolulu with General Westmoreland, Maxwell Taylor (U.S. ambassador to South Vietnam), General Earle Wheeler, U.S. Army (chairman of the Joint Chiefs of Staff), and Admiral U.S. Grant Sharp, Jr. (Commander in Chief, Pacific Command) to consider the military options. U.S. State Dept., *Foreign Relations of the United States, 1964–1968*, vol. 2, *Vietnam, January–June 1965*, esp. docs. 262, 264, and 265, retrieved January 2000 from the World Wide Web: http://www.state.gov/www/about_state/history/vol_ii/.

27. H. R. McMaster, *Dereliction of Duty: Lyndon Johnson, Robert McNamara, the Joint Chiefs of Staff, and the Lies That Led to Vietnam* (New York: HarperCollins, 1997); Summers, *Vietnam War*; Norman B. Hannah, *The Key to Failure: Laos and the Vietnam War* (Lanham, Md.: Madison Books, 1987); and Charles G. Cooper [Lt. Gen., USMC, Ret.], "The Day It Became the Longest War," U.S. Naval Institute *Proceedings*, May 1996, pp. 77–80.

28. On the importance of the "theater-strategic" level of analysis, see William J. Gregor, "Toward a Revolution in Civil-Military Affairs: Understanding the United States Military in the Post–Cold War World," Project on U.S. Post–Cold War Civil-Military Relations, Working Paper no. 6, August 1996 (Harvard University, John M. Olin Institute for Strategic Studies).

29. Harry Summers, *On Strategy II: A Critical Analysis of the Gulf War* (New York: Dell, 1992), p. 54.

30. Oral History of General Harold K. Johnson, 21 May 1973, p. 37. On the lingering skepticism toward policies of unconditional surrender, see Brien Hallett, "Unconditional Surrender and the U.S. Military," unpublished manuscript, Matsunaga Institute for Peace, University of Hawaii.

31. Among secondary sources see *The Pentagon Papers*, Senator Gravel edition, vol. 1; Melanie Billings-Yun, *Decision against War: Eisenhower and Dien Bien Phu, 1954* (New York: Columbia Univ. Press, 1988); George C. Herring, *America's Longest War: The United States and Vietnam, 1950–1975*, 2d ed. (Philadelphia: Temple Univ. Press, 1986); George Herring and Richard Immerman, "Eisenhower, Dulles, and Dienbienphu: 'The Day We Didn't Go to War' Revisited," *Journal of American History*, September 1984; and Michael Schaller, "Securing the Great Crescent: Occupied Japan and the Origins of Containment in Southeast Asia," *Journal of American History*, September 1982.

32. Documents at the Military History Institute, Carlisle Barracks, Penna.

33. See Christopher M. Bourne, "Unintended Consequences of the Goldwater-Nichols Act," *Joint Force Quarterly*, Spring 1998, pp. 99–109.

34. Gordon and Trainor.

35. Colin L. Powell, *My American Journey* (New York: Random House, 1995), pp. 576–7.

36. See the author's "Expanding the Base of Expertise: A PFIAB for Use-of-Force Decisions," *Strategic Studies Institute Newsletter*, U.S. Army War College, December 1999.

37. Each service views its educational resources differently, and indications are that Congress will take another look at the disparities as the next defense-reform debate shapes up. See Paul R. Schratz, "The Hundred-Year Growing Pain," *Naval War College Review*, September–October 1984, reprinted Winter 1998, pp. 137–52.

Ψ

Negotiated Joint Command Relationships

Korean War Amphibious Operations, 1950

Donald Chisholm

BETWEEN THE NORTH KOREAN INVASION of South Korea at 0400 on 25 June 1950 and New Year's of 1951, U.S. forces successfully conducted four major amphibious operations in support of the United Nations: Pohang-Dong, Inchon, Wonsan-Iwon, and Hungnam-Wonsan-Songjin-Inchon-Chinnampo. Absent these operations, the battlefield outcome at any given point during this period would have been decidedly less advantageous to the UN forces.

The amphibious operation against a hostile shore is probably the most complex, technically and organizationally, of all military undertakings. It is a joint operation that necessarily involves sea, air, and land elements, each of which has its own specialized expertise, technical operating constraints and imperatives, standard operating procedures, and organizational interests. These disparate elements must be knit into a virtually seamless whole if an amphibious operation is to be successful.

The planning and execution of the Korean War's amphibious operations, though now a half-century distant, hold some useful lessons for the contemporary period. The white paper ". . . From the Sea," first promulgated in 1992 and refined in 1994 as "Forward . . . from the Sea," has not only become the U.S. Navy's doctrine, as the concept of "operational maneuver from the sea" has become that of the Marine Corps, but the geopolitical characteristics of the post–Cold War world appear to require frequent projection of force, and often by amphibious means. Korean War operations also offer insights into the practical problems of joint operations generally,

Naval War College Review, Spring 2000, Vol. LIII, No. 2

insights useful in a time when virtually all military operations are "joint" to some degree.

This article considers one important aspect—command relationships at the highest levels, both intraservice and interservice, and their consequences for substantive outcomes—of the four major Korea operations. It directs attention not only to the role amphibious doctrine played in establishing these relationships but also to the *processes* of negotiation and bargaining that took place before and during these operations and gave content to those command relationships. Thus, it not only addresses the formal structures of command relations and their evolution but analyzes command relations as they were actually practiced. Issues include getting the right commander, with the relevant combat and amphibious experience, in the right place at the right time; and properly locating that place in the military hierarchy, assigning it responsibilities appropriate to the task at hand and discretion sufficient to the task.

Doctrine

The primary document of U.S. joint military doctrine states that "doctrine presents *fundamental principles* that guide the employment of forces. Doctrine is authoritative. It provides the distilled insights and wisdom gained from our collective experience with warfare. Doctrine facilitates clear thinking and assists a commander in

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Dr. Chisholm is a member of the faculty of the College of Urban Planning and Public Affairs at the University of Illinois, Chicago. He is the author of *Waiting for Dead Men's Shoes: Origins and Development of the U.S. Navy's Officer Personnel System, 1793–1941* (Palo Alto, Calif.: Stanford University Press, 2000).

He wishes to thank Bernard Cavalcante, director of the Navy's Operational Archives; David B. Crist of the Marine Corps Historical Center; Kerry Strong, director of the Marine Corps University Archives; Barry Zerby of the National Archives; David Keough of the Military History Institute; and James Zobel, archivist of the MacArthur Memorial, for their assistance in the research of this article. Jeffrey Barlow and Ronald Spector provided valuable comments on an earlier version that was delivered as a paper at the Fourteenth Naval History Symposium, U.S. Naval Academy, at Annapolis, Maryland, 23–25 September 1999.

determining the proper course of action under the circumstances prevailing at the time of decision."[1] It also recognizes the importance of certain values to effective joint operations, among them individual integrity, competence, moral courage, teamwork, trust and confidence, delegation, and cooperation. Of these, teamwork ("cooperative effort by members of a group to achieve common goals") and trust and confidence ("total confidence in the integrity, ability, and good character of another") loom largest in the story of command relations that follows.[2]

Modern amphibious doctrine really began with the establishment of the Fleet Marine Force in 1933 and the creation the next year of the *Tentative Manual for Landing Operations*—modified and adopted in 1938 by the Navy as FTP 167, *Landing Operations Doctrine,* and then adopted by the Army in 1941 as FM 31-5, *Landing Operations on Hostile Shores*. All of these doctrinal manuals were modified during World War II by amphibious experiences in the Central Pacific, Southwest Pacific, and European theaters. Between World War II and the Korean War, they were again adapted after further study. Consequently, when the North Koreans invaded the South, there was a corpus of thoroughly battle-tested amphibious doctrine—doctrine addressing, among many other factors, the structure of command relations, which is integral to the success of any such operation.

Doctrine reduces conflict over important issues and narrows the need for discussion at the time of execution by establishing prior consensus. To the extent that future situations resemble past experience in the ways that matter, doctrine provides an efficient guide to action. The more generally stated that doctrine, the more flexible it will be in application to a wide range of situations, some of which may not have been entirely anticipated. The more specific that doctrine, the greater its clarity—but at the cost of broad applicability. Thus, inevitably, doctrine is incomplete. Moreover, its actual application in any given situation will be governed by the specifics of that situation—including the characteristics of the forces and personnel actually available for employment. Doctrine may be substantially modified, even abandoned, by the commanders on the scene, should they wish, and consider themselves powerful enough, to do so.

Korea was the first war to be fought under the newly unified Department of Defense. The extremely bitter unification fight had left

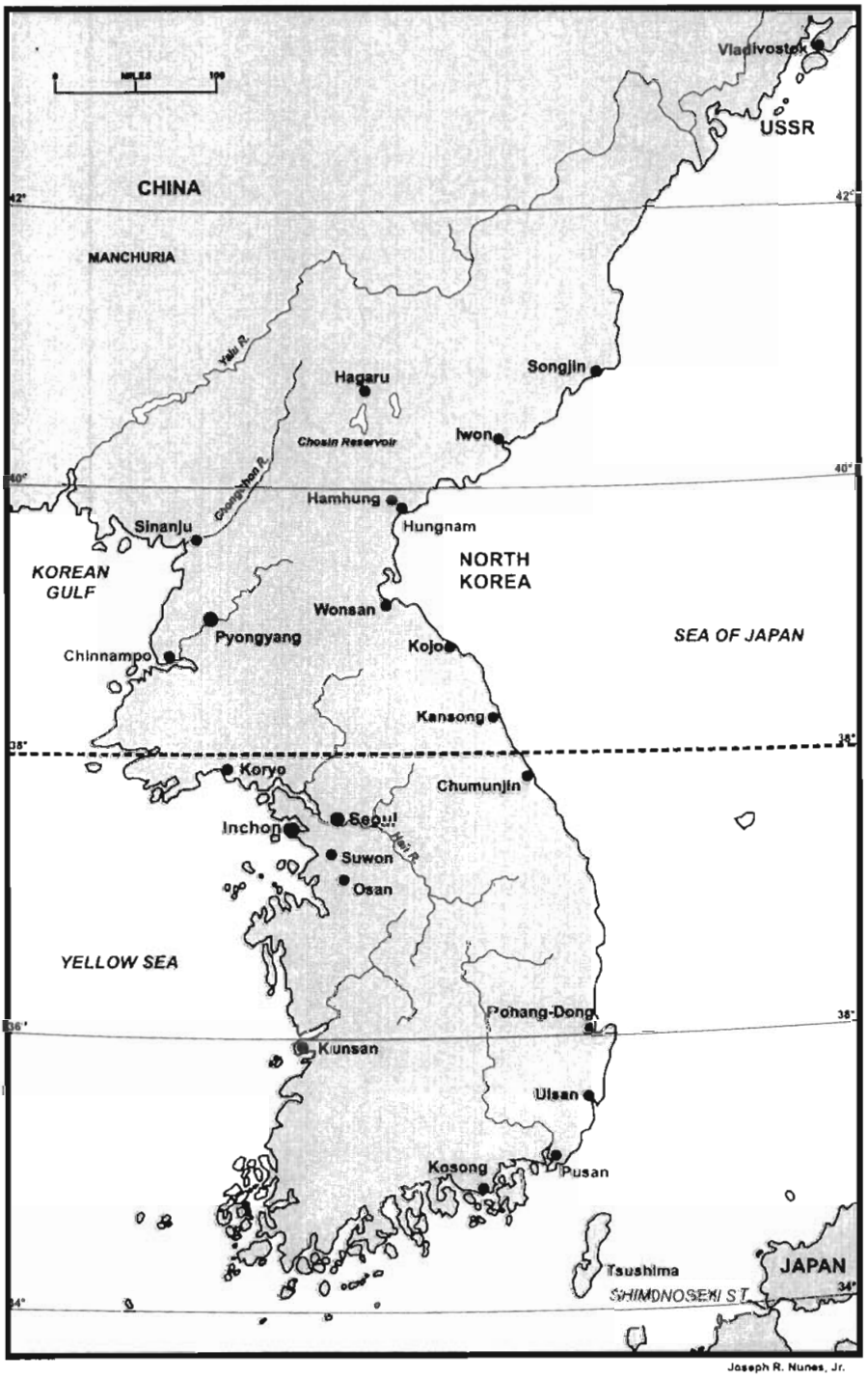
many senior officers in the Navy and Marine Corps deeply suspicious of the motives of their counterparts in the Army and the Air Force, suspicions that would profoundly affect their reactions to the latter's proposals and plans, especially as related to command of operations involving more than one service. The unification conflicts had also affected the internal harmony of the individual services, especially the Navy.[3]

As a final factor in seeking to comprehend not only the substance—the strategic and tactical function—of amphibious operations in Korea but also their organization, one also must attend to the personalities involved.

BLUEHEARTS

The tactical situation on the ground in Korea deteriorated very quickly following the North Korean invasion. The Commander in Chief, Far East, General Douglas MacArthur, determined in his visits to the battlefront in the first week of the conflict that it would be impossible to hold the line against the invaders; consequently, the United Nations forces would have to trade space for enough time to launch a counteroffensive. MacArthur never had in mind anything but an amphibious end-around that would exploit the enemy's deep penetration into the South and the weakness of the Communists' logistical support, believing that the "deep envelopment, based upon surprise, which severs the enemy's supply lines, is and always has been the most decisive maneuver of warfare."[4] He was confident that if in that trading of space for time UN forces were compelled to "fall back to Pusan proper, the Navy could hold open our lines of supply and under its guns we could hold a beachhead indefinitely."[5] Time constraints dictated that he work only with the forces and commanders at hand.

Thus was the concept of Operation BLUEHEARTS born. As promulgated by MacArthur's chief of staff, Major General Edward M. Almond, the plan called for the Eighth Army's 24th Division to land at Pusan on 2 July and move northwestward so as to halt the North Korean drive down the western side of the peninsula. The 25th Division would follow directly after, moving to the center of the peninsula. The masterstroke would be the landing of the 1st Cavalry Division at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Osan
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Ulsan
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JAPAN
SHIMONOSEKI ST.
42°
40°
38°
36°
34°
Joseph R. Nunes, Jr.

Inchon on 20 July, whereupon the 25th Division would drive north and close the noose around the Communist forces.[6]

These forces sounded better on paper than they were in fact. Each infantry division had only one tank company instead of the required battalion, and one antiaircraft battery, also instead of a battalion. Each infantry battalion was short not only its tank company but an infantry company; each divisional artillery battalion lacked one battery. Because of the weakness of roads and bridges in Japan, where it had been based, the Eighth Army had only light tanks.[7] In June 1950 these divisions were at 93 percent of authorized strength, a number itself already far reduced from their 18,900 war strength. Training and cohesion had suffered from an annual turnover that exceeded 40 percent; equipment and ammunition were in poor condition.

Until mid-1949, the Eighth Army's principal focus had been occupation duties, and no serious effort had been made to maintain combat efficiency at battalion level or higher. In April 1949, MacArthur issued a policy directive directing the attention of the Eighth Army, as well as of Naval Forces Far East and Far East Air Forces, to an intensified training program that would lead to a cohesive and integrated naval, air, and ground fighting team. By mid-May 1950, all Eighth Army divisions had completed battalion-level training, and one battalion from each had been given amphibious instruction by a Marine Corps unit. Still, no unit had actually made even a practice landing, and thus none was prepared for making an amphibious assault should the need arise.[8]

To call, then, the planning process for BLUEHEARTS "dynamic" greatly understates the close interplay of events with the selection of objectives and of the means for their accomplishment.

On 30 June, the 24th Division was ordered to fly its division headquarters and two battalions to Pusan; because of airlift constraints, only 450 men were actually flown in, on 2 July. On 3 July, the Commander, Naval Forces, Far East (COMNAVFE), Vice Admiral Charles Turner Joy, promulgated his Operation Order 7-50, which directed the ships of Amphibious Group 1, designated Task Force 90, to move the 24th Infantry Division by sea to Pusan or some other designated port.

COMNAVFE reported directly to MacArthur. Joy's forces consisted, aside from TF 90, only of Task Force 96: the antiaircraft light cruiser USS *Juneau* (CLAA 119); five destroyers of Destroyer Division 91; the

submarine USS *Remora* (SS 487), on loan from the Seventh Fleet; ten minesweepers; and a few other auxiliaries. It controlled various Japanese-manned ships, mostly former U.S. Navy tank landing ships (LSTs), which were owned by Shipping Control Administration, Japan and had been used for logistic support of the occupation and for repatriating Japanese POWs from the Asian continent. Naval base facilities comprised a minor ship-repair facility at Yokosuka, a small supply section, an ordnance facility, and a hundred-bed hospital. The Naval Air Facility at Yokosuka supported two seaplanes (loaned by the Seventh Fleet) for search and rescue, which, along with one target-towing plane for antiaircraft gunnery training, exhausted land-based air. Operations plans focused on passive defense, security under air attack, and evacuation of American citizens in an emergency, on the assumption that any future war would be with the Soviet Union and centered elsewhere. Day-to-day activities principally involved mine clearance of Japanese ports and showing the flag.[9]

On 27 June, the commander in chief of the Pacific Fleet, Admiral Arthur Radford, had ordered the commander of the Seventh Fleet, Vice Admiral Arthur D. Struble, to report to COMNAVFE. Struble's command, based at Subic Bay, was the primary U.S. western Pacific naval force. Its striking force was essentially a single carrier group: the carrier USS *Valley Forge* (CV 45), the cruiser USS *Rochester* (CA 124), and eight destroyers. There were three submarines—*Segundo* (SS 398), *Catfish* (SS 339), *Cabezon* (SS 334)—and a submarine rescue vessel, *Florikan* (ASR 9). Finally, there was a service group: the destroyer tender *Piedmont* (AD 17), the oiler *Navasota* (AO 106), the refrigerated stores ship *Karin* (AF 33), and the fleet tug *Mataco* (ATF 86). The Fleet Air Wing consisted of nine PB4Y-2 Privateers at Guam (with a small seaplane tender, *Suisun* [AVP 53], at Saipan) and nine PBM Mariner seaplanes at Sangley Point in the Philippines (two were at Yokosuka, and five were en route to Pearl Harbor).[10]

Admiral Joy duly assumed operational control of the Seventh Fleet, issuing Operation Order 5-50 as the basic order for Korean operations and also, on 3 July, Operation Order 8-50, directing a naval blockade of Korea south of forty-one degrees north latitude.[11] Struble was senior to Joy, and their relations had never been entirely cordial. Previously, this had not been a problem, given the separation of their commands. Now the Korean emergency had placed them in a close working relationship, which gave Struble considerable

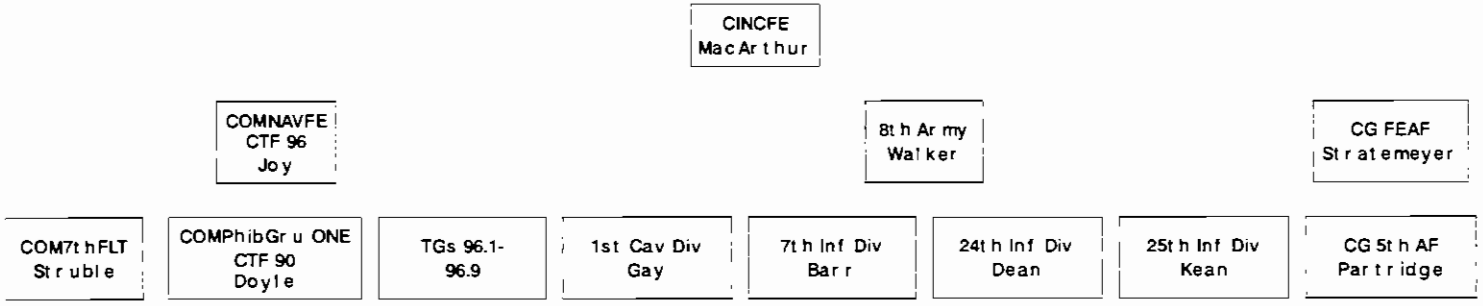
heartburn. Figure 1 shows the Far East command structure in effect on 1 July 1950.

On 4 July, Joy ordered Rear Admiral James H. Doyle, commanding Amphibious Group 1 (and thus TF 90) to travel with selected staff members to Tokyo to plan amphibious operations. His command had spent early May 1950 conducting landing exercises in southern California for the benefit of U.S. Army Command and General Staff College observers.[12] MacArthur had requested that the Navy train his Eighth Army troops in amphibious techniques, and on 20 May Amphibious Group 1 had sailed for Japan, where it had reported to COMNAVFE and was designated Task Force 90. Its only ships were the command ship USS *Mount McKinley* (AGC 7), the assault transport *Cavalier* (APA 37), the assault cargo ship *Union* (AKA 106), the tank landing ship *LST 611*, and the fleet tug *Arikara* (ATF 72). However, Doyle himself had considerable amphibious experience, and his staff officers were virtually all veterans of World War II's Central and Southwest Pacific amphibious operations.[13]

Doyle, in Tokyo, was now directed to plan for the immediate combat-loading of the 1st Cavalry Division (actually an infantry formation, part of the occupation force in Japan) for an amphibious landing "somewhere in Korea." The following day, Inchon, the port of Seoul on the west coast of the Korean Peninsula at the mouth of the Han River, was selected as the objective, and planning proceeded. Simultaneously, Almond directed the commanding general of the 1st Cavalry Division, Major General Hobart Gay, to expedite the Inchon landing "to the utmost limit." The division—diminished by 750 senior noncommissioned officers sent to the 24th Division—hurriedly drew its weapons and prepared to board ship in Yokohama.[14] The 1st Cavalry Division's planning for the landing was materially aided by Colonel Edward Forney, U.S. Marine Corps, and his staff from Mobile Training Team A (or "Able"), whom Doyle had seconded to the division—in fact, they largely wrote its operation order.

On 7 July, Kunsan, a seaport about 120 miles south of Inchon, was identified as an alternate objective and incorporated in the planning. Only two days later, however, events on the ground made Pohang-Dong, on the southeastern coast, the most probable objective, and "intensive research on that area [was] started." Pohang-Dong was definitely selected as the objective on 8 July, and the draft plans for Inchon were filed for possible future use.[15]

Figure 1
Far East Command Structure — 1 July 1950



Conflict over Naval Command Relations. On 10 July, Struble sent to Joy, with an information copy to the Chief of Naval Operations, Admiral Forrest Sherman, a message outlining the role he proposed to play in support of the 24th Division and the pending amphibious operation: close support for two days, working through Doyle, embarked on *Mount McKinley*.[16] Struble preferred air strikes on the west rather than east coast of Korea but was unenthusiastic about any such strikes, cautioning that operational losses would "reduce capabilities for later amphibious operations."[17] Thus commenced a campaign by Struble to alter a command structure that he believed inappropriate to the tasks at hand.

Joy replied (copy to Sherman) that the Seventh Fleet was to "conduct repeated air strikes against Wonsan and other selected targets from Sea of Japan [thus, the east coast] on day before landing. Cover initial stages of landing as necessary before retiring."[18] Radford, in Hawaii, had already supported Joy's position in a message to the Chief of Naval Operations (copy to Joy): "Carrier strikes by a single carrier or accompanied only by British CVL [light carrier] are a calculated risk which will increase with each operation. Under present circumstances this risk must be taken."[19]

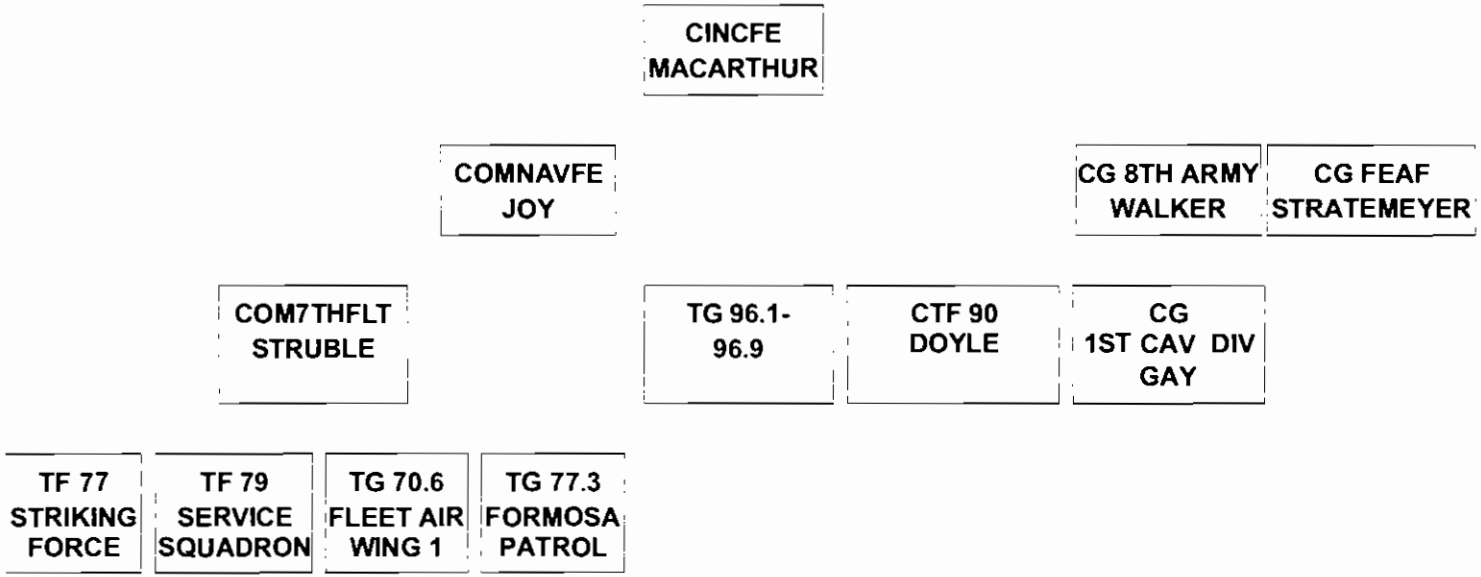
MacArthur gave Joy additional instructions on 11 July. Loading of the ships of the Transport and Tractor Group, as it was termed by the operation order, commenced at noon that day; it departed for Pusan on 13 July.

At 0740 on 12 July, Joy issued his Operation Order 9-50, setting forth the overall command organization for the landing (Figure 2). Doyle, who as Commander, TF 90 reported directly to Joy, would command the attack force, landing the 1st Cavalry Division to seize the beachhead at Pohang-Dong, and then support its exploitation. Struble, who also reported directly to Joy, was to provide carrier aircraft over the objective area and close air support of ground operations of the landing force as requested by CTF 90, as well as to conduct additional carrier air operations as directed by COMNAVFE. The objective area was to be defined by CTF 90. Command relations between CTF 90 and the landing force were to be governed by current doctrine: "Command responsibilities for accomplishment of assigned tasks on shore passes to commander landing force upon establishment ashore [of] his command post, at which time he will come under command of CG [commanding general] Eighth Army.

Figure 2

Overall Command Organization

Pohang-Dong Landing, 17 July 1950



The exact time [of] this transfer will be provided by despatch originated by commander attack force [Doyle]."[20]

All this seems straightforward. It had not been. Ironically, perhaps, the conflict had not been *inter*service but *intra*service. In any case, it had been considerable, and Joy's operation order was the consequence of this conflict. At 0940 on 11 July, Struble had sent to Joy (with Sherman and Radford as information addressees) a message protesting that "Doyle's tentative task organization . . . and your [message] apparently contemplate organizing a close air support group which will be directly under Doyle. I recommend that in the employment of heavy carriers the task force concerned not be placed under the amphibious commander but be directed to support his operations. Direct orders to carrier force concerned would then emanate through NAVFE."[21] Three hours later, Sherman sent Radford, then in Tokyo, a message (marked to be seen only by the admiral personally) to ensure settlement of the command-relations problem in Struble's favor. His language was to the point: "COM7THFLT 1110400 [the "date-time group," converted to Greenwich Mean Time, of Commander, Seventh Fleet's 0940 message] is in accordance [with] accepted practice as to command relationships. I will not concur in placing carriers under command of COMPHIBGROUP ONE. If naval command relationships cannot be worked out properly and harmoniously am prepared to consider your recommendations for changes in personalities."[22] On 12 July Joy instructed Struble (this time with Sherman, Radford, and MacArthur as information addressees) to cancel the air strikes scheduled for 17 July; "[I] desire [that] you plan [to] support Rear Admiral Doyle's landing for two days."[23] The resulting arrangement was that Doyle would request support from Struble *through Joy*, and Operation Order 9-50 so directed. Presumably, this would assuage Struble's objection to a de facto subordinate relationship to Doyle.

At noon on 13 July, Doyle finally issued his own operation order, designated 10-50, having received firsthand intelligence from a team of Amphibious Group 1 and 1st Cavalry Division staff officers that had flown into Pohang-Dong on the 11th.

Pohang-Dong—the Event. The heavy transports completed loading late on 14 July. Another advance party was flown in the next day to obtain up-to-the-minute intelligence on the enemy situation—it was

still unclear whether the operation would be an assault landing or an unopposed ("administrative") landing—while the transport group and its destroyer screen passed through Shimonoseki Straits. In accordance with Operation Order 10-50, Task Force 77 of the Seventh Fleet sortied from Buckner Bay, Okinawa, at noon on 16 July.

On the 18th, the transport group rendezvoused with the "tractor group" off the objective. Air support operations commenced at 0525. At 0558, CTF 90 signaled the traditional "Land the landing force." Fortunately, South Korean troops had held off the North Korean People's Army some miles away, and it was to be an administrative landing. The first troops reached the inner harbor at 0715, and general unloading began two hours later. Direct air support ceased at noon, and Task Force 77 commenced strikes against targets at Pyongyang, Kansong, and Wonsan.[24]

By 2400, 10,027 troops, 2,022 vehicles, and 2,729 tons of bulk cargo had been unloaded; "The landing was orderly and in organized units with [their] own equipment." At noon on 19 July, Major General Gay established his command post and assumed responsibility for operations ashore. On 30 July Doyle closed TF 90 operations at Pohang-Dong. The operation had gone perfectly, excepting only that the second echelon of shipping had been delayed by two days by Typhoon Grace.

In the event, little air support had been required. However, that outcome had not been (and could not have been) known prior to the landing, and the back-and-forth among senior naval commanders had revealed an underlying theme in amphibious operations. It demonstrated the same conflicting imperatives that had characterized amphibious operations since Guadalcanal—the fast-carrier admirals were reluctant to tie down their forces to amphibious objective areas or to take direction from amphibious commanders (escort carriers to supply air support would not be available until later). Admiral Doyle, the amphibious commander in the Pohang-Dong case, found no problems in the command relationships established for it; Struble, however, the carrier admiral, intended to see that things were different for the next amphibious operation.

Operation CHROMITE

As is now well known, MacArthur did get his landing at Inchon. The earlier BLUEHEARTS plans, shelved because of the deteriorating

ground situation for the Eighth Army and the lack of appropriate amphibious forces, were pulled down and fleshed out once the perimeter at Pusan had finally been largely stabilized—with the essential assistance of the 1st Provisional Marine Brigade, which arrived in mid-August.

By 23 July, by pulling together available operational, intelligence, and logistic data, MacArthur's assistant chief of staff for operations, Brigadier General Edwin K. "Pinky" Wright, and his staff in what was known as the Strategic Planning and Operations Group within Commander in Chief, Far East (CINCFE) headquarters, "had worked up three possible variants for a September landing which, in the form of draft plans, he circulated to the Far East Command staff."[25] One plan contemplated Inchon, one Kunsan, and the third Chumunjin (on the east coast). MacArthur elected to stay with Inchon, and he issued his Operation Plan 100-B on 12 August. The assault was set to go forward in mid-September, for three reasons: the assault forces required would not be available until then; the offensive had to proceed before the nasty Korean winter set in; and Inchon's tides restricted amphibious operations to only a few days each month (after mid-September, the next adequate tides would not occur until 11 October).

Organization and Command of the Landing Force. What forces would make the assault? The Eighth Army's units (the 24th and 25th Infantry Divisions and 1st Cavalry Division) were occupied in the Pusan perimeter. The Army's 3d Infantry Division would not arrive from the United States quickly enough.

In June 1950, the Marine Corps had no units of any size in the Far East, and consequently there were no trained amphibious troops immediately available to MacArthur. Fleet Marine Force Pacific, headquartered at Hawaii, consisted only of the grossly undermanned 1st Marine Division at Camp Pendleton, California. The 2d Marine Division, on the Atlantic Coast, was similarly understrength. The 1st Provisional Marine Brigade—cobbled together from elements of the 1st Marine Division, principally the 5th Marine Regiment and Marine Aircraft Group 33—had sailed for Japan on 14 July. It comprised 463 officers and 6,109 enlisted (plus 42 naval officers and 179 sailors), leaving only about thirty-five hundred FMF personnel at Camp Pendleton. It went into the line at Pusan on 2 August.

On 25 July, the Joint Chiefs of Staff (JCS) finally approved a request by MacArthur on 10 July for a war-strength Marine division (less one regimental combat team, or augmented regiment). The Marine Corps had been authorized on 19 July to call up its reserves; Marine security forces throughout the United States were reduced 50 percent; on 27 July, Congress authorized extending all Marine enlistments expiring prior to July 1951; and authority was granted to redeploy units of the 2d Marine Division to the 1st Marine Division. The latter was to sail for the Far East between 10 and 15 August, incorporating the 1st Provisional Brigade on its arrival. Ultimately, the division would comprise about fifteen thousand officers and men. In building up the new division, the new commanding general, Major General Oliver P. Smith, gave initial priority to divisional units over attached supporting elements, and within the division, to combat units. The provisional brigade had taken most of the division's standard thirty days' worth of stores and equipment when it sailed. The requisite additional supplies were delivered under urgent deadlines from a variety of sources, including the Barstow, California, supply facility and Camp Lejeune, in North Carolina.[26]

The 1st Provisional Marine Brigade was to be pulled out of the Pusan perimeter prior to the Inchon operation and revert to its prior identity as the 5th Marines. The 1st Marine Regiment would make it to Japan in time for the operation; the 7th Marines, being assembled from units scattered across the planet, would not. Thus, the Marines would land two regiments in the assault at Inchon. Who would make the follow-on landings? Only the 7th Infantry Division remained in Japan. It would come in the second and third-echelon shipping.

Who would command the troops for Inchon? MacArthur did not like the Eighth Army commander, Lieutenant General Walton Walker, nor was he even remotely satisfied with his performance to date. It seems likely that MacArthur's sentiments were reciprocated by Walker, exacerbated by a standing antipathy between Walker and Almond, MacArthur's chief of staff.[27] Walker's famous "stand or die" pronouncement to the Eighth Army had followed a private conference with MacArthur (Almond was the only other person in attendance) on 27 July, during which CINCFE had upbraided him. MacArthur's confidence in Walker had not improved since that discussion, and he was contemplating relieving him. It seemed unlikely,

therefore, that the amphibious end-around would be placed under Walker's command. Who, then?

On 15 August, MacArthur directed Almond to head a special planning group that would prepare the basic plans for, and constitute the nucleus staff of, CHROMITE.[28] It became known as Force X, with MacArthur loyalist Major General Clark Ruffner as chief of staff and Marine colonel Edward Forney, of Mobile Training Team Able, as

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Trust is an important lubricant of a social system.
Kenneth Arrow, Nobel laureate in economics

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deputy chief of staff. Forney's personnel came with him to Force X, so at least some there knew about the actual execution of amphibious operations and had relationships with the Amphibious Group 1 and 1st Marine Division staffs.

Force X worked up a plan for a separate corps, to report directly to CINCFE until such time as the Eighth Army had made contact with it following the landing; it would then revert to Eighth Army control. Were the arrangement accepted, who would command this independent corps? Because Inchon was primarily an amphibious operation and a highly risky one at that, it made considerable sense for MacArthur to appoint someone with substantial combat experience, especially in that discipline. Further, a corps-level command rated a lieutenant general. Given MacArthur's predilection for choosing subordinate commanders well known to him, that individual would almost certainly come from his circle of personal acquaintances.

The first criterion suggested a Marine general officer; the second profoundly limited the number of possibilities, the most likely being Lieutenant General Lemuel C. Shepherd, then Commanding General, Fleet Marine Force Pacific. MacArthur had met and spoken with Shepherd on 10 July regarding getting Marines into the Far East, and evidently they had got on well. Shepherd had been assistant division commander of the 1st Marine Division under MacArthur's overall command for the Cape Gloucester operation in World War II. Shepherd certainly was available—his FMF post was administrative. Moreover, by all accounts he wanted an active role at Inchon, not only for personal professional reasons but in the interests of the Marine Corps.[29]

However, several days (the exact date remains uncertain) after Force X began its work, Almond had occasion to speak with MacArthur regarding logistics issues, and in their conversation the question of a designation for the landing force came up; MacArthur decided that it would be called X (that is, Tenth) Corps. Almond inquired as to who would command X Corps, for he believed it essential that whoever it was become involved immediately in the planning. MacArthur replied that he would think it over and let Almond know later in the day. When they met again, MacArthur told Almond: "It's you."[30]

One may reasonably question this choice over Shepherd. Almond had no amphibious experience and precious little as a combat commander, and Inchon was one of the most complex amphibious plans in history. Several factors plausibly account for this selection, however. First, Almond had loyally served MacArthur as his chief of staff and was the officer personally closest to him. It may have been simply a matter of rewarding a subordinate, and in any case it was MacArthur who would hold the reins.[31] Second, MacArthur's principal focus was not the actual amphibious assault but the subsequent land campaign, especially the capture of Seoul. MacArthur's World War II experience in the Southwest Pacific had included no amphibious assaults of the type that had characterized the Central Pacific; his landings had been but prefaces to the main efforts. Finally, the potential political difficulty of designating a Marine general officer to command Army troops in combat, in light of the imbroglio that had followed Holland Smith's relief of Ralph Smith on Saipan in 1944, may have played a part.[32]

Whatever internal conflict MacArthur may have felt over appointing Almond to command X Corps was probably erased during Shepherd's second trip to Japan. On 24 August, Shepherd communicated to both Admiral Sherman in Washington and Almond his "grave concerns about the hazards and loss of life that would ensue if Inchon was found to be strongly defended at the time of landing"; he "strongly recommended" an alternate plan he had proposed for a landing farther south.[33] Later that day, Shepherd met with MacArthur, who turned on his famous charm and asked him to join his staff as an advisor for the operation. Shepherd wisely demurred, recognizing that such an appointment "carried considerable responsibility, but no authority or command; that in my position as CG, FMFPAC, it

would be somewhat embarrassing if my counsel was not followed as had been the case in recent discussions of the proposed landing." He proceeded to reiterate his concerns about Inchon and to expound his alternate plan. After a thirty-minute disquisition on the merits of Inchon, MacArthur told Shepherd that "he wished he could give me command of the Corps, that if he had not already given it to Almond he would do so; that at a later date he would give me a comparable command."[34] In the event, Shepherd went to Inchon as an "observer" aboard *Mount McKinley*.

Conflict between Almond and Oliver Smith at the 1st Marine Division began almost immediately, as the usually taciturn Marine noted in his personal log on 22 August 1950:

> At 1730 I reported to GHQ in the Dai Ichi building and found only Captain Ladd, General Almond's Aide. To get to the inner sanctum it was necessary to pass at least a dozen of the palace guards. The sentries near the office were armed with rifles at fixed bayonets and presented arms. After about an hour and a half, General Almond, GHQ Chief of Staff, arrived. He is to be the Commanding General of the new X Corps of which the First Marine Division is to be a part. The first impression of General Almond was not very favorable. He was supercilious in manner. He discussed the forthcoming operation with me. I voiced the objections noted above. With a wave of the hand he said there was no organized enemy anyway, that our difficulties were purely mechanical, and that the date was fixed. Then he questioned me as to my command experience. He insisted upon calling me "son."[35]

At the briefing on CHROMITE held at general headquarters the next day, Smith found the "usual general staff form of briefing, correct as to form, but having nothing [in] particular to do with reality. For instance, for the crossing of the Han River, the Engineer admitted he did not have the bridging material, but the matter was brushed off by stating that the crossing of the Han River presented technical difficulties which were under continuing study. . . . The task assigned the First [Marine] Division did not have much relation to our capabilities, particularly the latter phases of our task." (After attending a second briefing at GHQ, Smith would resolve in the future to send his G-2 [staff operations officer] instead.)

At the first briefing, Smith urged that the 1st Provisional Marine Brigade be brought out of Pusan to join his division for the assault. He "was informed that relief of the Brigade from combat would be bad for the morale of the Eighth Army and would disclose our plans. I was also informed that relief of the Brigade from combat would be dependent on the tactical situation." Also, because the 7th Marines could not possibly arrive before 0300 on the landing day, the regiment was "manifestly not available." From Smith's perspective, this "indicated a total lack of appreciation of the problem." Other issues included the precise locations where the division would go ashore at Inchon (X Corps plans called for it to make all landings in the dock area, something Smith wished to avoid if at all possible) and the extent of prelanding naval bombardment—the Army, along with Joint Task Force 7 (below), wanted only the minimum, in order to maintain surprise.

Ultimately, on 3 September, because Walker was still loath to release the Marine brigade (now once again the 5th Marine Regiment) from Pusan, a conference was held in Almond's office. "There was a rather heated discussion in which Admiral Joy tried to pin down General Almond on making the 5th Marines available." Almond announced that the 32d Infantry of the 7th Division would be substituted if the 5th was not made available. Called on for his opinion, Smith

> told General Almond frankly that in complicated amphibious operations such as the one we were to engage in, last minute substitutions could not be made; that it was unfair to the troops so substituted; that if the substitution were made, I would call off the Blue Beach landing and give the mission of the 5th Marines to the 1st Marines, and have the 32nd Infantry follow in. [I] told General Almond, however, that to make this change would be going beyond the point of a considered risk.[36]

The impasse was resolved by a suggestion from Struble that the 5th Marines be pulled out of the line at Pusan and sent to Inchon, with a 7th Infantry Division regiment to remain on board ship as a floating reserve for the Eighth Army.

After the landing, Almond would become anxious to be able to declare Seoul in United Nations control by 25 September—exactly

ninety days after the North invaded the South—for symbolic reasons; he believed that the Marines were moving too slowly. Almond then proposed to Smith that the 1st Marines make an enveloping movement against Seoul from the southeast. Smith declined on the grounds that he did not wish to separate his forces or have them come into Seoul from two opposite directions. He believed that the North Koreans would defend Seoul street by street and that it was wiser to keep the Marine units concentrated. This, of course, was close to refusing an order, and it was not conducive to good command relations.[37]

Moreover, Almond would on several occasions bypass Smith in the chain of command, speaking with and issuing orders to units at the regimental level. On 24 September, Smith commented that he "had already had one instance where General Almond had given direct orders to [Colonel Lewis] Puller [commanding the 1st Marines]. I told General Almond that I would appreciate it if he would not give orders direct to my regimental commanders, that if he would issue his orders to me, I would see that they were carried out." When they discussed the matter in private, Almond "denied that he had given direct orders to the regimental commanders. I told him the regimental commanders were under that impression. There the matter rested."[38] For his part, Almond later commented that

> his action was that of a commander who wants to succeed by coordinating his troops as much as possible. I always announced in advance, in both World War II and Korea, my intention to visit such and such units and I usually expected the CO [commanding officer] to be present. What I found out, especially in the case of General Smith, was I could go to the front line and find out for myself the conditions that existed more rapidly than I could get them through division headquarters.[39]

It is tempting to write off conflicts between Almond and Smith as simply an unfortunate clash of personalities, as a manifestation of the distrust between the Army and Marine Corps, or as reflecting their different organizational viewpoints. All these factors undoubtedly played a part, but four other elements also deserve consideration.

Three relate to professional experience and expertise. First, Almond was a staff officer in an organizational culture emphasizing

and rewarding in-depth staff work; Smith had far more combat experience than Almond and lived in a milieu emphasizing and rewarding operational results. Second, Almond had no amphibious experience or expertise, whereas Smith had a great deal of both. These two elements led to fundamental conflicts about the structure of military problems and their appropriate solutions; Almond tended to stress schedules and paper plans, treating them as equivalent to the actual situation on the ground. Third, what combat experience Almond possessed (his World War I machine-gun battalion and, in World War II, 92d Division command) had taught him that precise coordination from the top was vital, that subordinate units could not be trusted to carry out their assignments without close direction. MacArthur's penchant for focusing on the broad canvas and leaving "details" to his subordinates created a permissive condition for Almond's modes. Fourth, where practical constraints conflicted with Almond's understanding of CINCFE'S objectives, Almond pressed for the latter, behavior that someone less personally and professionally tied to MacArthur might not have displayed.

Another substantial conflict, between Almond and Major General David Barr, commanding the 7th Infantry Division, cannot be dismissed as interservice rivalry or as a matter of differing cultures. Ironically, Barr's reputation was as a "brainy staff officer," not as a battlefield commander. Still, Barr was "highly annoyed by Almond's driving intensity, dictatorial manner, and brashness and had such doubts about his battlefield competence that he asked Almond to find someone else to command the 7th Division at Inchon." For his part, Almond saw Barr as a liability. A staff officer of X Corps thought Barr "an inept, vacillating commander who exasperated General Almond continuously[;] . . . only their long friendship kept him from being relieved by General Almond."[40] Barr felt unable to refuse (as Smith had) Almond's directive to take the 32d Infantry in the enveloping movement against Seoul; nonetheless, when Almond ordered Barr to attack at night, Barr by his own admission "didn't put much effort into it." On the other hand, Barr had great respect for O. P. Smith and found Marine Corps amphibious operations "unsurpassed, near perfection."[41]

Command of the Attack Force. How would the attack force and other naval forces at Inchon be organized? Who would command them?

MacArthur was less immediately concerned about this command structure than with that of the landing force, and he appropriately left it to the Navy. That, however, did not make the matter effortless to resolve.

Struble, of the Seventh Fleet, was anxious to command the overall naval portion of the operation, and he set to work toward that end. He believed that a command structure different from that at Pohang-Dong was required, because CHROMITE was an "*invasion*, not a mere division landing." Joy, his superior as Commander, Naval Forces, Far East was less enthusiastic about that prospect, and a series of communications ensued among flag officers at the highest levels.

On 29 July, Admirals Sherman in Washington and Joy in Japan discussed by telex conference the prospective command organization and resulting flag officer requirements.[42] As Sherman later summarized the conversation to Admiral Radford, commanding the Pacific Fleet, the two discussed the idea of placing a new echelon between COMNAVFE and the Seventh Fleet commander. Sherman refused to make "Struble subordinate to anyone junior to Joy [but] would concur in giving him higher responsibilities under Joy and letting aviation flag officers handle fast carrier forces. . . . Will consider personalities and comment further by despatch."[43] Of this, Sherman advised Joy only that he "had communicated to Radford the highlights of our . . . telecon [telephone conversation]."[44] Sherman had effectively interceded for Struble, his protégé, to ensure that he would command all naval forces at Inchon.

MacArthur issued orders for CHROMITE on 20 August. By the 22d, Joy had in turn prepared a directive to the Seventh Fleet, but he had to wait to issue it until he received MacArthur's directive to him. Struble was advised informally by Joy on 25 August that he would command the naval forces at Inchon. On the 26th, Joy proposed to Radford (copy to the Chief of Naval Operations) that in light of the prospect of future operations he consider sending the commander of Pacific Fleet amphibious forces with his operational staff to the Far East Command in a command ship (specially outfitted, like *Mount McKinley*, with the extensive communications suite required to control amphibious assaults).[45] The next day, Radford sent to Joy (Sherman as information addressee), "It is my understanding [from prior] conversations with you that two amphibious groups under

direction [of Commander] Seventh Fleet could adequately take care of future operations from an amphibious standpoint. If an additional flag officer is needed for planning and/or control of future amphibious operations[, I] request that you make recommendations and outline the organization that you desire."[46] Joy replied that indeed he meant simply to request a second amphibious group commander and staff.[47]

Three days later, Joy sent a message to Sherman (copy to Admiral Struble) inquiring as to whether under Navy Regulations he had the authority to "designate second in command of a joint [multiservice] task force. If not[, I] request authority [to] designate Rear Admiral James H. Doyle as second in command to Vice Admiral Struble for coming operation."[48] The response came from the Secretary of the Navy later that day (copies to Radford and Struble): "You are hereby empowered to make details in command of a task force or other task command as is authorized for a commander in chief by Article Thirteen Forty Five Navy Regulations. This includes the authority requested in your 310349Z to CNO."[49]

Struble was formally appointed the overall commander at Inchon following the approval of the operation by the Joint Chiefs of Staff on 29 August. He had given some thought to the name for the organization; he decided on "Joint Task Force 7," communicating that name to Joy orally (probably on 27 August).[50] As Commander, Seventh Fleet, Struble had authority over no elements outside that fleet; as Commander, JTF 7, however, he controlled all units of the seaborne invasion, including Task Force 90 and X Corps—"and any military man should recognize the soundness of central command for such an operation." Struble "did not discuss the command relations with MacArthur, Almond, or the staff, because [he] had not made up the command part of his plan. Later [he] told Almond and informed him of [the planned] turnover from Joint Force Command to Com. General X Corps when he had established himself ashore."[51] Of course, given the forces and command personnel available, there were few other options for that critical aspect of command planning.

Struble believed that he followed a hands-off policy on day-to-day planning for the operation: "I could have had twice-daily conferences to review, etc., but *did not*. I had confidence in Doyle [CTF 90 and Commander, Amphibious Group 1] and Smith [1st Marine Division] and made the decision to tell them to proceed. I also made it

clear that on certain phibgroup [amphibious group]–marine views I did not agree and told them what we would do on such subjects." Struble later commented that "many of the elements of the phibgroup advanced planning were accepted and included—certain phibgroup-Mardiv [Marine division] ideas were not accepted—After my first complete meeting with Doyle and Smith I outlined to them the items that would be in my plan when issued and told them they could come to me at any time for further decision." In fact, the Amphibious Group 1 and 1st Marine Division staffs had worked on their plans together, on the basis of verbal directives from MacArthur through Joy, until at least 26 August.

Although formally Struble reported to MacArthur through Joy, it appears that his status as a joint task force commander gave him direct access to MacArthur, without going through either Joy or Almond: "As CJTF-7 I had a right to talk to MacArthur and did. Vis-à-vis highly important decisions if I couldn't make them myself—I would have included Joy in such a discussion. I did not use back door tactics." At the same time, Struble "did not at any time during this period ask MacArthur for any decision."[52]

The CHROMITE command arrangement not only suited Struble as a resolution of his conflicts with Doyle and Joy but gave the Navy a mechanism for dealing with its conflicts with the Army and the Air Force. The assault landing force (the 1st Marine Division) would remain under Doyle's command until its proper commander, Smith, established himself ashore. Smith in turn would command the follow-on force (elements of the 7th Infantry Division), while himself reporting to Struble. Thus, X Corps would effectively remain under Struble's control until Almond's command post was established ashore, when Almond would take it over, working directly for CINCFE. In essence this followed standard amphibious doctrine, although in a two-tiered fashion.

A principal point of dispute between Doyle and Smith, on one side, and Struble on the other was the extent of prelanding naval gunfire support to be provided. The two former commanders wished for up to ten days of gunfire; Struble would agree only to two days. Struble's view prevailed. As to who would control the gunfire support, recollections differ. Struble later contended that he retained control of the gunfire plan, believing that the decision as to its duration required thorough planning; his operation plan "placed the

surface bombardment force under Doyle so he could coordinate the gunfire plans with phibgroup and mardiv planners. He was to submit two courses of action to me for my approval. . . . [He] never reported on these plans and requested that the gunfire force not be placed under his command. I then placed [Commander, Cruiser Division] 5 directly under me, and told him to prepare plans, consulting with phibgroup and mardiv. I retained command and control of these plans and their execution."[53] Doyle would remember things differently: "I have no recollection of asking Struble not to place the gunfire support group under my command and cannot imagine that I did so. . . . [T]he fire was controlled by me in the *Mt. McKinley*."[54]

As with that between Almond and Smith, it is tempting to explain the conflicts between Doyle and Struble principally in terms of personalities. Certainly, they were no more than professionally civil to one another. There also appears to have been competition as to who would be remembered by history as *the* amphibious officer in Korea.[55] Some friction was undoubtedly generated by their respective positions in the operation, which led to different imperatives. More significantly, however, the two officers had come from distinctly different World War II amphibious cultures: Struble from Europe and the Southwest Pacific, Doyle from the Central Pacific. The former was used to working with, and largely under the control of, the Army; the latter was accustomed to the Marines, with the Navy dominating planning and operations. Finally, one supposes that Doyle, having managed the Pohang-Dong landing under his preferred command structure, now chafed under a new command setup that he did not want but had to accept.

Ultimately, a second amphibious group was sent to the Far East Command—Amphibious Group 3, under Rear Admiral Lyman Thackrey. Rather than give it a status equal to that of Amphibious Group 1, and Thackrey organizational equality with Doyle, Group 3 was made a task group within Task Force 90, under Doyle. It was to control shipping and unloading at Inchon after the assault phase, freeing Group 1 to focus on planning future operations.

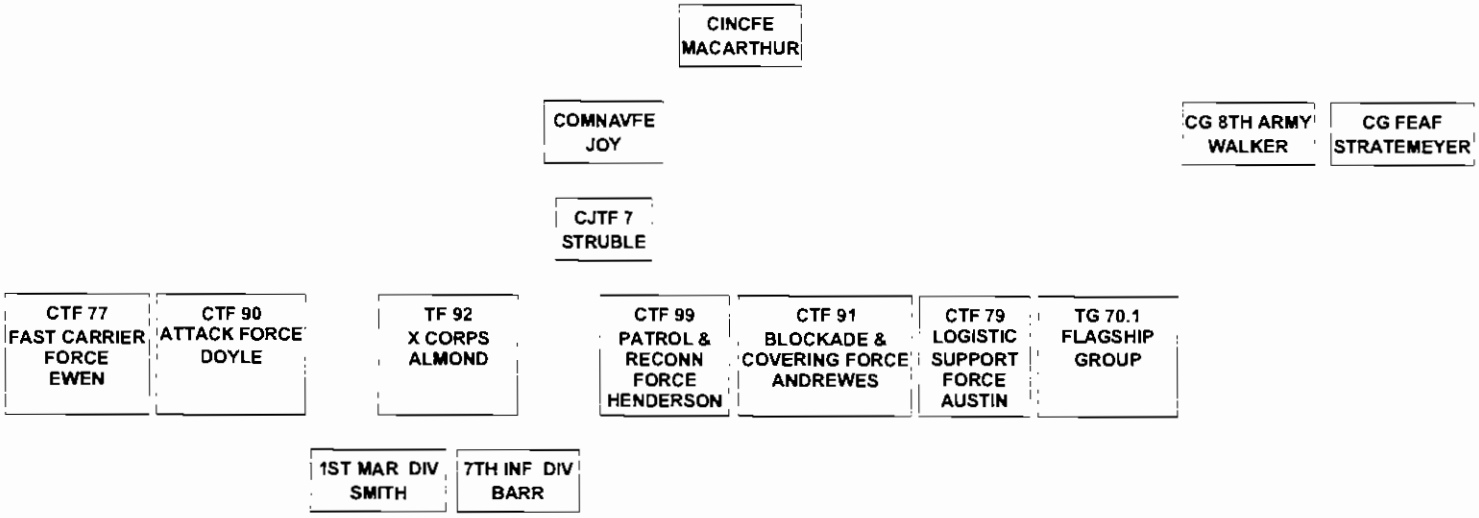
At about this time, Admiral Sherman made a decision that reflected concern about the capacity of Vice Admiral Joy and his staff to handle the burdens imposed by the Korean War, burdens that had been unanticipated in the post–World War II allocation of responsibilities. Joy's staff was small, intended for occupation duties, and

Joy's World War II experience had been limited to cruiser fire-support units. Sherman also had lingering doubts about the Inchon operation itself. His answer was to augment Joy's staff. Consequently, on 28 August, following his return from a visit to Tokyo, he summoned Captain Arleigh Burke (whose World War II record was distinguished but whose career had nearly ended in the defense-unification struggle) to his office and asked him to report to COMNAVFE as his deputy chief of staff—"as a senior officer to advise him and take charge of the headquarters' wartime responsibilities." Sherman had another agenda as well: he wanted Burke to "send a personal radio dispatch to me directly at least once each day. I want you particularly to study the plan for this upcoming Inchon assault. If you think it likely to fail, let me know and I can block the operation." To that end the Chief of Naval Operations offered Burke a box with code wheels for enciphering those dispatches—Sherman would have the only matching set of wheels. A man of exemplary character, Burke agreed to go to Tokyo and send Sherman the reports, but none that he had not previously shown to Joy; if Joy had not concurred, Burke would transmit "another dispatch stating why Admiral Joy disagreed with my report and what I think of his objections."[56] Sherman acquiesced, and Burke departed for Tokyo, arriving on 3 September and plunging immediately into the pile of plans, orders, and dispatches related to the impending operation.

Struble issued his Operation Plan 9-50 on 3 September 1950. Copies went, of course, to Joy and MacArthur, and "neither objected to the orders in the plan nor the command lines established, though they had about two weeks to do so if they wished." Doyle had already issued, the day before, his CTF 90 Operation Order 14-50 for the landing. Figure 3 shows the overall command organization for the Inchon landing.

There was also the matter of Air Force participation in the assault at Inchon—for which neither sea service had any enthusiasm. The Far East Air Force had, since the beginning of hostilities in Korea, sought to bring all land-based aircraft under its direct control—especially the Marine aircraft group that had arrived with the 1st Provisional Marine Brigade, but also naval aviation. This the Navy and Marines had successfully resisted. Struble now "declined both local fighter and B-29 assistance from the Air Force because [he] felt that naval air units assigned were better for the specific job in

Figure 3
Overall Command Organization
Inchon Landing, 15 September 1950



hand"—that is, that Navy and Marine aviators were experts in air-ground support operations, and the Air Force was not. Also, of course, excluding the Air Force would preclude interservice conflicts over air priorities during the operation. In consequence, what was from the Air Force viewpoint essentially a "no-fly zone" was demarcated around the Inchon area, inside of which naval aviation had responsibility, and outside of which the Air Force was free to engage targets.[57] The fast carriers of Task Force 77, commanded by Rear Admiral Edward C. Ewen, would distribute about 40 percent of their aircraft sorties over Inchon-Seoul targets, with the remainder evenly split between targets north and south of the area. Close air support on D day was to be provided from the escort carriers (smaller and slower ships, built in World War II on freighter hulls) of Task Group 90.2. The 1st Marine Aircraft Wing—much to the chagrin of the Far East Air Force—remained directly responsible to X Corps, as its Tactical Air Command, under Major General Field Harris, USMC.

In the next several days, Burke worked with Joy's staff on a plan to support the landing, reversing "the usual procedure of the top command's issuing a general plan to the lower echelons for working out details; instead, Burke and his colleagues worked out a ComNavFE plan based on those of Doyle and Struble. ComNavFE's responsibility would be coordination of the 71,000-man landing force and the hastily assembled 230-ship international fleet that would transport and support it."[58] Burke worked effectively within the COMNAVFE staff and unquestionably added to its expertise and capacity.

Unfortunately, Doyle and Almond failed to work well together. Two days before the 23 August conference in Tokyo, Doyle had told Almond that he must brief MacArthur on the details of the Inchon landing; Almond had responded that MacArthur was not interested in details. Doyle insisted that CINCFE must be made aware of them in order to make his decisions, and Almond only reluctantly agreed.[59] Whether the difficulty began only at this time or had existed before, it continued unabated through the later Hungnam evacuation. Much of Doyle's problem with Almond stemmed from the same source as Smith's—disdain for Almond's professional experience and judgment, as manifested in decisions Doyle found imprudent. Clearly Doyle also did not care for Almond personally, though this would not have mattered had he respected him.[60]

In contrast, Doyle and Smith worked extremely well together, quickly becoming friends and remaining so in the decades following the war. Each had the highest respect for the other's professionalism and expertise, and they developed the utmost confidence and trust in each other. This was facilitated by their (and their staffs') close physical proximity aboard *Mount McKinley*. Moreover, Doyle and Smith shared antipathies toward Struble and Almond, based on similar judgments of their expertise and characters. Consequently, Doyle, Smith, and their respective staffs worked together quickly, efficiently, and informally in the planning for Inchon. This in turn established a solid foundation on which the work for the next operation might proceed.

***CHROMITE*—*the Event*.** As history was to record, and Major General Smith commented in his personal log on the evening of 15 September, D day went "about as planned."[61] The preinvasion bombardment took its toll on the enemy; the assault against Wolmi-Do, a critical island commanding the main beach, commenced at 0630 on D day against moderate opposition, concluding by 0807. The main landings began at 1730 on D day. At 1800 on the next day (known as D+1), Smith established his command post ashore and assumed command of the landing force. General unloading had begun earlier that day. Second-echelon shipping, with the 7th Division embarked, arrived and commenced unloading on D+2; Commander, Amphibious Group 3 was designated to coordinate the evolution. At 1800 on 21 September, Major General Almond assumed command of all forces ashore in the objective area. Joint Task Force 7 was duly dissolved, control of its naval forces reverting to the Seventh Fleet. COMNAVFE had had little work to do—no coordinating had been required; Joy and Burke had remained at their command post in Tokyo, listening to the radio traffic.

Speaking to Rear Admiral Doyle years later, Major General Smith was less phlegmatic: "The only thing remarkable about this landing was that it was miraculous."[62] But to Doyle, it had been no miracle. In his 1950 report to the Pacific Fleet Evaluation Group, he remarked:

> The assault itself was successful only through the perfect teamwork that existed between the participating naval and marine elements.

> The successful accomplishment of the assault on Inchon demanded that an incredible number of individual and coordinated tasks be accomplished exactly as planned. Only the United States Marines, through their many years of specialized training in amphibious warfare, in conjunction with the Navy, had the requisite knowhow to formulate the plans within the limited time available and to execute those plans flawlessly without additional training or rehearsal.[63]

It is fair to say that the virtually perfect planning and execution of the Inchon operation occurred *despite* rather than *because of* the command relations in place. Probably, they were achievable only because of the high degree of professionalism and the practical World War II service of the Navy and Marine commanders and their staffs. Aside from CINCFE'S basic vision and the formal naval command relations established by Struble, substantive planning proceeded through the lower echelons (Amphibious Group 1 and the 1st Marine Division), whose plans and orders dominated those issued at the higher echelons—some of which were backdated, because the directives below them were officially pursuant to them. As the commander in chief of the Pacific Fleet observed,

> the planning at attack force–landing force level was ideal with the two staffs planning together in the same ship *(Mt McKinley)* in Tokyo, facilitating rapid resolution of problems and decisions. . . . [However] X Corps plans, formulated with assistance of Marine TTU [Troop Training Unit, containing Mobile Training Team Able] officers on loan to the Corps commander, were late in initiation as a result of the late formation of Corps staff and its inexperience in amphibious planning. The troop planning sequence was, as a result, quite unorthodox and the reverse of [the] normal sequence with the corps plan being predicated on and promulgated after the landing force plan.[64]

Moreover, as Admiral Radford found, command relationships were not entirely satisfactory in the execution phase. The problem was the physical separation of Struble and Almond. Struble was embarked on his flagship, the cruiser *Rochester*, but both MacArthur and Almond had elected to embark on *Mount McKinley*—the rationale being lack of space for staff aboard the heavy cruiser. This overburdened communications on the AGC and "caused many of the relationships

functions of CJTF [Struble] with X Corps [Almond] to devolve on Commander Attack Force [Doyle]."[65]

Struble, however, found no fault in the command relationships for the operation, noting afterward that

> the classic amphibious command structure as outlined in USF 6 [naval amphibious doctrine publication, 1952] was followed in the Inchon operation. The soundness of the command structure was again demonstrated. I recommend against any change solely for the sake of change, or for the purpose of satisfying preconceived but unproven notions. The existing command structure was evolved as the result of battle experience; let evolution dictate changes.[66]

One might conclude Struble was attempting to stave off potential problems with other services, but in fact he was worried about reversion to the naval command structure that obtained at Pohang-Dong.

Operation TAILBOARD

The Wonsan landing, Operation TAILBOARD, was conceived before the Marines who went ashore at Inchon were in control of Seoul. MacArthur expected that the North Koreans would head north along the east coast once they became aware of the landing at Inchon, and as the Eighth Army began its breakout from the Pusan perimeter; a landing at Wonsan would cut off the retreating North Koreans. On 27 September, MacArthur received permission from the Joint Chiefs to cross the thirty-eighth parallel, permission he had requested in the belief that the apparent defeat of the North Korean People's Army and the unlikelihood that the Chinese would enter the war had created an opportunity to reunite Korea. (Preliminary Joint Chiefs and presidential approval had been communicated to him as *Mount McKinley* headed to Inchon.) In the rush of optimism following the success of CHROMITE, MacArthur was confident that the war would be over by Christmas.

Operation TAILBOARD was ill starred from conception. First of all, X Corps was not absorbed into the Eighth Army when, on 26 September at Osan, the two forces linked up. Walker and his staff had assumed that it would be and that Almond would return to Tokyo as CINCFE chief of staff; Almond had apparently thought the same.[67]

Walker's staff had presumed that Almond would be replaced by a "new corps commander, compatible with and willing to take orders from Walker." This merger, they believed, would improve coordination and control of United Nations forces in Korea by establishing a central command closer to the battlefield. Walker further assumed that X Corps would move northwestward in pursuit of the NKPA (North Korean People's Army) and, supplied through Inchon, would move on Pyongyang and Chinnampo, finally striking eastward to Wonsan. At the same time, I Corps of the Eighth Army would move northeast from Seoul toward Wonsan, supplied through Pusan initially and through Wonsan once that port was taken. These objectives accomplished, the Eighth Army would move northward, picking up two more ports, Sinanju on the west coast and Hungnam on the east.[68]

MacArthur had other ideas. X Corps would remain independent and be withdrawn from the Seoul area—the 1st Marine Division would reembark at Inchon, and the 7th Infantry Division would move by rail and truck to be loaded onto shipping at Pusan. Both would land at Wonsan, from where they would attack westward toward Pyongyang. The Eighth Army, having moved into the Seoul area, would continue toward Pyongyang. This plan essentially replicated, farther north and with the "map reversed," Operation CHROMITE; it was intended to complete the destruction of the NKPA.

Moreover, MacArthur envisioned the triumphant entry of a still-independent X Corps into Pyongyang, much like that into Seoul. This would simultaneously reward Almond and withhold acclaim from Walker, whose Eighth Army, MacArthur believed, had performed inadequately in breaking out from Pusan during CHROMITE, while X Corps had shone.

But how were the two commanders in the field to relate to each other? Clearly, Almond could not serve under Walker. One solution would be to make Almond commanding general of the Eighth Army and send Walker into retirement, but this would have political costs. MacArthur elected the temporary palliative of maintaining X Corps as an independent unit—the war was nearly over, from his perspective, in any case.[69] Given these premises, it was probably not unreasonable to continue the same formal command relationships that had obtained for CHROMITE, which was virtually a template for all other aspects of the new operation as well.

MacArthur formally announced his intention to land X Corps at Wonsan on 1 October; X Corps issued its Operation Order 3 that day, replacing it on 4 October with Operation Order 4, which was revised on 10 October. The planning process for Wonsan, practically a duplication of that for Inchon, had already been proceeding step by step with it. CINCFE Operational Plan 100-D had been promulgated on 11 September, under Almond's name; it envisioned landings in the Chumunjin area of Korea's east coast, predicated on the assumption that the Inchon assault had been successful. On 15 September, even as the 1st Marine Division was assaulting Inchon, COMNAVFE had issued his Operation Plan 112-50 for planning purposes;[70] Joy had based it on CINCFE's Operational Plan 100-D and on the second revision of his own earlier Operation Order 5-50, his general operating order. On 26 September, MacArthur had directed his Strategic Planning and Operations Group to develop a more detailed plan for operations north of the thirty-eighth parallel. The following day, on which CINCFE received approval from Washington, his staff presented Operations Plan 9-50, with Wonsan as the objective. On 29 September, following ceremonies in newly recaptured Seoul, MacArthur outlined its basic features to his subordinate commanders (Walker, Almond, Joy, and Stratemeyer) and set the landing date for 20 October.

Joy, supported by his deputy chief of staff, now–Rear Admiral Burke, "flatly urged that the plan be scrapped, in part because of his growing belief that Wonsan harbor might be heavily mined." He later commented that "none of us in COMNAVFE could see the necessity for such an operation since the 10th Corps [*sic*] could have marched overland to Wonsan in a much shorter time and with much less effort than it would take to get the Corps around to Wonsan by sea"—because the two available embarkation ports, Inchon and Pusan, were already overtaxed by the supply needs of the Eighth Army.[71] Joy made his objections known to Major General Doyle Hickey, then the CINCFE chief of staff. Hickey was sympathetic but responded that the "General had made up his mind about the landing and there was no use trying to talk him out of it."[72] Struble, for his part, would later comment that "certainly the place for the blow after Inchon, and the strategic place for it, was Wonsan. Whether, from a transportation angle, one or both of the divisions embarked might better have been sent up by road is certainly an Army and a

ground force decision, that is hardly up to the Navy to get into."[73] In other words, Struble was of no help to the landing force commanders on the issues of most concern to them.

Consequently, on 3 October Major General Smith of the 1st Marine Division, though he had not been given much detail on the X Corps plan, established a tentative organization for the landing force, with the 1st and 7th Marines in the assault, two battalions each. Two days later, Struble issued his Seventh Fleet Operation Order 16-50, for preliminary operations, stipulating that the assault was to be conducted by a reconstituted Joint Task Force 7. On 8 October, Joy made his Operation Plan 113-50 (a revision of 112-50, issued 15 September) effective for operations. On 9 October Struble issued his final plan—COMSEVENTHFLT Operation Plan 10-50, reestablishing JTF 7. Doyle issued his COMPHIBGRU 1 Operation Order 16-50 on 15 October.

Thus, Almond would command X Corps, again comprising the 1st Marine Division and 7th Infantry Division. Struble would again command Joint Task Force 7, made up of the Seventh Fleet (including Task Force 90, its amphibious element), the landing force, and additional auxiliaries. Doyle, as CTF 90, would be the attack force commander. As at Inchon, once Smith established his command post ashore, command of the landing force would revert to him. Similarly, when Almond established his command post ashore, command of X Corps would revert to him, and Task Force 7 would again be dissolved.

COMNAVFE, through CTF 7, would control all air operations in the objective area—"within a line run inland from Kosong to the southern end of the Korean Gulf, north along the mountain spine, and eastward to enclose Hungnam."[74] Navy and Marine aviation would provide air support, with Far East Air Force to be involved if requested in an emergency by the commander in the objective area. However, unlike at Inchon, CTF 7, when relieved, was to turn over command of all land-based air (that is, the 1st Marine Aircraft Wing) to the Commanding General, Fifth Air Force.[75] Also, unlike for Inchon, the Advance Force (including the minesweepers) and the Escort Carrier Group were separated from the Attack Force, a decision that spread the planning load across more staffs—easing the burden but increasing the problem of coordination.

A conference had been held on 30 September at X Corps headquarters in Ascom City (a quonset-hut facility established by the Army Service Command three miles from Inchon) to discuss the landing at Wonsan. There its two division commanders learned that the plan assumed that the Eighth Army would relieve them by 3 October (in the event, the 1st Cavalry Division passed through the 5th Marines' lines on 4 October, and the Eighth Army as a whole relieved X Corps in the Inchon-Seoul area on 7 October). That corps would be required to prepare and embark in six to eight days and land at Wonsan on 15 October.[76] Major General Barr did not favor the plan, preferring either to align his 7th Division with the 1st Cavalry Division for a fast push northward from Seoul to Pyongyang, or to follow Walker's plan for X Corps to race to Wonsan from Seoul. Major General Smith did not mind an amphibious assault if it were executed in the right place, but he retained "quite a few reservations" about the overland attack from Wonsan to Pyongyang. Almond—who particularly feared guerrilla opposition in the rugged terrain between Seoul and Wonsan were X Corps to move in that direction—"turned aside" these concerns.

Unwillingness to discuss other possibilities, however, did not mean that planning for Wonsan was now firm—far from it. Events on the ground remained extremely fluid, their fluidity matched by that of the thinking about them at CINCFE. On 8 October, the 7th Division began its overland slog southeast to Pusan—except for its tank elements, which went by sea from Inchon. On the 9th, the 1st Marine Division commenced embarking at Inchon. That same day, Almond sprang a new landing site on Smith and Barr—Hungnam, some fifty sea-miles north of Wonsan. Developments had reduced the value of Wonsan considerably: as Smith noted, the "progress of the ROK's [South Korean units] had made a landing at Wonsan unnecessary. Also the opportunity to cut across Korea in order to help the Eighth Army seize Pyongyang is gone because of progress in the west. Apparently the [X] Corps is now trying to get a zone of action of its own on the east coast."[77]

The next day, however, the Hungnam landing was dropped; Smith recorded at the time that "the next idea was to have the 7th Division land commercially [that is, administratively] and go to Wonsan ahead of us [the 1st Marine Division], then that idea was dropped. In accordance with Corps orders we are still working on plans to land in

assault at Wonsan, even though at the moment the 3rd ROK Division is mopping up the city. Of course we can always change an assault landing into an administrative landing."[78] By that time, the 1st Marine Division was loading its equipment on transports at Inchon, and most of the 7th Division had arrived at Pusan. Because of the tight quarters in Inchon harbor, outloading the 1st Marine Division was causing great interference with efforts to supply the rapidly advancing Eighth Army.

The ROK I Corps captured both Hungnam and Hamhung two days later, on the 12th. The 1st Marine Division finally sailed from Inchon on 17 October. Aboard *Mount McKinley*, Almond held a press conference, at which Smith observed, "It is rather difficult for him to explain what he is going to do. The North Korean situation is still deteriorating but it is still the plan to land us at Wonsan."[79]

On 16 October, MacArthur expanded Almond's X Corps fiefdom, effective 1200 on 20 October: all UN and Republic of Korea personnel operating north of 39 degrees, 10 minutes north were to be under his operational control. In organizational terms, this further separated X Corps from the Eighth Army. Pursuant to this order, MacArthur created parallel, separate zones of action for X Corps and the Eighth Army—the central Taebaek Range became the boundary between the two forces. Thus all of northeast Korea went to X Corps as its field of operation; if Walker had any doubts about his importance in the scheme of things, they must have been dispelled by these orders. Moreover, reflecting the "end-of-war atmosphere" that now prevailed at his headquarters, MacArthur had already decided to make Almond commander of the occupation forces.

Unfortunately, Joy's concerns about mines at Wonsan proved more than well founded—as many as four thousand Soviet mines of four different types (including magnetic influence) had been sown by the North Koreans under direct Soviet supervision, beginning in late July. Sweeping proceeded very slowly, with the loss of two U.S. Navy minesweepers as well as South Korean and Japanese-manned "sweeps." Meanwhile the Marine division steamed slowly in racetrack patterns along the east coast, and it was still doing so on 21 October, when Almond requested that a Marine battalion be put ashore forty miles south of Wonsan, at Kojo. Doyle, however, refused, because the area had not been swept. The landing was called off that evening. Moreover, Doyle still balked at a hurried landing of troops

at Wonsan—in an administrative landing, especially, he wished to take no risks.

Almond displayed considerable impatience with what he viewed as the timidity of the Navy commanders, particularly Doyle, and on 23 and 24 October he "lashed out his frustration at Admirals Doyle and Struble in a series of heated conferences aboard the [battleship] *Missouri*."[80] The Attack Force continued to steam back and forth along its approach track ("Operation Yo-Yo," the Marines called it) until 25 October, when at 1500 some LSTs started in toward the landing beaches, although minesweeping continued. Almond now proposed, and Struble agreed, that they should cease minesweeping at Wonsan and concentrate at Hungnam. Doyle talked them out of this plan, largely because the landing beaches would be unusable in heavy weather, while the inner harbor at Wonsan, once clear, would remain functional. The next day, general unloading commenced; the troops would remain aboard the transports until it had been completed. Smith observed, "There is no urgent tactical need for getting all the troops ashore at once. The [X] Corps takes a dim view of this procedure."[81] As is now well known, when the Marines landed they were greeted by the 1st Marine Aircraft Wing and a USO troupe. By that time, the battle front was already fifty miles north of Hungnam.[82]

Meanwhile, what of the 7th Infantry Division? Task Group 90.8 (Amphibious Group 3, under Rear Admiral Thackrey) had arrived at Pusan from Inchon on 10 October, and the 7th Division commenced loading that day. Thackrey issued his Operation Order 2-50 on 16 October for embarkation and movement to Wonsan. Sailing was delayed several times, because of the threat of magnetic-influence mines and the increasing possibility of Chinese attack. As early as 19 October, Joy asked Struble and Doyle for suggestions of areas where X Corps could be landed other than Wonsan. On 24 October, Doyle nonetheless directed Thackrey to proceed to Wonsan. The next day, as the Marines went ashore there, Doyle, Struble, and Almond met to consider what to do with the 7th Division. They decided to send Thackrey and the 7th Division, when they arrived at Wonsan, on to Iwon—about a hundred miles north of Wonsan.

On reaching Wonsan on 26 October, CTG 90.8 made plans for the Iwon landing, producing Operation Order 4-50. Two days later, Underwater Demolition Team 3 reconnoitered Iwon, and two

destroyer-minesweepers swept the anchorage. They found it clear of mines. The first LST beached at 2230 on the 28th, the remainder the following morning. With some interruption because of surf conditions, Thackrey finished unloading on 8 November.[83]

As had happened before Inchon, the plan of the landing force (1st Marine Division) was completed before that of the expeditionary force (X Corps), and naval plans were prepared and issued jointly and concurrently with it. Unlike Inchon, however, this time X Corps headquarters was established ashore in advance of the landing of either division, and since the landings of both divisions were administrative, no difficulties in executing command relationships resulted regarding assumption of responsibility for further operations ashore. Amphibious doctrine, then, had worked effectively for controlling command relationships at the beachhead, but during the planning phase it had not performed as well. Part of the difficulty stemmed from the subordinate position in which peninsular warfare placed the Navy, relative to the Army, in decision making. Moreover, command and control of air operations remained a source of friction between the Navy and the Air Force; once again it was resolved only through negotiations, and only for the operation at hand.

The Chinese Enter, the UN Retreats

Joint Task Force 7 was dissolved on 1 November, and Struble returned to Tokyo. Success of the land campaign against the NKPA suggested ever more strongly that the war might soon be over, and COMNAVFE began considering what a postwar naval force might look like. Unfortunately, the optimism infecting CINCFE led to an overextension and dispersion of the Eighth Army and X Corps (to which the U.S. 3d Division and ROK I Corps had been added) in the far north of Korea, a situation the Chinese Communists found entirely to their liking; as early as the last week of October, thirty miles above Hamhung, Republic of Korea forces were encountering and capturing Chinese troops. On 31 October, Marine night-fighter aircraft observed extensive vehicular traffic across the Yalu River, and the next day there was a tentative report of Soviet MiG-15 fighters in Korea. These developments were the preliminary indications that the war was entering an entirely new phase. On 2 November, CINCFE estimated Chinese forces in Korea at 16,500—a figure increased two

weeks later to twelve divisions, with a hundred thousand men. By the 23d, the estimate had again been revised upward, to between 142,000 and 167,000. By the end of November, thirty Chinese division had been identified in Korea, totaling possibly 250,000 troops, and Soviet MiGs were regularly operating across the Yalu from Manchuria.

TAILBOARD had strained command relations and placed extraordinary demands on Navy and Marine commanders and their staffs trying to accommodate changing battle situations as well as shifting preferences at CINCFE, but the redeployment of the Eighth Army and X Corps from late November 1950 into early January 1951 would prove far more demanding: it covered a much wider area of action, and it required revision and adaptation almost daily by commands and staffs. Although contemporary and historical accounts of the evacuations focus almost exclusively on operations at Hungnam, the matter was decidedly more complex; it involved two coasts, five widely separated ports, and both an army and an independent corps. That the evacuations were done so successfully was a consequence not only of the expertise of the key commanders and their staffs but also of command relations that allowed discretion.

Early Preparations. At COMNAVFE, planning began early in November for evacuating UN forces from the north. Joy on 13 November issued Operation Plan 116-50, which directed that any evacuation was to be conducted on the principle of "an assault in reverse." It was to be an orderly activity, carefully controlled, *not* a Dunkirk or a Gallipoli. About this time, Rear Admiral Doyle told Joy that "he could not and would not come under Struble again."[84] Joy acceded to Doyle's demand, because of the importance of his amphibious expertise to the operation, relative to that of Struble's. In the new command structure, Doyle's instructions were "very far-reaching"—he would control all naval and air operations in the embarkation areas, including air and naval gunfire; gunfire support for UN ground forces; protection of shipping; and maintenance of the UN blockade of the Korean Peninsula.

By contrast, Struble as Commander, Seventh Fleet, was to be in a supporting role, resembling that in the Pohang-Dong landing. This was possible largely because of U.S. control of both the sea and air around the evacuation ports; the tasks of the Seventh Fleet could

accordingly be restricted to providing air and gunfire support for the troops on the ground, when requested by Doyle as CTF 90. In fact, Joy believed that "the Hungnam evacuation could be handled satisfactorily without the support of Seventh Fleet since heavy opposition was not a probability." Struble remained responsible, however, for coordinating naval air operations with those of the Air Force.

Joy recognized that "the command set up was admittedly not ideal but the proof of the pudding is in the eating for it worked smoothly at all times."[85] Publicly, Joy stated that the "rather odd" command arrangement was "based on the overall threat confronting Naval Forces Far East"—there was genuine concern that the Soviets might enter the conflict, and the Seventh Fleet needed to be able to operate independently of the beachheads in such an eventuality—but that was not the only reason.[86] Joy would later privately remark that "one of the reasons for the command . . . set up at Hungnam was a matter of personalities. Doyle complained to me that at Inchon Struble was continually in his hair and interfering with his exercise of command. As Doyle was more valuable to the success of Hungnam than Struble I thought it best to keep them separated as much as possible."[87] Struble was discomfited by the new arrangements, but there was little he could do about them directly, under the circumstances.

On 27 November, CINCFE ordered the Eighth Army forces that had crossed the Chongchon River in the western lowlands to withdraw back over it. By the next day the Eighth Army was in full retreat, and MacArthur notified the JCS that UN forces had gone over to the defensive. The Air Force made a tremendous effort to support these forces, and CTF 77 sent aircraft across the peninsula to assist.

On 28 November, at Burke's urging, Joy alerted Doyle (then in *Mount McKinley*, anchored at Hungnam) to the possibility of a general emergency requiring evacuation of UN forces from Korea to Japan. Doyle immediately ordered his staff to commence detailed planning for withdrawal of troops from Korea, either as an administrative evolution or a general-emergency withdrawal, based on COMNAVFE Operation Plan 116-50. Doyle's CTF 90 Operation Order 19-50 was issued the following day for planning purposes, to be effective when directed.[88] It called for half of TF 90 to conduct redeployment operations on the east coast under Doyle, and the other half on the west coast, under Thackrey. Overall responsibility would remain with Doyle, and Amphibious Group 3 would report to Doyle as the

Western Redeployment Force, Task Group 90.1. On 30 November, Doyle put all TF 90 ships (mostly in Japan, at Sasebo) on two-hour notice and began deploying them.

On 1 December, the Joint Chiefs of Staff instructed MacArthur to withdraw X Corps and "coordinate" its withdrawal with that of the Eighth Army, which would effectively end X Corps's independent status.[89] That day, Almond ordered a general retirement of X Corps to Hamhung.

The next day, the Air Force gave Major General Field Harris, commanding the 1st Marine Aircraft Wing, "autonomy in the conduct of air operations in support of X Corps, and instructed him to proceed without reference to Fifth Air Force except when reinforcements were needed."[90] The plight of X Corps prompted Harris to recommend strongly to CTF 77 (Ewen) a concentrated effort in its zone; however, Far East Air Force requested that air support remain split between X Corps and the Eighth Army. Joy responded by directing CTF 77 to give priority to close air support over other operations. On 30 November, however, CTF 77 had pointed out to Struble that while sorties in support of X Corps had been successful, about two-thirds of those for the Eighth Army had been wasted. Accordingly, Struble told FEAF on his own authority that "in view of unsatisfactory [ground-to-air] control in the west he would adjust his distribution of effort, and asked to be advised when the situation improved."[91] Consequently, 2 December was the last day that TF 77 split its efforts between east and west; thereafter it turned exclusively to X Corps. On that day, in fact, Struble turned down an Air Force request for strikes against the Yalu River, on the grounds that X Corps needed them more. On 3 December Joy made clear that close air support remained the principal concern of TF 77.

Almond had ordered the 1st Marine Division to concentrate at Hagaru, the 3d Division to reassemble at Wonsan, and the 7th Division to retire to Hamhung. The ROK I Corps was directed to fall back on Songjin, prepared for further movement by land or sea.[92] Initially it was thought that X Corps would defend the entire east coast from Wonsan to Hungnam, but because most X Corps forces were north of Hungnam, it was decided to concentrate the corps there.[93] Thus, the 3d Division would have to move from Wonsan to Hungnam. On 2 December, Doyle advised Joy that TF 90 was prepared to lift the 3d Division from Wonsan to Hungnam or Pusan.

Doyle's staff spent the first nine days of December planning and making preparations for a possible redeployment of X Corps through Hungnam. On 2 December he issued annexes to Operation Order 19-50 filling in details for the various component operations (with similar annexes for Operation Order 20-50, which covered the east coast specifically and was issued on 13 December). The staff planned both for defense of a perimeter around Hungnam and for evacuation through either Hungnam or Wonsan, consulting with Struble's staff along the way.

High-Level Conferences. On 7 December, a conference was held in Tokyo, attended by General MacArthur, General Lawton Collins (for the Joint Chiefs), General Stratemeyer, Vice Admiral Joy, Vice Admiral Struble, and Lieutenant General Lemuel Shepherd (who had just arrived on his fifth visit to the Far East). The group discussed a new plan for the Eighth Army to defend Seoul and a line on the Han River for as long as possible, then to retire to Pusan (once again), while X Corps was ferried south to Pusan. Walker, however, did not wish to try to hold the Han, because of the terrain, and MacArthur supported him. When X Corps arrived at Pusan, it would be dissolved, the 3d and 7th Divisions placed in the I and IX Corps, respectively, while the 1st Marine Division would go into reserve. Shepherd was surprised that "no adverse comment was made to Walker's proposed withdrawal plans without a fight"; he told his colleagues that "if the Eighth Army would take up a strong defensive position, it could inflict tremendous losses on the Chinese Communists just as X Corps was doing; that with our artillery, tanks, and especially aircraft, we could slow the Chinese Communist advance down together with his lengthening supply lines [to] a point where it would be too costly for the enemy to advance further." The others objected that the overwhelming numerical superiority of the Chinese dictated the withdrawal.[94]

Officially, Admiral Sherman, the Chief of Naval Operations, had "suggested" that the Pacific Fleet commander "consider sending Shepherd to help Joy [in] connection [with] Marine matters."[95] However, Admiral Radford had given Shepherd oral instructions "to take command of the naval phase of the operation should he consider it desirable." On Shepherd's arrival in Tokyo, at a 6 December conference, Vice Admiral Joy "gave reasons for asking me out.

Thought one of the senior commanders would be relieved and if I were present, I might get the job."[96]

Doyle only learned a quarter-century after the event that Radford

> had directed that if the evacuation was not moving properly under me, command would shift to General Shepherd. This arrangement apparently had the agreement of both Joy and Shepherd. In view of the facts that Turner Joy had directed that I command the entire operation and that Lem Shepherd had observed my conduct of the Inchon landing, if I had known of Radford's instructions at the time, I would have been insulted, because to me those orders cast doubt on my competence to command the withdrawal. Fortunately, I knew nothing of the scheme. Certainly, neither Turner Joy, who was my friend, nor Lem Shepherd, one of the Lord's own, would ever have taken advantage of the deal proposed.[97]

It may be speculated that "back-channel" communication from Struble to his friend Sherman back in Washington had cast doubt on Doyle's capacity, and that because directly "suggesting" a change in the command relations would have constituted interference with Joy's prerogatives, Sherman had taken this indirect approach—to be activated only should the operation go poorly. This would also account for the dubious explanation Joy gave to Shepherd for the latter's presence. We shall never know for certain, for Sherman died in the spring of 1951, leaving only cursory personal papers bearing on the matter.

Nonetheless, Shepherd's presence in Korea through 16 December was a tonic for the Marines and indicated to CINCFE the importance the Navy attached to the situation. He was able to expedite solutions to various problems the Marines were facing, and he interceded with the Far East Command headquarters on several matters. His presence may also have made some senior Army officers uncomfortable: in his report to Admiral Radford, General Shepherd expressed his opinion that "GHQ Far East is at present in a jittery state with a defeated attitude" and that "MacArthur will soon be washed up."[98]

On 8 December, Admirals Doyle, Struble, and Joy, General Shepherd, and Rear Admiral John M. Higgins (commanding Cruiser-Destroyer Group 5) met on *Mount McKinley* to discuss the redeployment of X Corps from Hungnam, which they now believed would be

required.[99] That evening a dispatch was received from MacArthur "ordering X Corps to complete withdrawal from North Korea and evacuate Hungnam."[100] The next day, Doyle conferred with Almond; the overall plan for movement of X Corps was firmed up, and the decision to redeploy X Corps to Pusan was announced.[101] That same day, the 9th, Almond closed his command post at Hamhung and opened it at Hungnam. Joy directed Shepherd to remain in Hungnam as his representative on Marine matters "and for counsel and advice in connection with the amphibious evacuation being planned."[102]

The 9 December order to Doyle formally established what Joy had already decided. CTF 90 was assigned the following missions:

1. Provide water lift for and conduct redeployment operations of U.N. forces in Korea as directed.
2. Control all air and naval gunfire support in designated embarkation areas.
3. Protect shipping en route to debarkation ports.
4. Be responsible for naval blockade and gunfire support of friendly units East Coast of Korea including Pusan.
5. Be prepared to conduct small-scale redeployment operations including redeployment ROK forces and U.N. POWs.
6. Coordinate withdrawal operations with CG Tenth Corps and other commands as appropriate.
7. Support and cover redeployment operations in the Hungnam or other designated embarkation areas in order to provide for the rapid and safe redeployment of own and friendly troops in Korea.[103]

One searches in vain for any reference to the Seventh Fleet and its responsibilities.

At Hungnam, Doyle established a division of labor with X Corps. Almond assigned Colonel Forney, who had become X Corps deputy chief of staff, additional "responsibility for operating the port, withdrawing units to the staging areas, embarking the troops, loading with supplies and evacuating the refugees." Doyle established a loading control plan in close coordination with Forney, who stationed himself in the dock area while Doyle and his staff remained aboard *Mount McKinley* in the harbor at Hungnam. Under Forney, a major from Shepherd's party ran the plans and operations section of the loadout-control organization. A radio net was established linking all relevant units. Forney also had a loading section and a Navy

liaison unit, each supervised by an Army officer. The operating arm of the control team was the Army's 2d Engineer Special Brigade (trained specifically to run ports), which operated the dock facilities, furnished working parties, assigned and handled the lighters, and the like. Doyle's staff directed the movement of ships in and out of Hungnam—how many, which ships, in what sequence, etc. As Doyle commented later, "The process was centralized, uncomplicated, and continually adjusted."[104]

X Corps established the sequence for withdrawing combat units, and Almond cooperated "fully and ensured that his subordinates followed his example." However, the sequence of withdrawal had had to be adjusted, for Almond initially proposed that elements of the 1st Marine Division be kept back to hold the perimeter.

Doyle had his own naval gunfire asset, in Task Group 90.8, under Rear Admiral Roscoe Hillenkoetter—the heavy cruisers *Rochester* and *St. Paul* (CA 73), four destroyers, and three rocket-firing landing ships (LSMRs). The 1st Marine Aircraft Wing, supplemented by Seventh Fleet carriers on request, provided his air support. Although the Far East Air Force did yeoman work with its C-47 and C-54 transports during the withdrawal from Chosin, its combat activities did not extend into the area controlled by Doyle.

Wonsan and Songjin. Because no enemy pressure was being exerted on Wonsan, it was decided to move the 3d Division overland by rail and truck to Hungnam; this was largely accomplished by 4 December. Consequently, only four thousand personnel and twelve thousand tons of gear had to be lifted by sea. Doyle sent the ships of Transport Division 11 to do the job. All friendly forces, except one South Korean marine battalion, were clear by 7 December. This permitted Doyle to reallocate shipping to Songjin to load elements of the ROK I Corps. Those transports departed Wonsan 6 December, arriving at Songjin on 7 December. The beach at Wonsan was completely clear by late evening on 9 December, and the last ship sailed from the harbor the next morning.

The total lift from Wonsan comprised 3,834 troops, 7,009 refugees, 1,146 vehicles, and 10,013 tons of bulk cargo. Withdrawal of the ROK I Corps from Songjin was completed at 1600 on 9 December, and on 10 December that command began unloading at

Hungnam. Shortly thereafter, as Almond had requested, most of the South Korean troops were lifted to Samchok.

Doyle considered the Wonsan operation as essentially a test of his preliminary plans for the larger redeployment from Hungnam:

> The troops ashore described around the city an arc whose radius they progressively reduced as supplies and personnel within the beachhead loaded and left. The fire support ships isolated Wonsan by shellfire, fired any observed missions requested, and at night provided random harassing and interdiction fires on pre-selected targets and fired star shells for battlefield illumination.[105]

The plans worked. The commanding officer of the 1st Marine Division Shore Party, responsible for clearing the beach, described the operations as "uneventful."[106] Once the 3d Division arrived at Hungnam, it established the defensive perimeter through which the 1st Marine Division and the 7th Infantry Division would pass.

Hungnam. The initial elements of the 1st Marine Division came down from the Chosin reservoir area into the perimeter on 11 December, just as "final plans for naval gunfire and naval air support were completed in coordination with ComCruDiv 1, CG Tenth Corps and operations officer TF 77."[107] Doyle assumed control of air defense in the Hungnam area, advising Struble of specific air support requirements. Doyle elected not to use antiaircraft artillery, because of the air cargo operations and congested harbor.

By the end of 14 December, 99 percent of 1st Marine Division personnel, 95 percent of its vehicles, and 97 percent of its bulk cargo had been loaded. At 1500, Doyle relieved Major General Harris of air control within the embarkation area. By 2000 on 16 December, two-thirds of the ROK I Corps had been loaded for Samchok; on the following day its twenty-five thousand personnel and seven hundred vehicles and other equipment departed.

At 1435 on 19 December, the commanding general of the 3d Division assumed responsibility for the defense of Hungnam, and Almond and his staff moved aboard *Mount McKinley*. Doyle, who found Almond arrogant, told him pointedly, "You understand, General, that these troops are now under my command."[108] The next day, the 7th Division completed loading, and at 2108 its commander

departed. Phased withdrawal of the troops continued apace with the loading at the docks, and D day was set tentatively for 24 December. On 22 December, plans and instructions for final embarkation on D day were completed and distributed. The following day, D day was confirmed as the 24th, and by midnight all preparations for pulling the last troops off the beach were complete. On D day, all beaches were clear of troops by 1436, and at 1457 sortie from the harbor commenced.

During the loading and final embarkation period, 105,000 U.S. and South Korean military personnel, along with 91,000 civilians, 17,500 vehicles, and 350,000 tons of bulk cargo were loaded out of Hungnam on a total of six assault-transport, six assault-cargo-ship, thirteen civilian-manned Navy-transport, seventy-six time-charter-ship, eighty-one LST, and eleven dock-landing-ship loads. All proceeded to Pusan. On 25 December, *Mount McKinley* arrived at Ulsan and at noon Joy relieved Doyle of further responsibility for redeployment operations on the east coast of Korea. Disembarking Almond and his staff, Doyle proceeded to Yokosuka, Japan, on 26 December.

The operation at Hungnam had been a remarkable success. The only deaths during the entire period had been those of two Army personnel aboard ships due to methyl alcohol poisoning and of several men killed by the premature explosion of an ammunition dump on the D-day embarkation beach.

As fate would have it, although X Corps now came under the Eighth Army, with Almond still in command, Almond never had to serve under Walker—who was killed in a highway accident involving a South Korean weapons carrier on the morning of 23 December. As had previously been arranged between MacArthur and Collins, General Matthew Ridgway immediately assumed command of the Eighth Army.[109]

The West Coast. What of the west coast and the Eighth Army? "Because of the limited port facilities on the west coast, Doyle considered that the Army would have to be under extreme hardship before it would call for a sealift from the small harbors that were available on North Korea's west coast" and therefore sent "mostly small, shallow draft ships to the west coast."[110] However, the Eighth Army's expeditious withdrawal southward threatened to leave the port of Chinnampo exposed, necessitating its evacuation. Consequently, on

3 December Joy passed on to Task Group 90.1, the Western Redeployment Force, an urgent Eighth Army request for shipping at Chinnampo. The Amphibious Group 3 staff reacted with confusion; Transport Squadron 1, which had been ordered to Inchon, wisely changed course and went to Chinnampo on its own. Additional naval forces joined to seaward of that port and sailed up the long river approach at night—no mean feat in a twisting, eighty-four-mile swept channel. Orders to the transport squadron finally came at 0425, and by 0930 all of the transports had made the port. By 1230, the transports had begun sailing independently, and destruction of the port by gunfire began. Embarkation operations were complete by 1800 on 5 December; 5,900 South Koreans were on their way to Pusan in amphibious shipping, and nineteen hundred Army port personnel were steaming to Inchon in civilian-manned Navy and Japanese-manned shipping.[111]

There was also the matter of Inchon. On 7 December, Thackrey had received orders from Joy to prepare to redeploy all unneeded Army stores; some outloading had already begun. Joy arranged for Army units to request shipping directly through Thackrey; CINCFE formally advised the Eighth Army of this channel the next day. Though the Army had indicated it would make its way overland, Thackrey worked up contingency plans for a sea lift, including emergency removal of troops to the islands immediately off Inchon should the Chinese press too hard.

As for the Eighth Army itself, the initial estimated need was to lift between three and five thousand personnel from Inchon. This number was exceeded by 18 December, and by the end of the month 32,428 troops, 1,103 vehicles, and 54,741 tons of cargo had been moved out of the harbor by sea. In the last five days of the operation, starting on New Year's Day 1951, Amphibious Group 3 lifted another 37,485 military personnel, 301 vehicles, and 6,403 tons of cargo. To these figures must be added 64,200 civilians taken south. The port was closed and its facilities blown up on 5 January. In comparison to the coverage the public press accorded operations at Hungnam, those of Thackrey's group at Inchon were virtually ignored—only one accredited press correspondent went to Inchon.[112] However, the withdrawal from Inchon proved a considerable accomplishment in its own right, and, when combined with the efforts at

Chinnampo, Wonsan, Songjin, and Hungnam, the overall achievement can only be considered extraordinary.

What was to be done with the 1st Marine Aircraft Wing following its redeployment was a matter of discussion. When X Corps had existed as an independent formation, the wing had had the sole responsibility for supporting it. Certainly, Almond had considered it an organic element of his command, and notwithstanding other problems with the Marines, he had backed it in disputes with the Air Force. Now, however, land-based air operations would come completely under the Fifth Air Force. On 10 December, General Shepherd urged Harris to "exert every effort to maintain the Wing itself in the operational picture and it was determined to take up the matter with Major General Partridge, Commanding General, 5th Air Force, on the same afternoon."[113]

Doyle would later remark that though official historians made Task Force 90's efforts seem "orderly and efficient," in actuality "inconsistency and variation were the norm, and ingenuity and experience got things done." In consequence, "changes, immediate decisions, and on-the-spot coordination were the order of the day."[114]

Doyle's action report as CTF 90 for Hungnam made little mention of command relations, other than to indicate the scope of CTF 90's responsibilities. However, in his action report for Seventh Fleet, Struble could not help but criticize the command structure for Hungnam:

> During the Hungnam operation, Commander Seventh Fleet was in a supporting role to Commander Task Force 90 who retained responsibility for redeployment operations. Based on my experience in the Inchon, Wonsan, and Hungnam operations, I consider that the formation of a joint task force under the fleet commander is a better solution to the command problem involved. Such a solution provides a unified command afloat for the thorough coordination of the various task forces engaged in related operations.[115]

Less than two days after the last ships cleared Hungnam, Admiral Sherman was already considering command relations for future amphibious operations in the Far East. In a message to Radford, the CNO opined that it

> is a matter of long term importance to the Navy to have amphibious force commanders function actively and to give them appropriate rank relative to Army and Marine commanders in the same amphibious operations. In this connection [IX Corps commander, Major General] Milburn[,] Almond[,] and [Major General John B.] Coulter are about to get three stars. Accordingly I plan designation of COMPHIBSPAC and COMPHIBSLANT [the amphibious "type commanders" for the Pacific and Atlantic Fleets, respectively] as vice admirals in near future. Believe it essential that [COMPHIPSPAC, Vice Admiral Ingolf N.] Kiland go forward [to the combat area] and exercise active operational command if he is to be effective as COMPHIBSPAC and [I] definitely feel that in the amphibious business promotion should go to [an] officer who has exercised command in whatever operations are being conducted. Accordingly [I] request you consider again sending Kiland to Far East as soon as practicable to function there as COMPHIBSPAC even though he may be withdrawn whenever situation stabilizes. Desire telecon [a telex conference on] this subject today 2100 with only you[, Lynde] McCormick and me present.[116]

However, in more general terms, Admiral Radford, in command of the Pacific Fleet, evaluated the command relationships established by then-current amphibious doctrine as sound. He recommended "no change to current doctrine for amphibious command. . . . Present command structure was evolved as a result of battle experience, is eminently satisfactory, and should remain in effect until change is dictated by some future major development in the field of amphibious warfare." He especially cautioned that "the success of amphibious landings in Korea, planned and executed in an unorthodox manner in many respects, must not set unconsidered precedents for the future."[117]

A Surfeit of Difficulties and Complications

Excepting perhaps the Wonsan operation, all of the major Korean War amphibious operations of 1950 may be judged both tactically and strategically successful. As this article has attempted to show, these successes derived in major part from a well-developed and understood body of amphibious doctrine, which paid attention to command relations. Indeed, the fundamental structure prescribed by that doctrine worked effectively to reduce conflict, promote

agreement among the services, and allocate responsibility. For example, there were no problems about when command would pass from the attack force to the landing force commander; also, the role of the Air Force was resolved readily, if not to that service's satisfaction. Even though no doctrine had been evolved for evacuation of major formations from the beach, the analogy of a "reverse" amphibious landing provided what proved a sound basis for working out relationships.

None of this, however, translated to a complete recipe for appointing commanders and establishing the relationships between them. These procedures still had to be worked out, and they remained an issue throughout the processes of planning and executing the amphibious operations—formal orders only *began* the process of establishing their exact character. The command relations established for one operation were not viewed as permanent by the senior officers involved, who maneuvered in the run-ups to succeeding operations to alter those they had found troublesome. Moreover, it might fairly be said that the operations succeeded at the tactical level despite the presence of certain commanders, and only because their subordinate commanders were extremely competent and extraordinarily professional.

Noteworthy problems in command relations occurred both across services and within them. Although these conflicts played themselves out most obviously as clashes of strong personalities, the underlying problems had to do far more with differences in expertise with respect to the practical military problems at hand, as well as with the interservice rivalries and intraservice difficulties that preceded and surrounded the war in Korea. The trust—"total confidence in the integrity, ability, and good character of another"—prescribed by modern joint doctrine for relations among commanders in joint operations simply did not obtain in certain key relations.[118] In the end, given the limited number of senior officers available for any such operation, these factors will always loom large.

Baldly put, Admiral Doyle did not respect Admiral Struble for his amphibious expertise, nor did he trust him personally, and apparently this view was reciprocated. Struble also evidenced an unwillingness to delegate responsibility to his subordinate commanders, notwithstanding his assertions to the contrary. General Smith, in contrast, worked extremely well with Doyle during the amphibious operations, according him the utmost respect for his amphibious

expertise and naval professionalism; Doyle had a like opinion of Smith (who concurred with Doyle's evaluation of Struble). This close relationship contributed materially to success at Inchon and Hungnam. Struble's conflicts with Doyle were also related to the former's problems with his superior, Admiral Joy, who was Doyle's friend. In the end, for Hungnam, Joy opted for command relationships that allowed Doyle to operate independently of Struble, largely on the belief that Doyle's expertise was more important to success in that instance than Struble's. Struble, for his part, felt it necessary and appropriate to seek support in these conflicts directly from the Chief of Naval Operations, who weighed in on his side, issuing the rather odd order to General Shepherd to relieve Doyle at his own discretion. All of this was complicated by Admiral Radford's poor opinion of Struble and Admiral Sherman's apparent unwillingness to make more than "suggestions" to Radford.

Similarly, neither Doyle nor Smith found General Almond competent in the tasks—especially tactical—with which he had been entrusted by MacArthur, and each determined to depend on his own considerable professional expertise. For his part, Almond found it very difficult to work with Doyle and, especially, Smith. One of the serious consequences of this poor relationship was that Smith felt obliged to resist what he perceived to be inapt if not dangerous orders from Almond. Quite apart from personality issues, which were ample, Doyle's and Smith's problems with Almond fundamentally stemmed from the latter's lack of combat command experience, his staff mentality, and his overweening personal loyalty to MacArthur. General Barr of the Army had difficulties with Almond comparable to those of his Marine counterpart and reacted in a similar manner.

Douglas MacArthur's lack of confidence in General Walker had in the first place led to the anomaly of an independent X Corps, which in turn made possible the appointment of a commander like Almond, who shared his superior's disdain for Walker, setting the stage for conflicts with Doyle and Smith. Given the amphibious character of the operations in prospect, it might have been far more sensible for MacArthur to appoint Shepherd—expert, available, willing, and personally known to him—to command whatever force would be principally responsible for them. Had that occurred, many of the difficulties that ensued during and after Inchon would probably have

been more easily solved if not entirely obviated. Certainly, command relations within X Corps would have been much more harmonious.

On one hand, MacArthur's considerable experience with amphibious operations in the Southwest Pacific theater in World War II gave him substantial insight into the practical problems of that kind of warfare. On the other, because until late in that war his resource needs were lower in priority than were those of the Central Pacific campaign, MacArthur had made do with jury rigs and hand-me-downs; his mostly coastal landings were characterized by short time-frames for planning, frequent changes, and landing forces (principally Army troops) often minimally trained in amphibious techniques. Success under these conditions in World War II—he was blessed with a skilled, energetic, and resourceful amphibious commander in Vice Admiral Daniel Barbey—may well have desensitized MacArthur in the Korean War to the myriad difficulties associated with translating his broad strategic vision into a series of operational movements, and concomitantly to the importance of the specific individuals placed in command positions.

Further, of the three amphibious cultures that developed in the Navy during World War II—Central Pacific, Southwest Pacific, and European—it was the first that dominated the postwar development of amphibious doctrine. This body of experience emphasized naval control and was predicated on assaults against islands. For MacArthur, amphibious landings had manifested themselves as subsidiary, if vital, components of Army ground campaigns; in the Navy's memory, amphibious operations had been at the very core of the larger naval campaign in the Pacific. These key differences seem likely to have led to conflicts in planning operations, irrespective of the individuals in key command positions.

Certainly, there was a surfeit of difficulties and complications in command relations at the highest levels during the Korean War amphibious operations. The question naturally arises as to whether these complexities were statistically unusual if not improbable, or whether such problems arise in all such joint operations. The answer lies outside the scope of this article. But, even if the former, the basic fact remains that command relations in such operations are not governed entirely by doctrine; they are likely never to be solely a function of the imperatives of the military situation; and they will inevitably reflect interservice rivalries, intraservice conflicts, and

strong personalities. Like many problems of organization, these are probably enduring and structural, matters that defy permanent solution. Doctrine goes a long way toward resolving them, but in the end—in actual practice—it provides only a foundation for the informal processes of accommodation and adjustment that structure command relations.

Notes

1. U.S. Joint Staff, *Joint Warfare of the Armed Forces of the United States*, Joint Publication 1 (Washington, D.C.: Department of Defense, 10 January 1995), p. vi. (Emphasis original.)

2. Ibid., p. vii.

3. On the unification battle, see Jeffrey G. Barlow, *Revolt of the Admirals: The Fight for Naval Aviation* (Washington, D.C.: Naval Historical Center, Department of the Navy, 1994); and Gordon W. Keiser, *The U.S. Marine Corps and Defense Unification, 1944–47* (Baltimore: Nautical and Aviation, 1966).

4. Letter, General Douglas MacArthur to Cdr. Malcolm W. Cagle, 19 March 1956, Cagle Papers, box 3, Operational Archives, Naval Historical Center [hereafter OA, NHC]. In addition to being U.S. Commander in Chief, Far East (CINCFE), following the United Nations resolution formally creating a command for Korea MacArthur was United Nations Commander in Chief (UNCINC). His headquarters was usually referred to in dispatches as Far East Command (FECOM) or GHQ. For the sake of simplicity this artcile uses only CINCFE.

5. MacArthur-Cagle letter, 19 March 1956.

6. Letter, Hobart R. Gay to Roy Appleman, in Roy C. Appleman, *U.S. Army in the Korean War: South to the Naktong, North to the Yalu (June–November 1950)* (Washington, D.C.: Office of the Chief of Military History, Department of the Army, 1961), as quoted by Clay Blair, *The Forgotten War: America in Korea, 1950–1953* (New York: Times Books, 1987), p. 88.

7. James F. Schnabel, *U.S. Army in the Korean War: Policy and Direction: The First Year* (Washington, D.C.: Department of the Army, 1972), chap. 3, pp. 10–12.

8. See Blair, pp. 46–8, for a description of the training process.

9. James A. Field, *History of United States Naval Operations—Korea* (Washington, D.C.: U.S. Govt. Print. Off., 1962), p. 46.

10. Commander, Seventh Fleet reported normally to the Commander in Chief, Pacific Fleet. However, the Chief of Naval Operations, Admiral Sherman, had agreed in February 1950 that "when the Seventh Fleet was in Japanese waters, or in the event of an emergency, and the Seventh Fleet was made available, he would report to CINCFE for operational control. This simply meant that under the two circumstances envisaged, the commander of the Seventh Fleet in an emergency would be under the operational control of CINCFE, and in peacetime when in Japanese waters, would be under COMNAVFE for any joint training exercises that were mutually agreed upon." Letter, Vice Admiral Arthur D. Struble to Cdr. Frank Manson, 9 January 1956, Cagle Papers, box 3, OA, NHC.

11. Commander, Naval Forces, Far East [hereafter COMNAVFE], War Diary, 24 June 1950 to 31 July 1950, OA, NHC. Actually, Radford was both Commander in Chief, Pacific Command (or CINCPAC, a unified command equivalent to CINCFE) *and* CINCPACFLT.

12. Commander, Amphibious Group 1 and Northern Attack Force Task Force [hereafter TF] 13, Operation Order 4-50, "Demon III (Satan at San Clemente; Mephisto at Aliso)," Command and General Staff College Demonstration, 11–12 May 1950, OA, NHC.

13. Commander Amphibious Group [hereafter COMPHIBGRU] 1, War Diary, date-time group 240001Z [0001 Greenwich Mean Time, 24 June] June 1950 to 152400Z July 1950, OA, NHC.

14. Appleman, p. 88.

15. COMPHIBGRU 1 War Diary, 24 June to 15 July 1950, OA, NHC. As Doyle later put the matter: "I was informed in July that MacA wanted a landing at Inchon. But before I was half way through the plans for it, it was called off because the Eighth Army had been pushed far down the peninsula and Walker asked for the 1st Cavalry to support him." Letter, Vice Admiral James H. Doyle to Robert D. Heinl, 8 October 1966. Heinl Papers, box 1, Marine Corps University Archives [hereafter MCUA], Quantico, Virginia. Although the Inchon landing was called off, the basic plans for putting troops ashore were used for Pohang-Dong, and the 1st Cavalry Division continued to use the "Bluehearts" appellation. See 1st Cavalry Division War Diary, July 1950, Enclosures, Operations Plan 7-50, Military Branch, National Archives.

16. One might reasonably suppose that Struble simply believed it vital to keep the CNO in the loop on important operarional matters. However, it appears that he wished to have his old friend (whom he had also served as Deputy Chief of Naval Operations) on bis side of any conflicts with Joy, and, as later message traffic indicates clearly, Sherman was willing to oblige.

17. Message, date-time group 100409Z-NCC 6560, 10 July 1950, Commander, Seventh Fleet [hereafrer COM7THFLT] to COMNAVFE, OA, NHC.

18. Message, 100755Z-NCC 6573, 10 July 1950, COMNAVFE to COM7THFLT, OA, NHC.

19. Message, 100824Z-NCC 6567, 10 July 1950, Commander in Chief, Pacific Fleet [hereafter CINCPACFLT] to Chief of Naval Operations [hereafter CNO], OA, NHC.

20. COMNAVFE Operation Order 9-50, 12 July 1950, OA, NHC.

21. Message, 110400Z-NCC 6820, 11 July 1950, COM7THFLT to COMNAVFE, OA, NHC.

22. Message, 111239Z-NCC 15378, 11 July 1950, CNO to CINCPACFLT, OA, NHC.

23. Message, 120033Z-NCC 7038, 12 July 1950, COMNAVFE to COM7THFLT, OA, NHC.

24. COM7THFLT, War Diary, 16 July 1950 to 1 August 1950, OA, NHC. The entry for 18 July notes: "At 0148K [designating the local time zone], TF 77 changed course to avoid units of TF 90 operating in area and resumed course at 0226K."

25. Robert D. Heinl, Jr., *Victory at High Tide: The Inchon-Seoul Campaign* (New York: J. B. Lippincott, 1968), p. 33.

26. General Oliver P. Smith, aide-memoire, Korea 1950–51, "Expansion and Outloading of the Division," Oliver P. Smith Papers, MCUA, Quantico, Virginia, pp. 3–10.

Following the North Korean invasion, Secretary of the Navy Francis Matthews canceled all his regularly scheduled conferences; neither he nor the Chief of Naval Operations, Admiral Sherman (no admirer of the Marines), would see General Clifton B. Cates, Commandant of the Marine Corps, for several days. Cates believed this was "an intentional measure to exclude the Marine Corps from early participation in the war." On 29 June, Cates cornered Sherman in a Pentagon hallway and asked why MacArthur was not asking for the Marines. Sherman replied, "What do you have?" Cates could provide a provisional brigade (a regimental combat team plus an air group). Sherman promised, probably reluctantly, to inform MacArthur and Vice Admiral Joy. Interview with Clifton B. Cates, 10

March 1996, box 16, Heinl Papers, MCUA, Quantico, Virginia. On 2 July MacArthur sent to the Joint Chiefs a formal request for the brigade; the JCS approved it the next day. On 10 July, Lieutenant General Shepherd, commanding Fleet Marine Force Pacific, convinced MacArthur to ask for the 1st Marine Division and an air wing. Shepherd and his aide, Victor H. Krulak, drafted a message, which MacArthur sent the next day. See Victor H. Krulak, *First to Fight: An Inside View of the U.S. Marine Corps* (Annapolis, Md.: Naval Institute Press, 1984), chap. 8; and Lemuel C. Shepherd [Gen., USMC, Ret.], Oral History, 27 July–4 August 1966, 13, 16, and 22 February 1967, Oral History Section, Marine Corps Historical Center. Shepherd wanted the Marines to go to Korea in at least division strength so they would not be merely a "bob-tail brigade attached to an Army division" and would have enough strength and combat support to act as an independent entity.

27. "One of Almond's numerous high echelon functions for MacArthur was the interception and transmission of calls to and from the field generals. Although this service was a duty imposed by the supreme commander, Almond's intercession generated open enmity with General Walker of the Eighth Army. Walker's own loyal staff members believed that Almond was deliberately undermining and isolating their commander from MacArthur at every opportunity. . . . The relationship between Almond and Walker . . . eroded as their mutual animosity intensified." Shelby L. Stanton, *Ten Corps in Korea* (Novato, Calif.: Presidio Press, 1996), p. 31. As Vice Admiral James H. Doyle put it, "Almond and Walker didn't get along for nothing." Robert D. Heinl, notes from interview with Vice Admiral James H. Doyle, 31 July–1 August 1950. Heinl Papers, box 28, MCUA, Quantico, Virginia.

28. "Chromite" was the term used at CINCFE for the Inchon landing, but the Navy and Marine Corps did not use it. See Vice Admiral Arthur D. Struble, "Comments on Field Manuscript" (circa 1960, referring to Field, *History of United States Naval Operations—Korea*), OA, NHC.

29. See Struble's comments in his letter to Robert D. Heinl, 3 September 1966. Heinl Papers, box 1, MCUA, Quantico, Virginia.

30. Lieutenant General Edward Almond, Army Oral History Interview, 28 March 1973, p. 29. We have only Almond's recollection of the decision to appoint him X Corps commander and how it came about. No one else was present, and MacArthur never talked about it for the record.

31. Shepherd believed that "Almond talked himself into getting X Corps" and that Sherman had not pushed MacArthur "very strongly" on the idea of X Corps as appropriately a Marine command. Heinl notes to interview with Shepherd.

32. On this controversy, see Samuel Eliot Morison, *History of United States Naval Operations in World War II*, vol. 8, *New Guinea and the Marianas, March 1944–August 1944* (Boston: Little, Brown, 1953), pp. 330–2; Jeter A. Isley and Philip A. Crowl, *The U.S. Marines and Amphibious War: Its Theory, and Its Practice in the Pacific* (Princeton, N.J.: Princeton Univ. Press, 1951), pp. 342–51; and Robert Sherrod, *On to Westward: The Battles of Saipan and Iwo Jima* (Baltimore: Nautical and Aviation, 1990), pp. 88–93. For General Holland M. Smith's perspective, see Holland M. Smith and Perry Finch, *Coral and Brass* (New York: Charles Scribner, 1949).

33. General Lemuel C. Shepherd, USMC, "Korean War Diary" covering 2 July to 7 December 1950. Shepherd Papers, box 2, Personal Papers Section, Marine Corps Historical Center, p. 34.

34. Ibid., p. 36.

35. General Oliver P. Smith, Personal Log, 2 August to 31 December 1950. Smith Papers, MCUA, Quantico, Virginia. Smith was older than Almond, and his date of commission was senior to Almond's.

36. Ibid. As a practical matter, the 7th Division was a division in name only. As Blair notes, "Ever since the heginning of the Korean War the 7th Division had been something of a madhouse. First, GHQ had stripped it of about 1,300 key noncoms and officers to beef up the 24th and 25th Divisions. Next upon the departure from Japan of the 24th, 25th, and 1st Cav[alry] Divisions, GHQ had ordered it to redeploy into the areas vacated by those divisions, all over Japan. Then, upon its assignment to Inchon, the 7th had to build up its strength from about 8,700 to 18,000 men, with disparate cadres and fillers from Okinawa and the States, in about six weeks. Next, the division had to absorb 8,600 South Koreans. Finally, the division had to attempt some training" (p. 276).

37. Smith, Personal Log. See entries for 23 and 24 September 1950. Blair (p. 289) goes so far as to assert that had Smith been an Army officer rather than a Marine, Almond would have relieved him on the spot.

38. Smith, Personal Log. Smith Papers, MCUA, Quantico, Virginia.

39. Almond, Army Oral History, p. 51.

40. Blair, p. 275.

41. Robert D. Heinl notes to interview with Major General David Barr, USA (Ret.), 12 October 1966. Heinl Papers, box 28, MCUA, Quantico, Virginia.

42. Message, 281508Z, 28 July 1950, CNO to COMNAVFE, OA, NHC. This message set up the telex conversation for the next day.

43. Message, 291561Z-NCC 18238, 29 July 1950, CNO to CINCPACFLT, OA, NHC.

44. Message, 291659Z-NCC 18239, 29 July 1950, CNO to COMNAVFE, OA, NHC.

45. Message, 260446Z-NCC 2743, 26 August 1950, COMNAVFE to CINCPACFLT, OA, NHC.

46. Message, 271335Z-NCC 3294, 27 August 1950, CINCPACFLT to COMNAVFE, OA, NHC.

47. Message, 280103Z-NCC 3461, 28 August 1950, COMNAVFE to CINCPACFLT, OA, NHC.

48. Message, 310349Z-NCC 4669, 31 August 1950, COMNAVFE to CNO, OA, NHC.

49. Message, 311029Z-12380, 31 August 1950, Secretary of the Navy to COMNAVFE, OA, NHC.

50. Letter, Vice Admiral Arthur D. Struble to Robert D. Heinl, 27 October 1966. Heinl Papers, box 1, MCUA, Quantico, Virginia.

51. (Both quotations.) Letter, Struble to Heinl, 3 September 1966. Struble compared the joint task force at Inchon to the command arrangements in World War II between Admiral Thomas Kinkaid (commanding the Seventh Fleet) and General Walter Krueger (commanding the Sixth Army) in the Philippines.

52. Ibid.

53. Ibid.

54. Letter, Vice Admiral James H. Doyle to Robert D. Heinl, 26 October 1966. Heinl Papers, box 1, MCUA, Quantico, Virginia.

55. Doyle believed that Struble was annoyed by the publicity that he and Smith had received after the successful landing at Inchon and that he had directed his public information officer to put out a release to the effect that he (Struble) had been the "overall amphibious commander."

56. E. B. Potter, *Admiral Arleigh Burke* (New York: Random House, 1990), pp. 336–7.

57. Letter, Struble to Heinl, 3 September 1966. Struble "was wary of elaborate coordinating arrangements with the Air Force unless Air Force units were to render significant help to us. They were unable to do so."

58. Potter, p. 338.

59. Heinl notes to interview with Doyle, 31 July–1 August 1966.

60. Burke had a similar experience with Almond. Concerned about the possibility that typhoons would batter JTF 7 as it rounded southern Kyushu into the Yellow Sea if it left as scheduled on 12 September, on 9 September he went to General MacArthur's office. He was stopped by the general's staff. When Burke insisted, he was referred to Almond, who said, "condescendingly, 'You can tell me what you want to bring to General MacArthur's attention.'" Burke refused and returned to his office. Shortly his phone rang, and he was asked to return. Burke explained his concern to MacArthur, who decided to advance the assault shipping's departure by one day. Potter, pp. 338–9.

61. General Oliver P. Smith, Personal Log, 2 August to 31 December 1950. Smith Papers, MCUA, Quantico, Virginia.

62. Robert D. Heinl notes to interview with Vice Admiral James H. Doyle, 31 July–1 August 1966. Heinl Papers, box 28, Marine Corps Archive, Quantico, Virginia.

63. Commander in Chief, U.S. Pacific Fleet, "Interim Evaluation Report No. 1," 25 June to 15 November 1950, Annex AA, Commander, Amphibious Group 1 (CTF 90), "Report of ComPhibGru Operations for 25 June 1950 to 1 January 1951," file A12/31-wt, serial 002 of 17 January 1951, p. AA8, OA, NHC. Early in July 1950, Admiral Radford had determined to "keep a record of our naval problems and how we solved them"; thus was born the Pacific Fleet Evaluation Group and its eighteen volumes of reports on naval activities in Korea, 1950–51. Arthur W. Radford, *From Pearl Harbor to Vietnam: The Memoirs of Admiral Arthur W. Radford*, ed. Stephen Jurika, Jr. (Stanford, Calif.: Hoover Institution, 1980), pp. 232–3.

64. "Interim Evaluation Report No. 1," Combat Operations Sections, Amphibious and Ground, Project no. I.C.2, Amphibious and Ground Attack Forces, p. 724.

65. Ibid., p. 725.

66. Ibid., p. 724.

67. Almond, Army Oral History, pp. 58–9.

68. Blair, p. 330.

69. This explanation comes from Blair, pp. 331–2. Doyle later recalled "the remark made by General MacArthur after Inchon—that he might remove Walker from his command because of slow movement north." James H. Doyle and Arthur J. Mayer, "December 1950 at Hungnam," U.S. Naval Institute *Proceedings*, April 1979, p. 46.

70. COMNAVFE, Operation Plan 112-50, 15 September 1950, OA, NHC. Oplan 112-50 is dated 15 September 1950 and filed under Operation Plan 113-50, dated 1 October 1950. Notwithstanding Almond's assertion (see his Army Oral History interview) that he learned of the Wonsan plan only on 1 October, he obviously knew from the very beginning of planning for it. Oplan 112-50 had the usual distribution list, which included all of the relevant subordinate commands in the Far East Command.

71. Blair, p. 333.

72. Letter, Admiral C. Turner Joy to Cdr. Malcolm Cagle, 30 April 1956. Cagle Papers, box 3, OA, NHC. MacArthur several years later averred that he "was never apprized of any Navy objections to the seaborne landing at Wonsan. Nor was I ever advised that an overland movement to Wonsan would be quicker and more effective than a seaborne landing. Terrain and supply difficulties would have overwhelmed any such argument." MacArthur-Cagle letter, 19 March 1956, Cagle Papers, box 3, OA, NHC.

73. Struble, "Comments on Field Manuscript," p. 36.

74. Malcolm W. Cagle and Frank A. Manson, *The Sea War in Korea* (New York: Arno Press, 1980; originally published by Naval Institute Press, 1957), p. 222.

75. COM7THFLT Operation Order 16-50, Annex C, "Coordination of Air Force and Naval Air Operations," 5 October 1950, OA, NHC.

76. Smith, Personal Log, p. 51. Smith noted that "the ROKs may get to Wonsan before we can mount out."

77. Ibid., p. 57.
78. Ibid., p. 59.
79. Ibid., p. 61.
80. Stanton, p. 153.
81. Smith, Personal Log, pp. 64–5.
82. That the landing forces could be safely landed even at that late date had largely been made possible through behind-the-scenes work by Rear Admiral Burke, who on 2 October had acted on his concerns about mines at Wonsan. Burke used informal ties developed with Japanese officials to secure the services of nineteen minesweepers, which were employed at Wonsan. Potter, pp. 343–4.
83. CTG 90.8, Commander X Corps and 7th Infantry Division Group and Commander Amphibious Group 3, "Iwon, Korea: Report of Landing, October–November 1950," OA, NHC.
84. Heinl notes for interview with Doyle, 31 July–1 August 1966.
85. Letter, Joy to Cagle, 30 April 1956, Cagle Papers, box 3, OA, NHC.
86. See Message, 051952Z-NCC 9179, COMNAVFE to COM7THFLT 6 December 1950. Joy advises of an "unconfirmed report received stating Soviet Air Force preparing large scale air attack on Japan and Formosa in conjunction Chi Commie [communist Chinese] ground action in Korea. No evaluation assigned this report at present but attention [is] directed [to] potential danger." The next day Joy told Struble by message that "although it is not apparent what Soviets would gain by coming into this scrap now, [the] possibility [of it is] increasing. COMNAVFE preparing plans based on Soviet interference before, during and after embarkation." Message, 070756Z-NCC 9823, 7 December 1950, COMNAVFE to COM7THFLT, OA, NHC.
87. Field, p. 292; Cagle and Manson, p. 182; Letter, Admiral C. Turner Joy to Cdr. Malcolm Cagle, 20 April 1956, Cagle Papers, box 3, OA, NHC.
88. COMPHIBGRU 1 War Diary, OA, NHC.
89. Field, p. 287. Walker had insisted to Collins that X Corps be absorbed into the Eighth Army, and Collins had agreed. Blair, p. 530.
90. Field, p. 268.
91. Ibid.
92. Ibid., p. 285.
93. COMPHIBGRU 1, Action Report, 9 to 25 December 1950, OA, NHC.
94. Shepherd, pp. 111–2.
95. Message, 032257Z-NCC 11967, 3 December 1950, CNO to CINPACFLT, OA, NHC.
96. Shepherd, p. 86. That the idea of Shepherd relieving a senior Army commander was indeed on Joy's mind is reflected in a message of 9 December 1950 in which he reported to Sherman that "Army 8 had only 2 casualties today. Too bad. A Marine general could now be overall commander in Korea." Message, 091310Z-NCC 839, 9 December 1950, COMNAVFE to CNO, OA, NHC.
97. Doyle and Mayer, p. 49.
98. Shepherd, pp. 116–7.
99. COMPHIBGRU 1, Action Report, 9 to 25 December 1950, OA, NHC.
100. Shepherd, p. 92.
101. COMPHIBGRU 1, War Diary, December 1950, OA, NHC.
102. Shepherd, p. 93.
103. COMPHIBGRU 1, Action Report, 9 to 25 December 1950.
104. Doyle and Mayer, p. 50
105. Ibid., p. 48.
106. Shepherd, p. 97.

107. COMPHIBGRU 1 (CTF 90), "Report of ComPhibGru Operations for 25 June 1950 to 1 January 1951," Annex AA of Commander in Chief, U.S. Pacific Fleet, "Interim Evaluation Report No. 1," file A17/31-wt, serial 002 of 17 January 1951, OA, NHC, p. AA19. [See also note 63 above.]

108. Heinl notes to interview with Doyle, 31 July–1 August 1966. [See also note 63 above.]

109. See Blair, pp. 552–3.

110. Cagle and Manson, p. 181.

111. COMPHIBGRU 3, War Diary, December 1950, OA, NHC.

112. Similarly, in his otherwise superior and comprehensive history of naval operations in Korea, Field devotes only four paragraphs to the west coast operations in December 1950, while Cagle and Manson grant those activities two and a half pages.

113. Shepherd, p. 96.

114. Doyle and Mayer, pp. 50–1.

115. Action Report of Seventh Fleet, 1 November 1950–26 December 1950, OA, NHC.

116. Message, 261515Z, 26 December 1950, CNO to CINCPACFLT, OA, NHC. Kiland did go out to the Far East, relieving Doyle as ComPhibGru 1 and CTF 90, in late January 1951. Doyle, promoted to vice admiral, became COMPHIBSPAC.

117. "Interim Evaluation Report No. 1," pp. 714, 716. [See notes 63 and 107.]

118. Joint Publication 1.

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Contacting Our Editorial Office

By Mail: Code 32, Naval War College, 686 Cushing Rd., Newport, R.I., 02841-1207
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Editor, circulation, or business: (401) 841-2236, press@nwc.navy.mil
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Argentina, a New U.S. Non-Nato Ally
Significance and Expectations

Commander Federico Luis Larrinaga, Argentine Navy

LIKE MANY OTHER SURPRISING CHANGES taking place at the end of the twentieth century, the emergence of Argentina as a formal ally of the United States attracted the attention of the world. How could the United States shift so decisively its policy toward a nation whose stance had until very recently been characterized by nonalignment, neutralism, and even rivalry?

President William J. Clinton made the official announcement on 16 October 1997, during a visit to Buenos Aires; in it he designated Argentina as a "major non-Nato ally," in recognition for its uniquely close cooperation with the United States on politico-security issues in the hemisphere and around the globe.[1] This political status has been granted to only seven other countries: Australia, Egypt, Israel, Japan, Jordan, New Zealand, and South Korea. Argentina is the first nation since the end of the Cold War, and the first Latin American state, to enjoy this distinction.

It was not only international policy makers who were taken by surprise.[2] Even Argentina, though it had been conscious of unprecedented warmth in its relations with the United States and was aware that some kind of recognition was to be conferred, had never expected to be categorized as a U.S. ally. For this southern country it meant a historic achievement: a new image and new prestige in the international arena.[3]

But as the celebration ended, questions arose. What does this designation mean? What does it really involve? What should be done to take advantage of this remarkable opportunity for partnership with the world's leading nation? What will the United States expect from Argentina, and what should Argentina expect in return? In addition, this new status caused concern among Argentina's neighbors,

Naval War College Review, Spring 2000, Vol. LIII, No. 2

particularly Brazil and Chile. How should Argentina and the United States proceed so as not to disturb regional stability and Pan-American economic integration?[4]

Since President Carlos S. Menem adopted the concept of "prosperity through involvement and a distinguished national role in the world," Argentina has gone through a major change, a shift reflected not only in foreign policy and international alignments but within the country. The dramatic shift from military rule to democracy, the consolidation of stability and civilian control of the military, and the adoption of a free market economy, were all achieved in nine years.

The United States found this transformation a positive one, both in principle and in three particular respects. First, Argentina's leadership and cooperation in the field of international peacekeeping had become important, primarily in Haiti, the Peru-Ecuador conflict, Rwanda, Mozambique, Cyprus, and the former Yugoslavia.[5] Second, it offered an opportunity to reenergize American involvement in the increasingly important MERCOSUR, the Southern Cone Common Market;[6] relatedly, it held out the prospect of new support for President Clinton's proposal for a Free Trade Area of the Americas by 2005.[7] Third, it seemed likely to motivate other countries to follow Argentina's example in working toward cooperation and international responsibility.[8] Ultimately, conferment of the status of major

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Commander Larrinaga is a 1975 graduate of the Argentine Naval Academy and holds a master of business administration degree from Salve Regina University, Newport, Rhode Island. He is a naval aviator, currently commanding Naval Patrol Squadron 6, in Patagonia; previously he served in the Policy and Strategy Office of the Argentine Navy General Staff. In 1997 and 1998 he attended the Naval Command College at the U.S. Naval War College; upon graduation he served as a research fellow in the College's Center for Naval Warfare Studies, Strategic Research Department.

The author expresses his gratitude to a number of persons who agreed to be interviewed and offered guidance in the preparation of this article: Dr. Robert Scheina (National Defense University), Dr. Robert S. Wood and Capt. William Piersig, USN (then of the Naval War College), Dr. Donald C. F. Daniel (Naval War College), Dr. F. Ruiz Ramon (Center for Naval Analyses), and Jorge Osella (minister, Argentine embassy, Washington, D.C.).

The contents of this paper reflect the author's personal views and are not necessarily endorsed by the U.S. Naval War College or the Argentine Navy.

non-Nato ally, or MNNA, was the American response, and it represents a very important message from the United States—the beginning of an alliance of values with Argentina.[9] These values embody not only solidarity against threats to peace and security but also commitment to the core principles of freedom and democracy, open markets, education, and the preservation of the environment.[10]

Yet common values, though very important, are not a sufficient basis upon which to formalize and preserve an alliance. History shows that agreements last only if they address specific national interests. Economic security and political support are perhaps the main interests in both countries affected by the new relationship. Implications for the future should be assessed and expectations adjusted so as to make them compatible with social-political factors on each side. The gap in the wealth of the two countries is still too wide to allow direct economic integration; although aligned with the United States, Argentina still has to finish a difficult process of internal reorganization. Nevertheless, a range of opportunities presents itself for both nations: for the United States, to increase political cohesion and hemispheric integration, and to share international responsibility with a new partner; for Argentina, to assume a more preeminent role in the world.

Alliances must be confirmed by specific actions by both sides that indicate commitment to the partnership and acknowledge its usefulness. In this instance, how can each country strengthen this new relationship, in the framework of its own interests? What are the real expectations, on both sides, and which of them are feasible? How should they be prioritized?

Why Argentina?

There is a popular saying, "Nothing is free." This certainly applies to Argentina's historical relationship with the United States. The improvements in that relationship of the last decade have come at the price of unprecedented changes in Argentina; it was on 9 July 1989, when President Menem's administration began, that those changes truly began. Argentina had rarely involved itself in international security arrangements, maintaining instead a purely national focus. National security needs forced the country to direct its efforts toward preventing infiltration by communist organizations to foment

insurgency; the culmination of that effort was the so-called "dirty war" of 1976–79, which defeated domestic terrorism. Externally, the national objective was simply to secure its borders and territorial claims, including the South Atlantic islands and a slice of the Antarctic continent. Argentina's presence in multinational collective-security organizations was minimal (only twenty-one nationals were involved, seventeen of them in UN missions).[11] President Raúl Alfonsin, Menem's predecessor (1983–89), had recognized the necessity to change the country's isolationist stance, which had been aggravated by the military governments, the "dirty war," and the Malvinas/Falkland conflict; however, he had been able to change little in foreign affairs.

The Political Shift. President Menem understood from the very beginning of his administration that it was crucial for the country's well-being in the post–Cold War era to adopt an active global role, to show a positive shift—or at least legitimate intentions of one—toward internationalism. Objectives were set in the areas of peace and global security affairs.[12] In February 1990 Menem began a new foreign policy agenda with a commitment of armed forces to UN peacekeeping and monitoring on a larger scale than previously. Argentina provided four fast patrol boats to support the UN Observer Mission in Central America (ONUCA), becoming the first UN member to employ naval forces in this type of mission.[13] The most important consequence of this operation was that it sent the international community the first clear signal that Argentina was shifting its foreign policy in support of the evolving "New World Order," that it was going to back up this new commitment with substantial resources.

Shortly afterward, Argentina sent a destroyer, a frigate, and several air force cargo planes to support the United States–led DESERT SHIELD/DESERT STORM operation. As the only Latin American country to commit forces in the Gulf War, Argentina stood out.[14]

On 15 February 1992, President Menem announced a major contribution of ground forces to the UN peacekeeping operation in Bosnia-Herzegovina and Croatia. The Army would provide one of the twelve infantry battalions to be deployed as UNPROFOR (the UN Protection Force), a battalion consisting of nine hundred personnel and capable of operating independently. Despite the Army's lack of experience in overseas operations, a severely constrained budget,

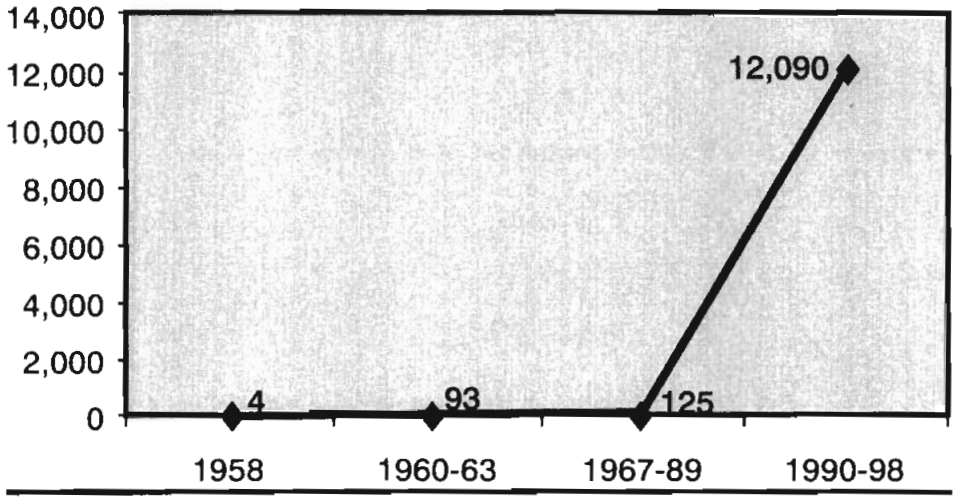
and very demanding standards for assignment to this unit, in May 1992 the 865-man Argentine Army Battalion (BEA, in the Spanish initials) was fully deployed in Western Slovenia, Croatia. The BEA remained in place until the end of 1995, rotating its personnel every six months.

Meanwhile, in April 1993, Argentina began a second major deployment in support of UN peacekeeping: a group of 390 army and marine corps personnel and air force helicopter pilots would be sent to Cyprus. Moreover, on 17 February 1997 it was announced that an Argentine army general, General Evergisto De Vergara, would be the commander of the UN peacekeeping force on Cyprus. When he took command in March 1997, it was the first time that an entire UN "blue helmet" mission force had been placed under an Argentine officer.[15]

Following the initial commitment, the country made other significant troop contributions to international peace operations as well: in 1995, a 115-man contingent to the UN mission in Haiti and fifty-seven military engineers to the UN mission in Kuwait (a commitment that continues to the present); in 1995–98, a seventy-three-man reconnaissance unit to UNTAES, the UN temporary administrative mission in Eastern Slovenia, and sixty-two civilian police personnel (of the Gendarmeria Nacional) as a Multinational Special Unit of the Nato International Police Task Group stabilization force in Bosnia-Herzegovina. In 1995, when hostilities broke out on the Peruvian-Ecuadorian border, Argentina sent a small contingent to join a non-UN group known as the Military Observer Mission Ecuador-Peru. MOMEP, with representatives from the United States, Brazil, Chile, and Argentina, acted as guarantor of a 1942 treaty on the territory claimed by the belligerents. Since 1995, twenty-nine observers have participated in MINUGUA (the UN Human Rights Verification Mission) in Guatemala. Even more recently, President Menem offered to support an international military coalition to be formed to force Saddam Hussein to accept the UNSCOM program.

The evolution of Argentina's involvement in UN operations can be observed in Figure 1: a total of 12,312 personnel, ranging from four men in 1958 to 12,090 in the 1990–98 period. Fifteen Argentine servicemen lost their lives in protecting international peace. Today Argentina is involved in many of the "blue helmet" missions around the world, currently contributing 785 men (524 troops, 261

Figure 1
Argentina's UN Involvement



policemen), as can be seen in Table 1. Of the seventy-seven countries that were contributing troops to peacekeeping operations as of 30 November 1998, Argentina was ranked eighth, with 664 men (Table 2). President Menem's initiative of global reach, then, was a success, and it became a constant element of the international scene. The United States sought new ways to recognize the Argentine

Table 1
Current "Blue Helmet" Missions: Argentine Contribution

Belgium (ICC-SHAPE)	1	U.S. (UN-PKO)	1
Bosnia (UNMIBH-IPTF)	32	Guatemala (MINUGUA)	8
Bosnia (SFOR)	77	Haiti (MIPONUH)	144
Cyprus (UNFICYP)	410	Kuwait (UNIKOM)	87
Croatia (UNMOP)	1	Middle East (UNTSO)	3
Denmark (SHIRBRIG)	1	Western Sahara (MINURSO)	1
Ecuador-Peru (MOMEP)	13	Honduras-Nicaragua (MARMINCA)	4
UN Headquarters	1	White Helmets	1

Macedonia (UNPREDEP) lifted 22 March 1999.

Source: Argentine Ministry of Defense, 31 March 1999

Table 2
Selected Troop Contributors to UN Peacekeeping
(30 November 1998)

1. Poland	1,053	13. United Kingdom	416
2. India	919	14. Canada	297
3. Bangladesh	888	15. Pakistan	291
4. Finland	787	16. Côte D'Ivoire	233
5. Ghana	780	17. Sweden	209
6. Austria	772	19. Russian Fed.	199
7. Ireland	716	20. Germany	190
8. **Argentina**	**664**	43. Japan	44
9. France	664	47. Chile	38
10. Nepal	649	49. China	35
11. Fiji	611	50. Australia	32
12. USA	583	54. Brazil	19

Source: Department of UN Peacekeeping Operations, Military Advisor's Office.

contributions, perceiving in them evidence of shared values, substantial effort in support of multinational goals, and a new national direction.

Furthermore, Argentina's example began to motivate regional participation and integration. On 27 June 1995, the Argentina Joint Peacekeeping Operations Training Center (CAECOPAZ) was inaugurated by President Menem. At the same time, five countries (Argentina, Brazil, Paraguay, Uruguay, and the United States) joined forces in a peacekeeping exercise, FUERZAS UNIDAS 95. Since then, multinational training and exercises have started in different countries. In the present environment, defense agreements within the structure of MERCOSUR are likely to succeed, particularly in the fields of peacekeeping, environmental protection, and humanitarian relief (search and rescue, for instance).[16] At the hemispheric level, Argentina hosted on 23–24 November 1998 the Second Specialized Inter-American Conference on Terrorism, organized by the OAS; at that conference an Inter-American Committee against Terrorism (CICTE, in Spanish) was created to develop cooperation against terrorist acts.

Argentina and the United States are assessing the possibility of an international antiterrorist/antidrug force and working to solve the sovereignty concerns regarding its employment.[17] In these ways, Argentina's peacekeeping efforts have changed perspectives on security at the regional and hemispheric level. Its foreign deployments have given way to bilateral and multilateral defense cooperation and a policy of close ties with neighbors.

A remarkable aspect of the policy shift has been the improvement in relations between Argentina and Chile. Chile has long been the major external security concern of Argentina, mainly because of territorial disputes. Today, all but one of the border issues have been solved. An agreement over the last one (a zone in the Andes known as the Continental Ice Fields) was signed by both presidents in December 1998 and is likely to be approved soon by the respective congresses.[18] Also, whereas Chile had been in the past a rather conservative contributor to overseas multilateral missions, in August 1997 the Argentine minister of defense announced that Chilean officers were to join the Argentine-commanded peacekeeping forces on Cyprus, together with Brazilian and Uruguayan officers, after being trained at CAECOPAZ.[19] Finally, an unquestionable example of regional integration was the total support that President Menem expressed to President Eduardo Frei regarding the detention of General Augusto Pinochet in London, even though Chilean "assistance" to Great Britain during the Malvinas/Falkland conflict had just become public.[20] The Chilean government responded with support for Argentine claims of sovereignty over the Malvinas/Falklands.[21] Relations between the two countries are now the warmest ever.

All these circumstances converge with the government's overall strategy of political alignment with the United States and of economic liberalism. Manifestations of that strategy have included the cancellation of the Condor missile project and a general realignment toward nonmilitary goals, especially relative to health and production. As regards weapons proliferation, Buenos Aires has established an exports-control regime for chemical, nuclear, bacteriological, and missile-related items; joined the Missile Technologies Control Regime and other organizations for the control of sensitive-technologies transfer; signed of the Chemical Weapons Convention; adhered to the Nuclear Weapon Non-Proliferation Treaty; suspended nuclear exports to Iran; supported the inter-American commission for illegal

arms traffic; reported data to the UN Defense Issues Transactions registry; and declared a unilateral moratorium on the manufacture of antipersonnel mines. Regionally, Argentina has joined with Brazil in creating a Nuclear Material and Policy Control Agency; with the Southern Cone Common Market nations in declaring MERCOSUR a "peace zone"; and with Brazil and Chile in forming confidence-building-measures committees on combined exercises, defense and security issues analysis, and information sharing on new weapons.

Further, President Menem has achieved, by a visit to London in October 1998, reconciliation with the United Kingdom regarding the Malvinas/Falklands conflict, joining in a bilateral declaration of commitment to the resolution of sovereignty claims by peaceful means only. Argentina is now an active participant in the Organization of American States in the area of hemispheric security issues—confidence-building measures, inter-American defense roles, and new threats. Finally, the nation is energetic, through the United Nations, in the defense of international law and the promotion of democratic regimes and human rights.

President Clinton's words in Buenos Aires eloquently summarized the reasons for conferring MNNA status on Argentina: "We accorded the major non-NATO ally status to Argentina because of the truly extraordinary efforts that have happened just in the 1990's. . . . There is hardly a country in the world that has anything approaching the record of the Argentine military in being willing to stand up for the cause of peace. We believe that we should be sending a signal that this is the policy that other countries should follow."[22]

The Economic Shift. The return of governmental power to civil Argentine authority in 1983 was the first, necessary step toward economic stabilization and prosperity. The nation had possessed a booming economy at the turn of the last century, but its potential had begun to wane during the 1930s, and in the 1950s it dropped off the roster of prosperous nations, becoming instead one of the developing countries. Most economists agree that the main mistake had been looking inward and deprecating international involvement. The Menem administration began in 1989 to gain control in the economic sphere. Reducing the military budget by half, privatizing defense industries, and abolishing universal conscription served to put the armed forces under largely effective civilian control.

A strict development policy, which the country had lacked for too long, then began. The overall framework was one of privatization,

> *In recognition of your country's extraordinary contributions to international peacekeeping, I have notified our Congress of my intention to designate Argentina as a major non-NATO ally under our laws.*
>
> *President William J. Clinton*
> *Wreath-laying ceremony in Buenos Aires, 16 October 1997*

deregulation, decentralization, open markets, and policies designed to achieve economic stability. The Convertibility Law, which went into effect in April 1991 and established a currency board to control the Argentine money supply, formed the core of Argentina's new policy. Its provisions were designed to stabilize Argentine finances and make them more transparent, providing greater confidence to both national and international investors. Since 1992, parity has been maintained—one peso to one U.S. dollar, freely convertible. Every peso is backed with hard currency from the nation's central bank reserves.

Given this open market policy, foreign funds slowly began to flow into the country (fifty-four billion dollars between 1992 and 1997).[23] Increased exports and capital investment, along with greater consumer demand and credit availability, stimulated the whole economic process. Macroeconomic indicators signaled the changes that resulted. For instance, inflation (as measured by the consumer price index), which had reached 4,923.6 percent in 1989, grew just 1.6 percent in 1995 and 0.3 percent in 1997. Gross domestic product increased 51.2 percent between 1990 and 1997. The annual average growth in GDP for the period 1990–95 was 6.2 percent; in 1996 it was 4.8 percent and in 1997, 8.6—even after the effects of the "Tequila crisis," the Mexican economic breakdown.[24] (However, IMF predictions for 1999 came true, as the Asian and Brazilian downturns slowed Argentine GDP growth significantly.) The financial system also improved in 1991, registering a growth in supply of credit, together with banking deposits, of 401 percent. Although the public debt remains a major concern (currently ten billion U.S. dollars), it has been rescheduled in a manageable way.

Still, the most significant component of Argentina's economic reform has been the enormous level of privatization, extending to most formerly state-run firms. It represents an absolute about-face after decades of state-owned public enterprises. The sale of transportation networks, electrical-power and telephone companies, oil refineries, and so on has played a critical role in the government's economic stabilization and modernization plans. Between 1989 and 1994, fully one-third of the Argentine economy was transferred from the public sector to the private. This transfer resulted in a massive infusion of new money from both overseas investors and Argentines, who in many cases retrieved funds they had sent abroad during the previous decade. Overall, the government raised substantially more than U.S. $26 billion by selling controlling interest in about 150 companies.[25]

However, privatization and systemic restructuring has been a harsh reality for the people and for some domestic industries. The unemployment rate in May 1997 was stubbornly high, 16.1 percent.[26] Although the rate is dropping, job creation through modernization has been disproportionately slow, and as more highly skilled jobs do appear, significant retraining of the workforce is needed. The position of the middle class, traditionally an outstanding strength in the country, has started to erode due to setbacks arising from labor reform, corruption, and the cost of health care and education; that erosion is today the biggest concern of the government.

Internationally, Argentina has been a member of a variety of international associations (including the United Nations, the Organization of American States, the International Monetary Fund, the International Bank for Reconstruction and Development, the Latin American Integration Association, and the Inter-American Development Bank), and it adheres to most international conventions (the General Agreement on Tariffs and Trade and the World Trade Organization, among others).[27] It has formed an agreement with Canada and the European Union. Nonetheless, the country has played its most notable role on the regional level, especially with the creation in 1990 of the Southern Cone Common Market. This free trade zone and customs union today includes Argentina, Brazil, Paraguay, and Uruguay. MERCOSUR is having a major effect on market-based development: the economies of member countries are beginning to grow and complement each other in trade and industry.[28] Other important regional agreements have been made with Chile and Bolivia

(as adherent members of MERCOSUR); also, Argentina has observer status in the five-member Andean Community of Nations. All of these agreements are congruent with President Clinton's Miami Summit of the Americas in 1994, which stressed hemispheric integration and foresaw the consolidation in 2005 of a free trade zone from Alaska to Tierra del Fuego, the southernmost part of Argentina.

These structural reforms demonstrate that the country has taken some crucial first steps toward its goals of sustainable economic growth and democratically led political stability. Argentina's challenge for the immediate future and beyond will be to consolidate the gains of recent years, institutionalizing these presidential policies and then building on this foundation over the longer term.

The Other MNNAs. The notion of "major non-Nato allies" of the United States first appeared in 1989, with the addition of language entitled "Cooperative Agreements with Allies" (Section 2350a) to Title 10 of the U.S. Code. Thereafter, until Argentina, MNNA status was always granted according to restrictive political criteria related to national-security strategic goals.

Of the prior MNNA nations, the U.S. interests in Israel, Egypt, and Jordan were and are obvious: to help the parties in the Middle East and North Africa achieve a comprehensive Arab-Israeli peace, ensuring regional stability and security.[29] In the Asia-Pacific region, Japan and South Korea are key countries in the U.S. efforts to strengthen alliances through forward presence, support constructive relations with major powers, and ensure peace in a historically unstable area.[30] Finally, Australia and New Zealand have traditionally shared American values (democracy, free trade, human rights), and they have supported sustained U.S. presence and security activity (training, force projection capabilities, etc.) in a region of great strategic weight.[31]

Argentina does not offer the same strategic leverage to the United States as any of these previous non-Nato allies; indeed, there are no outstanding geopolitical security problems in the region. The same distinction has been granted Argentina, but under a different rationale: as a confirmation of common values and a recognition of congruence in political decisions regarding U.S. interests. Argentina's circumstances as an MNNA differ, then, from those of its predecessors.

However, enough similarities can be noted with one of them, Australia, to allow a useful comparison. Both countries have shown

commitment to the preservation of similar values, and they have somewhat comparable geopolitical and economic situations. Both are in the Southern Hemisphere, though on opposite sides of the globe, and close to Antarctica (Argentina is less than five hundred nautical miles away). Both have large territorial expanses and populations that are of low density and have strong European roots. The coastlines of both are extensive, and their natural resources are ample. In both nations economic expansion is taking place, more recently in the case of Argentina. Finally, both Australia and Argentina follow policies of cooperation with the United States. Still, there are two significant differences: the geostrategic context and the time factor. There is not much Argentina can do about the first issue; the Southern Cone is a relatively peaceful area, and it does not currently represent high strategic interests. The time factor refers to the respective longevity of the relationships involved. Australia's ties with the United States are of long standing and have been frequently tested; Argentina is a new partner, and its relationship with the United States must be confirmed and defined in practice.

. . . There is no exact definition of what it means to be a "non-Nato ally"—and perhaps it is not even important when compared with the possible benefits that could be obtained. In fact, ambiguity represents an opportunity. . . .

Consequently, what aspects of Australia's healthy and durable relations with the United States should Argentina consider as the keys to taking advantage of this unique opportunity? What benefits and liabilities are to be expected?

Perhaps the most valuable characteristic of Australia from the American point of view has been its stability and historical reliability as an ally in a highly volatile area. This was reflected in the speech given by Australia's minister of foreign affairs on 5 March 1998: "Australia sees its alliance to the United States as making a contribution to regional security."[32] Australia is a predictable partner. The long list of bilateral treaties between Australia and the United States since 1815 testifies to the fruitfulness of the relation. Mutual defense assistance, atomic energy, space, communications, weapons development, scientific and technical cooperation, logistical

support, education and cultural exchanges, and air transportation are among the subjects of the more than 170 treaties.[33] As a result, Australia has preferential access to the Foreign Operations Program of the U.S. Department of State; that program includes commercial exports of defense articles services and technical data licensed under the Arms Export Control Act (or AECA, Public Law 90-269) and the Foreign Assistance Act of 1961 (FAA, Public Law 87-195), leased defense articles, excess defense articles, and foreign military sales, among other valuable opportunities.[34]

In the case of Argentina, sustaining present policies would be of paramount importance in building a reliable relationship with the United States and benefiting from it. Political coherence through successive administrations will make Argentina as reliable an ally as Australia has been, paving the way to real partnership and sustained mutual support.

MNNA: Meaning and Implications

The MNNA status given to Argentina was largely symbolic and unrelated to strategic concerns. Does it in fact signify any major change?

As we have seen, the announcement was meant to recognize Argentina's stature in international peacekeeping and promote its efforts toward economic reform and hemispheric integration.[35] But the real value and significance of MNNA status is that it reflects an unprecedented degree of mutual confidence and congruity of policy; as such, it opens a new set of rules between the two countries. Opportunities will open at all levels as acknowledgment of the new alliance grows.

In the defense realm, MNNA status implies a close working relationship with American forces. It does not establish any mutual defense obligation, imply special access to advanced weaponry, or carry the kind of security guarantees afforded to members of Nato. Nevertheless, it offers some benefits in the foreign-assistance process that could be substantial. The legal bases for that process and the role in it of MNNA status are section 517 of the Foreign Assistance Act of 1961, as amended, and the Arms Export Control Act.[36]

Argentina would be eligible by law for priority delivery of excess defense articles, access to stockpiles of U.S. defense articles,

Figure 2
Security Assistance Programs
Applicable to Argentina as an MNNA

- **Foreign Military Sales** (FMS)—FAA, Section 524: government-to-government sales of defense articles, training and services (during 1997 Argentina was granted $18,981,000)
- **Direct Commercial Sales** (DCS)—AECA, Sections 21–40A: sales of defense articles, services, and training from private companies with export licenses from the Department of State; negotiated directly between the foreign government and the U.S. arms manufacturer (in 1997 Argentina was granted $208,464,576, second-largest grant in the region after Brazil, but only $3,283,000 was delivered)
- **Foreign Military Financing** (FMF)—AECA, Section 23: grants and loans for defense articles, training, and services
- **Excess Defense Articles** (EDA)—FAA, Section 516: used and surplus arms and equipment of the U.S. armed forces, ranging from rations and uniforms to vehicles, cargo aircraft, and ships; most transferred at no cost but may be sold, loaned, or leased; coordinated by Security Assistance Organizations (SAOs) at U.S. embassies; maximum EDA to a foreign government per fiscal year is $350 million, current value (Argentina was offered $23,352,000 in 1997, more than any other country in Latin America and the Caribbean)
- **Leases**-AECA, Sections 61–64: defense articles leased by the U.S. government
- **International Military Education and Training** (IMET)—FAA, Sections 541–6: funding for courses given in the United States and in-country by U.S. personnel (Argentina was the region's second largest recipient in 1996 and the third largest in 1997 with $603,000 and 179 students; the 1999 figure was $600,000)
- **Expanded IMET**—subset of IMET for noncombatant training (Argentina was second in the region during 1996 and fourth in 1997)
- **International Narcotics Control** (INC)—FAA, Sections 481–90: funding for equipment, training, crop eradication, and other programs of the State Department's Bureau for International Narcotics and Law Enforcement; aid granted is shared within South America
- **Section 1004 Counterdrug:** training, equipment upgrades, and other services provided by the Department of Defense for counternarcotics ($261,000 approved for Argentina in 1998)
- **School of the Americas**—Fort Benning, Ga.: U.S. Army Spanish-language training school for Latin American militaries (eighteen Argentine students in 1997)
- **Inter-American Air Forces Academy**—Lackland Air Force Base, Tex.: U.S. Air Force Spanish-language training school for Latin American militaries
- **Center for Hemispheric Defense Studies**—National Defense University, Fort McNair, Washington, D.C.: to improve planning and management skills of civilians
- **U.S. service academies**
- **Foreign Military Interaction** (FMI): also known as military-to-military contact
- **Excess property:** nonlethal equipment provided by the Department of Defense for humanitarian purposes
- **Special Operations Forces Training:** includes the Joint Combined Exchange Training (JCET) program
- **Deployments for Training** (DFT)
- **Humanitarian and Civic Assistance** (HCA)
- **Exercises:** UNITAS, CABANAS; counterdrug, peacekeeping, skills-exchange exercises

FAA Foreign Assistance Act
AECA Arms Export Control Act

purchase of depleted-uranium antitank rounds, participation in cooperative research and development programs, and advanced training. The programs that are governed by the FAA and the AECA (traditionally known as "security assistance") and by the Defense Department for which Argentina would be not only eligible but favored under the new status are given in Figure 2. In addition, Argentina has received an aid grant of $1,250,000, to be used during the next five years in multinational training (CAECOPAZ) and operations.

However, the Defense Export Loan Guarantee (DELG) program, which insures private lenders who finance sales of defense articles (authorized by section 2540 of Title X, U.S. Code), permits the participation only of countries that were major non-Nato allies as of 31 March 1995; it cannot be used by Argentina. Western Hemisphere countries generally cannot currently participate in the DELG program, for reasons that might not be valid today; a small change in the law (the time limit) would make Argentina and future MNNAs eligible. This program would be particularly beneficial to Argentina, because of its highly constrained defense budget. Foreign military sales and excess-defense-articles acquisitions have been limited by Argentine budget restrictions.[37]

Aside from foreign assistance, defense relations between the United States and Argentina have notably improved since the designation was made. Visits of high-ranking authorities (including defense ministers) are leading the way to defense agreements, enhanced military-to-military contacts, better integration of multinational forces throughout the hemisphere, and increased Argentine responsibility in planning and organizing multinational exercises, UNITAS, and regional combined activities. Some specific achievements of these bilateral security meetings are listed in Figure 3.

But still, from an Argentinean perspective, the implications of MNNA status should extend far beyond security issues. Even though it was granted for no evident strategic interest, it must surely carry significant political leverage. Although relations with third parties are not affected directly, they might be influenced. By the same token, increased stability and security are likely to enhance economic relations and present opportunities. In these realms, there is much that could be achieved.

Figure 3
Bilateral U.S./Argentine Defense Achievements

- **Consolidation of a Bilateral Working Group** (BWG)--organized in six subgroups: military cooperation, security assistance, peacekeeping operations, civilians' defense education, science and technology, and environment protection cooperation (the fourth meeting took place in Buenos Aires in October 1998)
- **Master Information Exchange Agreement** (MIEA)—between the U.S. Department of Defense and the Argentina's Ministry of Defense to conduct reciprocal, balanced exchanges of research and development information of mutual interest to the parties in order to improve conventional defense capabilities through standardization, rationalization and interoperability (signed 22 July 1998)
- **Information Security Bilateral Agreement**—on military interoperability and scientific-technological cooperation (Signed 11 January 1999)
- **Acquisition Cross Services Agreement (ACSA)**—concerning responsibilities in logistics, transportation and equipment (under negotiation in the U.S. Department of State)
- **Agreement of Defense-Related Environmental Cooperation** (under negotiation in U.S. Defense Department)

Source: Argentina Ministry of Defense, Military Affairs Secretariat

Regionally, Argentina is doing its best to solve discrepancies and promote integration. MERCOSUR is on its way to merger with the North American Free Trade Association to produce a hemispheric free market. Relations with Chile have never been so steady. The Falkland/Malvinas issue is the only unsolved foreign issue, and President Menem has given top priority to the improvement of relations with the United Kingdom and the islanders, pursuing various kinds of negotiations. The United States, as Britain's closest ally, could contribute to the solution of this controversy, which involves Argentina's vital interests.[38]

Today, in the third year of this new relationship, things have not changed very much in terms of tangible results. Even in security assistance issues, Argentina has been unable to meet its needs. Buenos Aires is looking for greater consideration as an MNNA in order to sustain its capacities and uphold its commitment to peacekeeping and multinational efforts.

There being no preconceptions and established patterns to limit the scope and benefits of the MNNA designation given to Argentina, regional concerns and stability should be the only perceived limits in bilateral analysis of the possibilities. It is now time to turn a unilateral declaration into more profitable bilateral relations, exploring all possible areas and establishing a doctrine of a compatible cooperation.

Concerns, Opportunities, and Disadvantages

From a national perspective, the Menem administration has been criticized for implementing extreme economic measures without taking full account of social consequences. Most macroeconomic improvements were achieved at high social cost. Deregulation and the privatization boom caused, as we have noted, unemployment and income insecurity among the middle class. Today, a political reaction is evident.[39] Important figures of the country are demanding that globalization and free trade be supported only to the extent that they are compatible with domestic social and political stability. In this view, international integration might lead to social disintegration if globalization is not rationalized with respect to the industrial culture, sophistication, and wealth of the nation.[40] Economists in Argentina argue that the economic process is being retarded essentially because of a "social exclusion effect" (unemployment and lower wages) caused by its rigidity and by mismanagement of the human dimension.[41]

A high priority for social stability, then, will be critical if Argentina is to be able to sustain its current policies. Related to this problem is the need to minimize corruption, which is still extensive and impedes economic improvement. Although that fact is largely acknowledged throughout the country (which is actually a good sign), the question is how decisively the presidential administration will respond—how it handles the elements of national power that bear upon the social burden, particularly the organizational-administrative element, which has been the most troublesome throughout the history of the country and appears to be the key to the nation's future performance as a whole.[42]

The historical trends of the various political parties indicate that foreign policies will be maintained on a "quid pro quo" basis (contributions proportional to achievements). In general, Argentina will remain globally proactive as long as social improvements can be achieved, and as long as external relations are fair and reciprocal.

External relations include, particularly, those with the other nations of the region. The official announcement of the new status granted to Argentina caused surprise and consternation among its neighbors. No such proposal had ever been offered to any nation in the Western Hemisphere; the designation produced negative reactions, due to the uncertainty of its meaning and scope. Brazil was

concerned especially about the economic implications of greater U.S. influence in the region; a former Brazilian president, José Sarney, argued that the move was an attempt by the United States to destabilize relations among MERCOSUR members. Argentina was also generally criticized as having, supposedly, won its new status by demeaning itself, bending to Washington's whims and disregarding its sovereignty.

On the other side of the country, Chile focused on regional security, being annoyed by the possibility of an American military alliance.[43] Chilean officials claimed that Argentina's new status was unnecessary and would cause friction, undermining the regional military balance.[44] Chile's minister of foreign affairs traveled to Washington to request an explanation; the secretary of state assured him that the status did not involve security but "recognize[d] symbolically a country's relationship with the United States, and it is open to other countries"—implying that Chile could achieve the same status.[45]

The record shows that the United States did in fact have regional balance and stability primarily in mind: not only had Washington lifted its arms embargo on South America prior to the designation but it had, above all, observed regional cooperative achievements and trends.[46] The designation was also meant, as we have noted, to be supportive of MERCOSUR as a step to broader hemispheric economic integration.

Nevertheless, legitimate arguments are being raised regionally, pointing out the risks of asymmetric globalization and the dilemma between international involvement and loss of sovereignty.[47] Every actor playing a role in globalization has particular considerations in terms of relative power and competitive advantage. To open to globalization a developing market without the needed social infrastructure or regulations is very likely to increase existing inequalities and exclusions within a country and region. Each nation has its own rhythms of evolution and consequently of integration, and their interactions with globalization are always difficult to predict.[48] Stronger economies, for their part, can be expected to consider the social dimension of their new economic partners from an ethical perspective. The willingness of each nation to integrate globally, and its real capacity to do so, should be measured in terms of proportionality and relative capacity.[49]

The United Kingdom, due to its persisting South Atlantic disputes with Argentina, may well have privately raised objections to the granting of MNNA status. As the closest ally of the United States, it had been informed prior to the designation, and the Americans had discussed the issue with British authorities.[50] Acknowledging Argentina's maturity in foreign affairs and politico-economic accomplishments may have been London's main reason for agreeing to the new alliance. However, it seems prudent to assume that the United Kingdom demanded as a precondition that the United States not interfere in the Falklands/Malvinas dispute.

In any case, relations since then between Argentina and the United Kingdom have improved significantly. The queen received President Menem in October 1998, and Prince Charles, the heir to the British throne, visited Argentina in March 1999.[51] In addition, the British arms embargo has been lifted, and military contacts were established in 1999 to plan future combined exercises, probably starting with naval forces.

As for the Falkland/Malvinas affair, discrepancies about sovereignty prevail: Argentina claims the islands as a legitimate part of its national territory, and the United Kingdom defends the islanders' right of self-determination. For Argentina, the Malvinas represent a high national interest. There are not many issues that unite Argentine popular opinion, but this is one of them. Nevertheless, Argentina is committed to solving the dispute diplomatically through the United Nations, and its main concern is to sustain an open dialogue until a solution is found. Buenos Aires is willing to support the islanders' aspirations and is reopening relations to gain their confidence, but it argues that they do not have the status of a third negotiating party. The solution should be reached between the United Kingdom and Argentina exclusively, to avoid misperceptions.

Presently, therefore, Argentina's MNNA status can be helpful in only an indirect way;[52] the United States and Argentina have agreed that the former should not interfere with these negotiations. However, during a January 1999 visit of President Menem to Washington, he requested "support" from President Clinton, not that he act as a mediator but that he "stimulate" the dialogue.[53] The same plea was made to the Secretary-General of the United Nations by Argentina's foreign minister in connection with UN Resolution 2065, which urges both parties to find a prompt solution.[54]

A Unique Historical Opportunity

There has been a political and economic sea change in Argentina over the past decade. That its active role in global security issues, hemispheric cooperation, and determination to solve disputes by negotiation have held constant throughout the decade proves the nation's responsibility and commitment to common values.

It is consistent with the U.S. interest and security strategy to become a partner with such nations, which can shoulder the burdens of the security and expansion of democracy.[55] MNNA status is highly symbolic, but nobody can deny its political implications. The bilateral opportunities that this moment offers are vast, extending far beyond security to economic, financial, scientific, educational, environmental, and commercial areas. Responsibility and ethical implications mark the real limits. Already, government leaders, lawyers, investors and entrepreneurs, educators, scientists, workers, and students are breaking down tariff, legal, and cultural barriers. Dynamic regional markets are poised for even greater growth, which the United States might help shape and take valuable advantage of.[56] What in fact do the two nations hope to achieve?

There is no doubt that the differences in national power and global roles between Argentina and the United States affect their mutual expectations. Realism would indicate that the United States, as the world's only superpower, represents a great deal to Argentina; what does Argentina mean to the United States? Comparative advantages are vast on one side; are there any on the other? The result of this imbalance is that the attention of the southern country is highly focused in this new relationship. Simply speaking, Argentina has very high expectations from this partnership; it expects a substantial degree of integration with the United States.

Before exploring such issues, it is necessary to set the two nations' interests and strategies against the background of global transformation. It is widely accepted that the future is being shaped by certain irreversible trends, which might be seen as opportunities or threats, depending on one's perspective. The most influential trends appear to be globalization and economic interdependence (which influence competitive advantage and denationalization) and technological networking (involving information, communications, and transportation). A critical effect of these driving forces is the reconfiguration of

interstate and transnational organizations, under redefined rule sets.[57] We may add to these what might be the biggest problem of the new millennium: overgrowth of population in relation to the production and distribution of food and water.[58]

U.S. Expectations. To the American people, Argentina is a little-known developing country in the Southern Hemisphere, one with which the United States has had cultural differences and a conflictual past. To businessmen and officials, it is a state achieving substantial change in terms of international involvement and regional cooperation, as well as slow if steady economic growth—but having little strategic importance.

It would seem incumbent, then, upon Argentina to attract the attention of its new and powerful ally. What can Argentina offer? What can it do that would meet American expectations of a useful partner?

The United States intends to maintain its leadership in the global community, promoting its basic national interests:[64] protection of its security and vital geopolitical interests (implying a need to secure peace, deter aggression, prevent crises or otherwise defuse and manage them, cooperate with allies, build structures, further arms control and disarmament, and deal with the threat of weapons of mass destruction); promotion of American prosperity (of which 35 percent is related to international business, making the global marketplace more important than ever to the domestic economy, and accordingly the stability and promotion of open markets and free trade); protection of U.S. citizens abroad; safeguarding of the nation's borders (especially through enforcing immigration policies); shielding of the nation from narcotics trafficking, terrorism, and other international crimes; promotion of American values, including democracy, human rights, and the rule of law (in particular through developmental assistance to reform faulty judicial systems and to help train parliamentarians); humanitarian assistance to those in greatest need; global challenges of excessive population growth, contagious disease, and environmental degradation; and finally, for carrying out the nation's foreign policies, the maintenance of a strong international presence.[59]

It is in this combined context of worldwide trends and global American interests that the United States will look to Argentina, and

in which Argentina might very well represent useful opportunities to the United States. In general, "to promote the consolidation of the political and economic progress and close bilateral relationship, the U.S. calls for a steady and broad engagement with Argentine leaders and civil society."[60] More specifically, American objectives regarding Argentina include: consolidating Argentina's progress toward a stable democratic order and open economy; assuring high levels of U.S. exports to Argentina; establishing a secure environment for U.S. investment and for intellectual-property rights holders; strengthening U.S.-Argentine security ties; encouraging continued Argentine participation in international peacekeeping and regional confidence-building activities; supporting a strong Argentine antiterrorism and law enforcement capability; and fostering Argentine leadership as it prepares to host the Fourth Conference of Parties on Climate Change.[61]

In addition, Washington might usefully choose to apply itself to a number of issues specific to Argentina's circumstances: market-based solutions for climate change; use of various foreign-assistance resources to improve the capabilities of Argentine armed forces, which cannot themselves at a time of great budgetary stringency achieve the improved interoperability with U.S. and Nato forces that becomes increasingly important as Argentina expands its worldwide peacekeeping activities; and antiterrorism and anticrime assistance against transnational threats to Argentine society and to regional peace and security.

From a practical point of view, what might the United States expect from Argentina? To carry on its overall national strategy of global involvement, Washington needs greater contributions from responsive partners.[62] There appear to be three major areas where Argentina can contribute. The first is timely political coverage, in terms of legitimacy. This is highly valued, particularly in situations that demand rapid response, or in which the UN becomes immobilized or for reason of its charter cannot act. Preventive strategies and crisis-response prearrangements, as examples, would provide a useful time advantage. The second is international involvement, supporting U.S. efforts to defend common interests and norms. Shouldering responsibility in a proportional manner means not only sharing costs but earning the right to share in future benefits. In this sense, involvement triggers global cooperation "by example." For Argentina, this could involve strengthening its diplomatic and

military tools to address global challenges such as crisis prevention, peacekeeping, humanitarian response, human health assistance, environment protection, and actions against illegal drugs, international terrorism, and crime. The third promising area is economic security. This most important goal involves providing and supporting the necessary conditions to increase global economic growth. These would include national and regional stability, open markets and free trade, cultural exchanges, control of natural resources, and food and water production and distribution.

The United States, however, might well perceive a number of issues that could diminish the value to it of the new relationship. One is in the arena of reputation and international perception, which are vital in sustaining a comfortable relationship. Although Argentina is undergoing a process of positive changes, it has politico-economic concerns that need to be decisively addressed. These concerns are focused on political-social development and economic stability, necessary conditions for international involvement and growth. First, Argentina will make itself less useful as a partner in American eyes, and in turn will derive less benefit from its non-Nato ally status, if it cannot muster the coherence and reliability necessary to institutionalize the policies that the United States wished to recognize in the first place. The recent radical changes in politics and economics must survive the succession of administrations. Second, it must solve domestic social disparities.[63] Progress in unemployment and regressive income distribution, health care and education, as well as other microeconomic problems, is necessary to the social stability that, in turn, underpins the activism that has made Argentina attractive as an ally. Third, Argentine society must reduce corruption.[64] The present level of corruption is perceived internationally as unacceptable, affecting the reputation of the country and impeding relationships and businesses. Finally, the Argentine judiciary system, which at present causes apprehension with respect to its efficiency, must be enhanced.[65]

Argentina's Expectations. Leadership implies capability of the leader and acceptance by the led. There is no question that the United States is the most powerful nation today; however, the consensus fluctuates as to its stature as a global leader. The United States will be unable to sustain a leading position unless it provides other

countries the means necessary to work with it. It must support international coordinating systems (the UN, Organization of American States, and so on) focused on upholding peace, but it must also address the economic issues in which most problems are rooted.

The Western Hemisphere is the most peaceful region in the world today, but that should not necessarily entail a low priority. This now-democratic hemisphere should, for the benefit of all its nations, become a productive one as a whole. What happens here will have a major impact on the United States. Although in 1998 almost 45 percent of U.S. exports went to the Americas, the general feeling is that the powerful North American nation is not giving this region a proportionate level of interest, effort, and commitment toward greater openness and integration.[66]

Nevertheless, the United States does have a positive approach, reflected in presidential visits and more integrative policies—such as agreement to a Free Trade Area of the Americas by 2005. However, in view of the facts that conditions for expanding U.S. markets in Latin America are inadequate and that the region lacks resources to undertake major economic and social programs needed to carry out its positive intentions, the United States should emphasize developmental assistance prior to further demands for globalization and free trade. Argentina, as a new ally, looks most of all for a real partnership, fair and equitable for both parties. Fairness would imply a mutuality of gains—based on proportionality and reciprocity in terms of national power and national will, and limited only by the partners' legitimate concerns.

Argentina sees this alliance, granted perhaps for symbolic reasons but fairly and genuinely earned, as an achievement to be proud of, a historical opportunity that opens the way to several options. Above all, it is willing to do its share. But as Argentine authorities brainstorm the real meaning and future implications of the new status, their focus should be not in its theoretical significance but in its practical opportunities.

Significance is ambiguous—there is no exact definition of what it means to be a "non-Nato ally"—and perhaps it is not even important when compared with the possible benefits that could be obtained. In fact, ambiguity itself represents an opportunity, an opportunity for choices and accomplishments that will, in the end, establish significance. But what are the options?

Defining concrete options is not the purpose of this article (though we will offer some possibilities below, some suggested by interviews with knowledgeable analysts, both American and Argentine). They are numerous and varied, depending on the missions and goals of the stakeholders involved. The bilateral working groups (officials from the departments of state and defense of both countries) created when President Clinton visited Argentina in 1997 appear adequate to explore, select, and coordinate options, as long as they are kept fully aware of the needs, changes, and opportunities of the parties. But first of all, these groups need to inform and motivate the respective stakeholders about the possibilities. Those on the Argentine side can be expected to consider a number of particular areas feasible in terms of common interests and comparative advantages.

The first of these is increased economical involvement, basically assistance in creating an environment and infrastructure in which business can thrive. Argentina's new status recognizes that it has established the level of security mandatory for economic enterprise. The country's main comparative advantages are related to its geography: its size (it is the seventh-largest nation in the world); its natural resources—including its arable land and the living and nonliving resources of its huge continental shelf (3,300,000 square kilometers); and its geostrategic situation (access to Antarctica and throughout the South Atlantic). Through MERCOSUR, Argentina looks forward to becoming a global food exporter. Agriculture represents one of its most important potentials; because conditions for production are favorable and demand is growing, it can be competitive without subsidization.[67] Argentina strongly supports U.S. objectives regarding free and open agricultural markets. As a matter of fact, and due to the growing global importance of agricultural products, a consulting committee was created in 1998 to strengthen bilateral relations in this area.

Second, the United States is expected to continue to represent the main source of foreign investments in Argentina. Since 1991, direct U.S. investment has grown 245 percent; by 1997 it had reached almost ten billion dollars. Commercial exchange between the countries during 1997 amounted to $8.02 billion. However, the trade balance was in that year markedly favorable to the United States, one of the most competitive countries in the world; its exports increased 392 percent (mainly machinery, electronics, fertilizers, soybeans,

and herbicides), while Argentine exports increased only by 46 percent (mostly oil, leather, and food). It is difficult for Argentina to compete with the United States in a free market–type economy; Argentina, as a formal ally, looks in this initial stage for a degree of preferential treatment in its commerce with the United States. Specifically, the restoration of "fast track" authority in such matters to the U.S. executive branch would promote growth-creating trade agreements and facilitate the opening of foreign markets for American exporters. Increased economic involvement should also include research-and-development information exchanges and increased opportunity for participation in U.S. science and technology programs.

A second major arena of Argentine expectations is defense interaction. Buenos Aires holds as a major goal the deepening of interoperability with U.S. forces, especially through grants and affordable defense assistance. As we have seen, Argentine defense policy is directed toward cooperative engagement; the country has displayed commitment to global security issues in support of the UN and the United States. However, Argentine armed forces today are being pushed by their budgets to downsize and focus more narrowly on their core missions. If present capabilities are to be sustained, training and equipment upgrades are top-priority needs. Argentina expects the United States to see professional engagement and interoperability not only as ways to enhance skills and expand training opportunities but as imperatives for future out-of-area, combined operations.[68]

Today, in a context of commitment and alliance with the United States, and with the former British arms embargo and U.S. veto both lifted, Argentina needs to advance its defense systems to the state of the art and to interact with the best role models. It wishes to proceed in two broad areas: personnel contacts, training, and communications (especially command and control interoperability; mutual exchanges such as naval "ship riders"; regional training opportunities; academic and operational courses of instruction; war gaming at the regional-strategic level; meetings to address organizational, administrative, and doctrinal issues; combined regional and out-of-area operations; and multinational doctrinal development); and the transfer of defense equipment and infrastructure on affordable terms (in particular, operational networking capacity, advanced technology and

Internet-based systems, priority delivery of defense articles, and affordable financial programs).

If American expectations of Argentina as an ally are tempered by perceptions of that nation's weaknesses, from the Argentine point of view the United States has problems of its own. It is often perceived as disregarding hemispheric concerns, and prioritizing East-West relations over North-South ones. As a result, the true extent of U.S. hemispheric involvement and responsibility might be considered uncertain by many nations, including Argentina. Historically, the United States has been primarily committed to Europe. If today the Western Hemisphere offers an opportunity of economic integration in which the United States is interested, to take advantage of it that nation will have to take consistent account of the ethical implications of commitment to free trade and globalization.

Options and Outlook

Notwithstanding the complexities and uncertainties, there are a number of specific initiatives that might be pursued, some of them mentioned or implicit in the analysis above. These possibilities meet the criteria of expectation, need, willingness, and capability; they represent opportunities from which both parties could benefit; and taken together, they would supply actual content to the heretofore undefined and largely symbolic concept of "major non-Nato U.S. ally." The suggestions fall into three broad groups, of which the first is military cooperation:

- More affordable acquisition programs
- Command and control to support long-range maritime search and rescue in the South Atlantic area
- Enhanced regional air control systems (the Southern Hemisphere already properly covered)
- Improved command-and control interoperability and networking (for information warfare, space and electronic warfare, and regional and out-of-area operations)
- Multinational doctrinal development and training (for naval expeditionary warfare, military operations other than war, and other diverse scenarios)

- A South Atlantic logistical site for the support of both Argentine and deployed U.S. forces
- Combined littoral warfare training (land-based air attacks, submarines/shallow-water warfare, mine warfare).

The second is that of hemispheric security: integrating satellite information systems (networking security agencies), humanitarian assistance cooperation and training (risk assessment and disaster preparedness, early warning, regional and international coordination), environmental protection programs, combatting drug trafficking and terrorism, and research and development in such common programs as the environment, oceanography, and Antarctica. The third is political and economic integration. It would embrace such initiatives as consolidating and promoting the "new American vision" of increased politico-economic integration and broadly based development proposed in 1999 by the Argentine ambassador to the United States.[69] Under this heading one could also suggest increasing interagency (foreign and defense ministry) consultations within the framework of the existing bilateral working groups, "fast track" negotiation authority in hemispheric economic negotiations, gradual agreements aimed at proceeding from NAFTA and MERCOSUR toward a Free Trade Area of the Americas, and promoting bilateral micro-enterprise programs.

President Clinton's conferral upon Argentina of the status of "major non-Nato ally" represented an unprecedented message from the United States about a new perception of Argentina. A communion of values had been achieved, and it established an appropriate context for new opportunities at almost every level. Though Argentina does not have the same strategic leverage as the other seven MNNA, it can still achieve benefits. This relation opened a new set of rules and opportunities; the very fact that these rules and opportunities are as yet undefined in practical terms implies that they can be expanded at all levels as experience of the new alliance grows.

The MNNA designation basically implies a close working relationship between the two countries' defense forces, particularly eligibility and (in certain cases) priority under U.S. foreign-assistance legislation. Legally, it does not establish defense obligations, imply access to advanced weaponry, or offer mutual defense or security

guarantees. To date, the most significant achievements have been a number of defense-related agreements, enhanced military-to-military contacts, and improved integration of multinational forces through combined exercises.

Nevertheless, the Argentine view is that, as of its third year as a major non-Nato ally, not much has been achieved in terms of tangible results, and not enough benefit has accrued to Argentina to allow it to sustain its capabilities and commitment to peacekeeping and multinational involvement—the very capabilities and commitment by which it earned its new status. The new status, and the radical changes implemented by President Menem's administration in furtherance of it, have generated domestic and regional difficulties, all related to the possible implications of broader U.S. influence: economic destabilization, undermining of the regional military balance, and social unrest caused by rapid progress toward an extreme free-market economy without the necessary infrastructure in place.

When it was conferred, Argentina's new status as a major non-Nato ally of the United States had little concrete, specific meaning in terms of precedent, procedure, or law. In such respects, its significance is still unclear. That ambiguity, however, is not a problem but an opportunity—to take initiatives, achieve innovations, stretch boundaries, and define the concept through accomplishments. Integrity, open dialogue, and a mutual will to match interests and expectations will lead the way to a mature partnership.

Notes

1. Presidential Determination 98-9 of 6 January 1998, *Federal Register*, vol. 63, no. 16.
2. Michael May, "Argentina Issue of Non-NATO Status Causes Concern," *Jane's Intelligence Review*, vol. 4, no. 10, p. 15.
3. Calvin Sims, "U.S. Alliance Brings Prestige to Argentines," *New York Times*, 20 October 1997.
4. Terence Hunt, "Latins Uneasy as Clinton Tells of Military Moves," *Memphis (Tenn.) Commercial Appeal*, 17 October 1997.
5. House Committee on International Relations, Subcommittee on Western Hemisphere, *U.S. Policy toward South America: Hearings*, testimony of J. Davidow, Assistant Secretary of State for Inter-American Affairs [hereafter Davidow testimony], 8 October 1997, in Federal Document Clearinghouse, *Congressional Testimony*.
6. May, p. 15.
7. Christian Chaise, "Clinton Defends Latin American Policy on Argentine Television," Agence France Presse, 17 October 1997.
8. Davidow testimony.

9. William J. Clinton, "Remarks at a Wreath-Laying Ceremony in Buenos Aires, Argentina," *Weekly Compilation of Presidential Documents*, 20 October 1997.

10. Ibid.

11. *United Nations Handbook, 1989* (New York: 1990), p. 41. The UN operations were UNIIMOG in Iran-Iraq and UNAVEM in Angola.

12. Herbert C. Huser, "Democratic Argentina's Global Reach," *Naval War College Review*, Summer 1998, p. 57.

13. Juan Carlos Neves, "The Argentine Navy and United Nations Peace-Keeping Operations in the Gulf of Fonseca," *Naval War College Review*, Winter 1994, p. 47.

14. Juan Carlos Neves, "Interoperability in Multinational Coalitions: Lessons from the Persian Gulf War," *Naval War College Review*, Winter 1995, p. 51.

15. Huser, p. 59.

16. "Remarks of President Menem," 8 July 1997, Telam.

17. Fatima Sleiman, "El MERCOSUR y la seguridad," *La Nacion News*, 14 January 1999, retrieved from the World Wide Web: www.lanacion.com.

18. "Hielos: Menem y Frei listos para la firma," *Clarin News*, 15 December 1998; and "La Argentina y Chile ya no tienen conflictos limitrofes pendientes," *Clarin News*.

19. "Chilean Officers to Join Argentine Force in Cyprus," *Clarin News*, 22 July 1997.

20. "Otra Señal de Menem a Chile," *Clarin News*, 24 October 1998; and "Detalles de la Ayuda de Chile a Londres en Malvinas," *Clarin News*, 1 December 1998.

21. "Luego del arrepentimiento, Chile firma una declaracion de apoyo por las Malvinas," *Clarin News*, 15 December 1998.

22. "President Clinton's remarks in the Univision Town Meeting in Buenos Aires," *Weekly Compilation of Presidential Documents*, 16 October 1997.

23. *Anuario Estadistico de la Republica Argentina 1998* (Buenos Aires: Instituto Nacional de Estadistica y Censos), p. 16.

24. Ibid., p. 19.

25. *Argentina Business*, 2d ed. (San Rafael, Calif.: World Trade Press, 1998), s.v. "current issues."

26. Ibid., s.v. "labor."

27. Ibid., s.v. "Arg. international role."

28. Ibid., s.v. "Mercosur."

29. U.S. State Dept., *Congressional Presentations for Foreign Operations, Fiscal Year 1997 and 1998* (Washington, D.C.: Office of Resources, Plans and Policy, March 1998), p. 507.

30. Ibid., p. 176.

31. Ibid., pp. 176–7.

32. Speech by the Hon. Alexander Downer, MP, minister of foreign affairs, to the Joint Services Staff College, Canberra, 5 March 1998, Embassy of Australia, Washington, D.C.; and Australian Legal Information Institute, *News and Additions*, retrieved from the World Wide Web: http://www.austlii.edu.au [hereafter AustLII].

33. Embassy of Australia, *Australian Treaty List: Bilateral* (Washington, D.C.: Department of Foreign Affairs and Trade); and AustLII.

34. U.S. State Dept., *Congressional Presentation*.

35. U.S. State Dept., *U.S. Secretary of State Madeleine K. Albright and Argentinian Foreign Minister Guido Di Tella Press Remarks* (Washington, D.C.: Office of the Spokesman), 15 August 1997.

36. *Improvements to Certain Defense and Assistance Provisions, Title 22 U.S. Code*, sec. 2321k (Designation of Major Non-Nato Allies); *Title 10, U.S. Code*, sec. 2350a (Cooperative Research and Development Projects, Allied Countries); Presidential Determination 98-9; and Latin America Working Group, *Major Non-NATO Ally (MNNA) Status, US Security*

Assistance to the Western Hemisphere, retrieved from the World Wide Web: http://-www.ciponline.org/facts/mnna.htm.

37. Latin America Working Group/Center for International Policy, *Security Assistance to the Western Hemisphere, 1998*. Retrieved from the World Wide Web: www. ciponline.-org/facts/index.htm.

38. "La visita presidencial: Primer dia del Presidente Argentino en Washington 'Menem dijo que Clinton va a hacer una gestion ante Blair por Malvinas,'" *Clarin News*, 12 January 1999.

39. R. Cohen, "In South America and Asia, Discovering Globalization's Perils: Argentina, a Paradigm, Gets a Rude Surprise," New York Times Service, *International Herald Tribune*, 7 February 1998.

40. William Pfaff, "Don't Forget That Globalization Creates Losers Too," Los Angeles Times Syndicate, *International Herald Tribune* (Neuilly-sur-Seine, France), 13 November 1997.

41. Pedro Lacoste, "Con los ojos puestos mas alla del 99," *Clarin News*, 10 January 1999.

42. Frederick Hartmann, *The Relations of Nations*, 6th ed. (New York: Macmillan, 1983), pp. 58, 67.

43. F. Quilodran, "El debate regional cambio la agenda del Grupo Rio. Menem busca calmar a Frei y Cardoso," *La Nacion News*, October 1997.

44. May; and Hunt.

45. Axle Krause, "Rediscovering Latin America," *Delegation of the Commission of the European Communities*, November 1997, retrieved from the World Wide Web: http://www.-proquest.umi.com.

46. C. Chaise, "Clinton Defends Latin America Policy on Argentine Television," Agence France Presse, 17 October 1997.

47. E. Gosman, "Dura critica de Cardoso a la globalizacion," *Clarin News*, 5 January 1999; and "Critica 'globalizacao assimetrica' e pide uniao do Mercosul contra a crise," *Globo On* (Brazil).

48. Paul Samuelson, "Una mirada sobre 1999," Los Angeles Times Syndicate for *Clarin News*, 10 January 1999.

49. Ciudad del Vaticano, "El Papa y los conflictos mundiales," ANSA for *Clarin News*, 12 January 1999.

50. U.S. State Dept., *Secretary of State Remarks*, 15 August 1997.

51. Jason Webb, "British Heir to the Throne Prince Charles Will Visit Argentina in March," *Buenos Aires Herald News*, 12 January 1999; and "El Principe llega para hablar de reconciliacion, no de soberania," *Clarin News*, 9 March 1999.

52. "Malvinas, Di Tella dijo en Londres que hay un proceso en marcha," *Clarin News*, 21 January 1999.

53. M. L. Mackay, "De que habla la Argentina cuando habla de gestion," *Clarin News*, 14 January 1999.

54. "Koffi Annan consultara a Londres por Malvinas," *Clarin News*, 20 January 1999.

55. Institute for National Strategic Studies, *Strategic Assessment 1998* (Washington, D.C.: National Defense Univ., 1998), p. 3.

56. Davidow testimony.

57. Robert S. Wood, "Global Transformation and National Defense" (remarks delivered at the Navies of the Americas Conference, 29 October 1998, U.S. Naval War College, Newport, R.I.).

58. "Population: Feeding the Planet," *National Geographic Magazine*, October 1998, p. 56.

59. U.S. State Dept., *Congressional Presentation for Foreign Operations*, statement by the Secretary of State, Madeleine K. Albright, March 1998, p. v.

60. Ibid., p. 419.
61. Ibid., p. 418.
62. Institute for National Strategic Studies, pp. xii, xiv.
63. "La exclusion economica," *Clarin News*, 17 January 1999.
64. "La Argentina, observada por sus casos de corrupcion," *Clarin News*, 24 February 1999; and Transparency International, *Corruption Perception Index (CPI)* (Berlin: 1997).
65. "Dura advertencia de la DEA por la lucha contra la droga en la Argentina," *Clarin News*, 6 December 1998.
66. R. M. Sayre [Amb.], "U.S. Relations in the Western Hemisphere and Brazil," *ROA National Security Report*, November 1998.
67. "El Mercosur alimentario," *Clarin News*, 3 January 1999.
68. Margaret Daly Hayes, *By Example: The Impact of Recent Argentine Naval Activities on the Southern Cone Naval Strategies* (Alexandria, Va.: Center for Naval Analyses, February 1995).
69. Diego Guelar, "Nueva Vision de America," *Clarin News*, 5 January 1999.

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A Note to Our Subscribers

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The Politics of Extravagance

The Aircraft Nuclear Propulsion Project

Carolyn C. James

HOW DID THE U.S. NAVY GET INVOLVED in a ponderous, pricey, and ultimately pathetic effort to achieve nuclear-powered flight? The Navy was the post–World War II leader in supporting research for technological innovations intended to strengthen U.S. military might;[1] the Aircraft Nuclear Propulsion Project (ANP), however, is one instance in which it would have been better not to have been involved at all. Unfortunately, the story that will be told here—one of interservice rivalry over appropriations—has a familiar ring. Some might prefer that this seemingly lost chapter in naval history remain in dusty boxes at government archives; as will become apparent, it does not place its principals in a very positive light. It is important, however, that this story be remembered and retold. In the post-Goldwater-Nichols spirit of reducing interservice conflict, lessons can be drawn from proposals based as much (or more) on jealousy as on prudence, and from ideas more fantastic than feasible. This is true even when the events at issue are several decades old; as the saying goes, those who forget the past may end up reliving it.

The ANP project, a manifestation of the American push for innovation in aviation technology, now seems like a figment of the Cold War imagination.[2] The nuclear jet, originally envisioned by the Air Force, was to be capable of extremely long-term, continuous flight without refueling. The program, which commenced under the Joint Committee on Atomic Energy (JCAE) and the Lexington Project of the Atomic Energy Commission (AEC), located at the Massachusetts Institute of Technology, ballooned into a massive research and development effort. The ANP project spanned almost fifteen years,

Naval War College Review, Spring 2000, Vol. LIII, No. 2

included about two dozen governmental and private institutions, and consumed over a billion dollars (in 1950s currency). The ANP ultimately failed: no aircraft of practical value that used a nuclear reactor for its power plant ever materialized. The final decision to scrap the project reflected more concern about cost and negative public opinion than about feasibility—a feasibility that may be judged by the fact that even today, and for the foreseeable future, nuclear-powered aircraft remain technically possible but too problematic, along several dimensions, to be realized.

This article begins, after placing the ANP project in historical context, by explaining the technological obstacles it had to overcome before atomic flight could have been realized. By the early 1950s the project was still highly debated but had matured into a complex research and development effort; a chronicle of the Navy's role, beginning in this period, follows. As will next be seen, the project would fall victim to rising costs, competing weapons systems, and ultimately the fears that often accompany the use of nuclear energy. The article concludes with a brief review of the project as well as of its aftereffects.

On 8 August 1945, as a world torn by six years of conflict considered the prospects of peace and rebuilding, the commander in chief of American military forces looked ahead to the nation's future security needs. Although the predictions of General Giulio Douhet, the early-twentieth-century aviation theoretician, about the social impact of strategic bombing had not fully materialized, it was clear that airpower had become a key component of national defense.[3] A memo from President Harry Truman to Henry Stimson, the secretary of war, drew attention to the importance of aircraft development. "It is vital to the welfare of our people," Truman emphasized, "that this nation maintain developmental work and the nucleus of a producing aircraft industry capable of rapid expansion to keep the peace and meet any emergency." In particular, the United States would need an "adequate number of advanced and developmental aircraft."[4] These assertions, which undoubtedly reflected even earlier conclusions about the need to keep ahead of the Soviet Union, provided legitimacy to even the most revolutionary thinking in aviation at the time, including such ideas as atomic power for aircraft—a concept that

followed quickly on the heels of the awesome events at Hiroshima and Nagasaki.

While the idea of nuclear-powered aircraft may seem almost ludicrous today, in the years immediately after World War II it appeared both feasible and desirable.[5] For many informed observers, scientific advancement had become identified with the early end to the war with Japan brought by the atomic bomb.[6] Atomic energy, then in its nascence, held an almost mystical promise of technological leaps to a safer, less complicated world.[7] In particular, the atom also became the focus of postwar security thinking; both elite and mass opinion quickly perceived a need to stay ahead of other states in development of weapons based on that technology. It is necessary to recall as well that the environmental concerns so dominant in nuclear issues today were not as significant at that time.

When the Cold War intensified and the United States began to contemplate armed conflict with the Soviet Union, ANP offered many advantages. National security seemed to have become increasingly a matter of threatening atomic retaliation. The one means of delivery then available, however, was strategic bombers, whose reach was limited.[8] In order to protect the nation and its overseas allies, as well as threaten the Soviet Union, the United States depended accordingly upon several costly foreign bases. A nuclear power plant, if it achieved operational capability, would keep an

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Carolyn C. James is a Visiting Research Scientist with the International Institute of Theoretical and Applied Physics (IITAP) at the Iowa State University of Science and Technology. Trained in political science, Professor James is a specialist in nuclear weapons policy, both acquisition and strategy. Her research includes the role of nuclear scientists and engineers in civil-military relations, crisis decision-making in nuclear-capable states, and the proliferation of weapons of mass destruction. Recent publications include "Iran and Iraq as Rational Crisis Actors: Dangers and Dynamics of Survivable Nuclear War," *Journal of Strategic Studies*, March 2000, and "Security Policy at the Dawn of the Nuclear Age: The Case of the Aircraft Nuclear Propulsion Project," in *Handbook of Global International Policy*, ed. Stuart Nagel (New York: Marcel Dekker, 2000).

Professor James would like to acknowledge the generous support of IITAP, the Eisenhower World Affairs Institute, and the Kennedy Presidential Library.

aircraft armed with atomic warheads aloft for days at a time. Thus ANP promised to endow the United States with a constantly airborne atomic capability that depended only on military installations at home. U.S. bases in other countries could be reduced to the political and logistical functions of forward presence.[9]

Like that of most states after a war, the U.S. mind-set favored demobilization. This widely held attitude created a difficult cross-pressure for decision makers: they had to ensure security while responding to a public eager for the return of normal conditions and, especially, peacetime prosperity. Here was another attraction of ANP: while it might require a substantial investment up front, it could be justified as a means to save enormous amounts of money in the long term through reduction in infrastructure.

The role envisioned for ANP, as just described, fit perfectly into the mission of the U.S. Air Force. The Navy, however, as it had with many nuclear issues, became interested in this piece of the atomic "pie." Interservice rivalry motivated a considerable effort on the part of the Navy to possess an atomic-powered aircraft suitable to its own mission requirements, especially antisubmarine warfare. As will be seen below, this desire accounted for a respectable percentage of the overall time, effort, and funding spent on the ANP.

In sum, the project had appeal in terms of the need to beat the USSR to technological breakthroughs and of the possibility of a strategic deterrent that did not need foreign bases or otherwise depend on an American ability to ensure free passage of the world's oceans. The quest for aircraft nuclear propulsion, at least at its outset, made sense for the United States in the era of a building rivalry with communist states and related tensions at home.

From Idea to Research and Development

Support for aircraft nuclear propulsion started in the military. Even before the end of World War II, Colonel Donald J. Keirn, an Army Air Corps power-plant specialist serving at Wright Field in Dayton, Ohio, who had long been interested in state-of-the-art aviation technology, initiated discussions about nuclear propulsion.[10]

Concerns about the connection between future security and progress in aircraft technology reached the cabinet level in December 1945, in the form of a proposal sent by the Engineering Division of

the Air Technical Service Command to the Department of War. This document, which specifically made a case for an Air Engineering Development Center, put a premium on planning ahead: "Our immediate planning for future development and development facilities must be projected far beyond the possibilities known today." The proposal also argued that nuclear propulsion of aircraft should have the same priority as nuclear weapons research: "It is equally important to develop nuclear energy as a propulsive means and, with nuclear propulsion, supersonic flight around the world becomes an immediate possibility. Special consideration should be given to a system whereby nuclear energy would first be used for propulsion to the target and then the nuclear matter detonated as an atom bomb."[11]

Further military support for research, implicitly endorsing in advance such projects such as the ANP, came from a statement by Rear Admiral P. F. Lee, the Chief of Naval Research, to the President's Air Policy Commission (known as the APC) in March 1946. Lee asserted that "the Federal Government must support basic research on a greatly increased scale. To a large measure the security of this country is dependent on our scientific resources." Furthermore, aircraft would be at the top of the list, at least from the Navy's point of view: "Over one-half of the funds requested by the Navy for research and development facilities for Fiscal Year 1949 have been set aside for aeronautical research and development facilities."[12] Taken together, these assertions by high-ranking military officers make it clear in retrospect that innovative aircraft-related projects could expect a sympathetic ear from the services.

Aircraft nuclear power became an official research project in May 1946, when the Army Air Forces awarded to the Fairchild Engine and Airplane Corporation a contract to perform preliminary studies on a manned, nuclear-propelled airplane.[13] The project, which Fairchild was required to conduct at Oak Ridge National Laboratory in Tennessee, effectively represented a proposal for more extensive work, which would include development and even flight testing of aircraft.

The problems inherent in aircraft nuclear propulsion were numerous; some of the greatest challenges were in reactor development. In particular, aircraft nuclear propulsion required a reactor much more compact than available under current technology. No airframe could carry a reactor of then-normal dimensions. To be small and light

enough to be used in an airplane, a reactor would have to release more heat energy—some 500 percent more—than did the first submarine reactor. Confined to a small space, the extremely hot reactor might even melt itself, unless more resistant materials also could be developed. Furthermore, the reactor would require more efficient shielding to protect the crew from deadly radiation; land-based reactors at the time usually were protected by six feet of concrete. All of these considerations could be rolled up in terms of "power loading," pounds of vehicle weight per horsepower; on that practical scale, the *Nautilus* nuclear-powered submarine measured more than 150, while a supersonic bomber would have to be closer to four.[14]

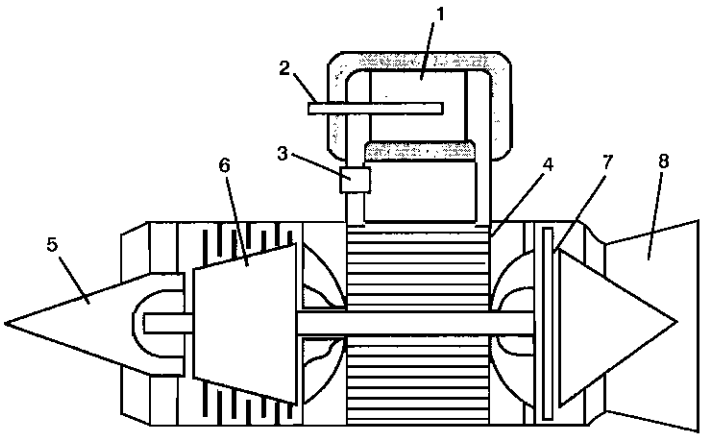
Two basic approaches to nuclear propulsion that received sustained attention during the Fairchild project were known as direct and indirect cycles. The brief technical summary that follows will give some sense of the difficulty (see Figure 1) of the issues involved:

> In the direct cycle, air enters through the compressor, is forced into the reactor, and is heated by the fuel elements. After passing through the turbine, where energy is extracted to drive the compressor, the heated air is expelled at high velocity through the exhaust nozzle. In the indirect cycle, the heat generated in the reactor is absorbed by a liquid-metal coolant flowing through the reactor core. The liquid-metal coolant then flows through an intermediate heat exchanger where the heat is transferred to a secondary loop. The hot liquid-metal is then pumped to the jet engine. The jet engine contains radiators, where the heat is given up by the liquid-metal and imparted to the air-stream flowing through the engine. Thus, the air is heated directly by the reactor in the direct cycle as contrasted with being heated indirectly by the reactor in the indirect cycle.[15]

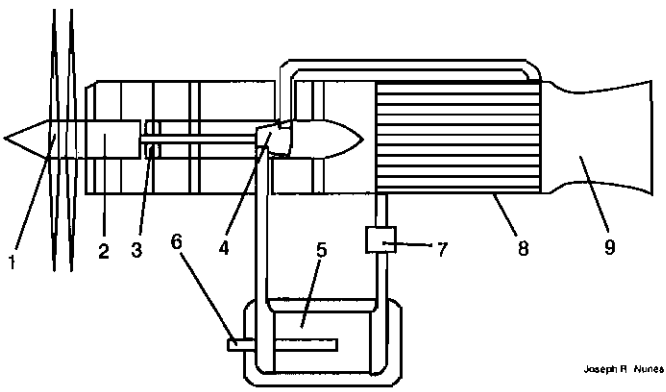
Few scientists and engineers at that time were qualified even to begin to make well-informed judgments about which system would better fulfill future mission requirements.

At the outset, however, it became apparent that each system had a basic advantage that was accessible to a general audience. The direct cycle would be simpler to develop. As implied by its name, a direct-cycle reactor supplies a turbine with heated air flowing directly from the reactor core. In this respect the technological barriers

Figure 1
Indirect Reactor Cycle



Schematic of an atomic turbojet engine with liquid-metal heat exchanger:
1. reactor; 2. control rod; 3. liquid-metal pump; 4. heat exchanger;
5. inlet cone; 6. compressor; 7. exhaust turbine; 8. jet nozzle.



Schematic of an atomic turboprop engine with mercury turbine:
1. propellers; 2. reduction gear; 3. air compressor; 4. mercury turbine;
5. reactor; 6. control rod; 7. Mercury pump; 8. condenser; 9. jet nozzle.

Yu. N. Sushkov, "Atomic Energy in Aviation."

would be fewer and simpler, and an atomic-powered jet seemed likely to become airborne sooner. However, the indirect-cycle approach, though more complex, promised to result ultimately in a smaller reactor.[16] If a direct-cycle program could not develop a system that was compact enough, it might prove a dead end. Only time and effort could answer the question of which system would be better in an overall sense. Unfortunately, in the end, even the fifteen years that the project lasted were not enough; both systems continued to be researched throughout the ANP's lifetime.

The reactor was not the only component requiring extensive research. Much of the weight came from reactor shielding, and compactness here would be especially critical. Ceramic materials would become one of the important avenues of research. Two ways were proposed to shield the airframe, the unit shield and the divided shield. The unit shield, which would surround the reactor itself, would provide the greatest reduction in radiation exposure for the crew and aircraft components. Unfortunately, it would also be the heavier option, which would trade off against the desire for high speed. A divided shield would split the shielding between the reactor and the crew compartment. Weight in the nose would increase, which was a particular concern, because as will be seen, the ANP airframe was often conceptualized as a seaplane, which would need to be able to land on rough seas. In addition, increased leakage of radiation into the components of the plane would reduce reliability, increase maintenance requirements, and shorten the life of the aircraft. The more susceptible organic materials, such as rubber, hydraulic oil, and lubricants, would need to be replaced with inorganic substances or with entirely new systems that did not require organic materials.[17]

From the outset there were skeptics about ANP, mostly in the scientific community. For example, when asked by Keirn in July 1945 about aircraft nuclear propulsion, Vannevar Bush, then director of the Office of Scientific Research and Development, replied that "the idea was a bad one" and told him to "forget it."[18] In 1948, J. Robert Oppenheimer and James B. Conant (both advisors to the AEC) asserted that although the aircraft could be developed, the technological barriers were too immense to make the endeavor cost-effective.[19] However, it was to be more explicit and favorable reports from outside both the military and private industry that commanded the

attention of key decision makers. The APC produced a report, *Survival in the Air Age*, that included a dramatic statement in favor of aircraft nuclear propulsion:

> The possibility of employing atomic energy for the propulsion of aircraft and guided missiles is sufficiently important to warrant vigorous action by the Atomic Energy Commission, the Air Force, the Navy, and the NACA.[20] Some work of a preliminary nature already has been done in this field by the AEC, the Air Force and its NEPA project. Immediate steps should be taken to intensify research effort in this field under a plan that would be supported by all of the above agencies and under which the project would be given the benefit of all the background information in the atomic field actually needed by the recipients for the appropriate performance of their respective functions.[21]

Tensions with the Soviet Union were growing, and arguments in favor of high-technology research and development programs found few critics. The APC report encountered no opposition, and it gave the idea of a long-term development effort for nuclear propulsion enhanced legitimacy.

ANP also got a major break from elsewhere within the Byzantine system of national security advising. A report submitted in September 1948 at the request of the AEC by a team of leading scientists had considerable and generally favorable implications for the ANP project. The AEC had requested a group of forty nongovernmental scientists at MIT to determine the overall feasibility of the project. Headed by Prof. Walter G. Whitman, chairman of MIT's Department of Chemical Engineering, the "Lexington Project" concluded that success would require the development of improved metals and more potent chemical fuels. The Lexington team found ANP was possible but warned that it would probably cost upward of a billion dollars and take as long as fifteen years.[22] While the price tag might have seemed high, it mattered more that this distinguished group of scientists had concluded that the thing could be done. The possibility was all the more important because at this point no alternative to long-range manned aircraft, such as intercontinental-range missiles, seemed practical.

In the four years after Truman expressed interest in the idea of improved aircraft technology, then, work on ANP generally met with

approval or at least tacit acceptance. The phase of advising and consultation drew to a close at the outset of 1951, and the relevant agencies—at the time, the AEC and the Air Force—moved the project toward basic research as a preliminary to applied research and development. The cost, thus far, had reached twenty-one million dollars.[23] Preliminary proposals for ANP were ready by February 1951, at which time the research and development went into full swing for a nuclear airplane that would be supersonic and achieve operational status in the early 1960s.

The Navy Tries to Get on Board

You've got to realize, when I went to Washington in '54, there were no missiles. There was no aircraft that could fly the speed of sound. There was no atomic power. There was certainly no satellite. The whole thing came, all of a sudden, bunched in there. It came within five or six years—five or six years.

—Thomas S. Gates, Jr., Secretary of Defense[24]

The Navy involved itself in aircraft nuclear power as early as the spring of 1949, when its representatives served on an ad hoc steering committee formed to provide guidance to the program. As the rivalry that then arose played itself out, serendipity intervened, producing events in and outside of government favorable to the ANP.

Interservice rivalry over aircraft nuclear power came into the open in late 1953, even though the Navy and Air Force had begun to work together as early as 1949 in what seemed a cooperative and promising way. In May of that year, the Navy transferred $1.5 million to the Air Force for ANP research;[25] it also assigned personnel to now-General Keirn's staff at the Aircraft Reactors Branch of the AEC. According to an agreement between General Keirn and Rear Admiral James S. Russell, former chief of the Bureau of Aeronautics, the Navy's interest would be limited to keeping track of ANP advances in case any developments could be used by the Navy as well; "Navy participation was not to generate into a competition to fly first."[26] In August the Navy informed the AEC that it was interested in a low-power reactor for a subsonic seaplane. At that point in time, its "interest" was restricted to gathering data in order to assess possible mission applications.

During the same month, as part of that effort, the Navy awarded study contracts to seaplane builders and reactor consultants to "assess the significance of nuclear power for aircraft design."[27] Navy spokesmen argued that a jet with the remarkable endurance envisioned—the figure of a thousand hours was commonly used—would be better suited to antisubmarine warfare than to long-range strike. Flying close to the ocean surface, it would be able to conduct thorough sweeps of vast areas in remote locations. Because a supersonic, high-altitude ANP aircraft did not seem to be around the corner by any means, a low-flying plane, traveling at subsonic speed, made sense in developmental terms; also, ANP might be more easily justified in the context of naval operations than that of strategic action against the Soviet homeland.

Perhaps seeing merit—and therefore danger—in the Navy's case, the Air Force responded in the second half of 1953; General Curtis E. LeMay of the Strategic Air Command took the lead, though his earlier interest in ANP had been minimal.[28] The Air Force reemphasized the advantages of thousand-hour-endurance strategic bombers, which would not require in-flight refueling. Such an aircraft, based safely in the United States, could strike targets missed by an attack by conventional long-range bombers or intercontinental ballistic missiles (which by 1953 appeared a promising prospect). The value of such a capability, in comparison to some tactical advantage in antisubmarine warfare, argued against any diversion of constrained Eisenhower-era budget resources from the Air Force to the Navy. On the strength of this rationale, the Air Force had reason to believe that it would hold the long-term advantage in any power struggle with the Navy over ANP.

Significant disagreements existed over the design of the proposed jet, its purpose, and which service would control it. The first airframe proposed by the Navy, in 1956, was based on the Martin P6M-1 Seamaster, built by the Glenn L. Martin Company of Baltimore, Maryland. The Seamaster, according to Vice Admiral Thomas S. Combs, Deputy Chief of Naval Operations (Air), "seem[ed] ideally suited for eventual nuclear propulsion, due to its size and configuration, combined with [the] practically unlimited takeoff and landing areas water provides."[29] Seamaster would have four modified turbojet engines, served by a single reactor. Its advantages as a platform would be low-altitude maneuverability, a large crew, high crew and

aircraft utilization, and substantial payload.[30] Seamaster would be used initially as a low-power, modest-performance seaplane for anti-submarine warfare and radar early warning, but experience with aircraft nuclear propulsion, the Navy predicted, would eventually lead to a high-speed attack plane.[31]

The Air Force's airframe development centered on the Convair Division of General Dynamics Corporation in Fort Worth, Texas. Convair was developing an aircraft with a canard configuration (that is, with horizontal stabilizers and control surfaces forward of the wing) that allowed the crew to be over a hundred feet from the reactor. The plane was to be subsonic, weigh 450,000 pounds, and be close to the same size as a B-52. Of its four turbojet engines, two would be powered by a reactor, either the General Electric direct-cycle type or the Pratt & Whitney indirect-cycle reactor;[32] takeoffs and landings would be powered by the other two (conventional) engines, mounted under the wings. The aircraft had no tail but instead a vertical stabilizer-rudder assembly at each wingtip and the canard stabilizer-elevator surfaces forward on the fuselage.[33]

Squabbling on ANP within the Department of Defense meant headaches for the AEC and national laboratories like Oak Ridge. Almost every time the DoD went through a policy spasm, alterations would be called for. Due to the interrelated nature of ANP components, nearly every change to technological requirements impacted upon reactor development, whether it pertained specifically to the reactor or not. Competing Navy and the Air Force ANPs now began to contribute to the rising research-and-development price tag.

In September 1953, Edward Teller expressed doubt that the airplane ever could reach the test-flight stage.[34] He was merely the most prominent among several AEC consultants with such views. In fact, reviews consistently produced ambivalent or negative results, and over time they leaned more toward the latter. While cost ultimately became the primary concern, the feasibility of ever producing a nuclear-powered airplane also repeatedly came up as an issue. Experts often expressed the opinion that funding and human talent would be better utilized elsewhere.[35] If ANP was inherently wasteful, interservice competition soon made its progress even more so.

Notwithstanding, things looked up considerably for the program when in August 1953 the Soviet Union successfully detonated its first thermonuclear device. This development gave a boost to those

in favor of developing the next generation of weapons. Their arguments were valuable to the ANP project in particular, because it remained far from deployment and was thus in a highly vulnerable and expensive state. Unfortunately for its advocates, a discussion at a meeting of the National Security Council in October 1953 explicitly linked budget issues with research projects under way and the personnel they required. The secretary of defense, Charles O. Wilson, expressed the opinion that the government "already had about all the good scientists who were available at work on these various AEC and Defense projects." He doubted "whether the expenditure of more money would produce a significantly larger number of good scientists." Secretary of the Treasury George M. Humphrey reinforced that point, asserting that "there was no way that you could spend money faster than on research, and unless this research was very carefully scrutinized, the results were often not worth the expenditure."[36]

Thus, despite the apparently increased Soviet threat, indirect pressure on long-range, speculative projects like ANP continued to mount as the president and his inner circle became increasingly reluctant to burden a public exhausted from three years of the Korean War and impatient for sustained economic growth. Large-scale weapons programs with no immediate likely payoff, such as the ANP, stood out conspicuously in brainstorming sessions about what to scale down or even eliminate within the defense budget. It was at this point, in January 1954, that John Foster Dulles delivered a landmark address on massive retaliation—just in time, for the ANP project. In it the secretary of state threatened the Soviet Union with all-out nuclear punishment for any transgression.[37] The prospect of an aircraft that could strike the USSR from within the United States itself received renewed attention and even priority as tensions increased within the nuclear context.

Meanwhile, despite the back-and-forth between the Air Force and Navy, and among the political leadership, significant progress had been made in reactor development. The weight and size of the shielding had been reduced to levels much closer to operational limits. Advances also had been made in heat-resistant materials.[38]

In April 1954, the Air Force decided that the time was right: it announced that an ANP bomber would be needed as soon as possible. The assertion did not preempt matters in the Air Force's favor,

however. In February 1955, the Navy produced Operational Requirement CA-01503 for its own ANP program; Developmental Characteristic CA-01503-3 followed in April. These documents defined the mission of the ANP primarily as long-range attacks against naval shore targets, warships, and shipping; secondary missions included mining and forward-area reconnaissance. The Navy hoped to have a prototype by 1961. In May, Secretary of the Navy Charles S. Thomas, agreeing that a nuclear propulsion system for a subsonic aircraft was desirable, proceeded to engage contractors to begin research.[39]

Things were going well, then, for ANP in general in the first half of 1955. In April, for example, the concept reaped a dividend from the announcement of a decision by Eisenhower to "build and send around the world a new atom-powered merchant ship." The *New York Times* was confident that

> the atom-powered merchant ship will have a significance beyond any of these [experimental power plants]. In the first place, visiting the ports of the world will bring both knowledge and a practical demonstration of the peaceful uses of atomic energy in medicine, agriculture and power production to the underdeveloped and power-starved areas of the world and help them thereby to plan their own industrial and technical revolution in the light of the atomic age.[40]

Such exposure helped the pro-ANP lobby with a growing public-relations problem related to safe operation. Instead of being told to worry about the risk of a crash and associated environmental contamination, the informed public was now reading about possible commercial benefits as a side-effect of defense technology. Other uses for nuclear power also were proposed in this period, including an atomic-powered aircraft carrier, atomic locomotives, and atomic artillery.[41]

The fortunes of the ANP reached their crest in June 1955. At that time the AEC and DoD agreed that ANP should be accelerated, with the objective of flight testing by 1959. Authorized expenditures increased dramatically. Existing facilities were expanded, and construction began on new sites for additional research and development.[42]

Interservice maneuvering, predictably, now went into high gear. Despite civilian expert opinion that the entire idea needed serious

reconsideration, the Navy increased pressure for an atomic-powered aircraft of its own; the program was riding high for the Air Force—why not get in on the action? The Navy argued that atomic power made more sense in a seaplane than in a bomber, since accidents would expose fewer civilians. Water, after all, is a better shield against radiation than the ground; in addition, the weight of the reactor would cause the wreckage to sink quickly. The Navy also pointed out that current engine designs being produced for the bomber project did not meet specifications for a subsonic seaplane. The Air Force, wishing to establish itself as the lead agency for ANP within the Pentagon, replied that any sea-based aircraft could be folded into its strategic bombing mission.[43] The Navy's rebuttal came in the form of a statement from the Secretary Thomas that seaplanes with nuclear propulsion "promised to be a potent supplement to the new Navy" and that nuclear seaplanes should belong only to that service.[44]

Science advisors to the AEC by this time were ridiculing the seaplane idea, on which the Navy was spending several million dollars for preliminary designs.[45] In December 1955 the AEC postponed certain related Navy contracts to study the possibility of its own ANP system. A technical review group would determine whether additional research and development was necessary or existing programs could be adapted for Navy use; that group concluded that no specific Navy program was necessary, and the Department of Defense concurred.

Notwithstanding, the Navy's interest in having its own nuclear-powered aircraft grew even more in early 1956. (Ironically, in March 1956, a month after these decisions, General Electric had successfully tested a turbojet engine operating on nuclear power from a direct-cycle reactor.)[46] In March the Assistant Secretary of Defense (R&D), Dr. Clifford C. Furnas, told the Navy that although he agreed with the technical review group's findings, a Navy seaplane would receive support from existing and future program. The Chief of Naval Operations, Admiral Arleigh A. Burke, confirmed that the Navy would continue to work on independent aircraft design studies. As a result, in July the Defense Department impounded $7.4 million of Navy funds earmarked for the ANP until such time as the service was able to orient properly its programs.

A memorandum from Colonel A. J. Goodpaster, Eisenhower's staff secretary, to Percival Brundage, director of the Bureau of the Budget, summed up the core of concern—finances. Goodpaster asked "whether it [was] correct to conclude that the proposal involves no new net increase or acceleration in expenditures or appropriations."[47]

The Decline and Fall of ANP

The President [Eisenhower] commented that the next thing he knows someone would be proposing to take the liner Queen Elizabeth *and put wings a mile wide on it and install enough power plant to make it fly. Dr. [Herbert] York begged him not to let the idea get around, or someone would want to try.*

—Minutes of a meeting, 23 June 1959[48]

To the consternation of both the Air Force and the Navy, in August 1956 Eisenhower reduced the ANP budget. Although no hard evidence exists, it would seem the president gave every sign of agreeing with the general prognosis of the science advisors and looked forward to eliminating ultimately the expensive and doubtfully effective program. It seemed to him that the services had been fighting over a slice of the nuclear pie that many doubted ever would be "baked." The mission of the overall ANP was now restricted to pure research for nuclear propulsion systems and shielding. This decision was tantamount to cancellation, since ANP was described as "more than 90% an engineering job and less than 10% research."[49]

President Eisenhower was determined, as he told Secretary of Defense Wilson and seven high-ranking military officers in December 1956, that the defense budget "must not keep going up and up each year to the point where we defeat ourselves." He shared Secretary of the Treasury Humphrey's concern "as to whether we are being reckless with our economy."[50] In view of that concern, Secretary Wilson told the president later in the meeting that he would be "backing down to some extent on the rate of research and development on the atomic powered aircraft." Eisenhower agreed, at least implicitly, responding that he would like to see the AEC "put added resources to bear on controlled hydrogen reactions." The president saw this as

the most likely path toward a major breakthrough, and he did not rush to the defense of the ANP.[51]

Advocates of the ANP project, however, had not given up. A very upbeat article in *Flying* magazine pointed to a bright future for the "A-plane" project. It asserted that the first flight could be expected by 1960—an earlier date than was hoped for by even the most optimistic supporters on the inside—and lauded progress in reactor development. The article noted the existence of interservice rivalry but described the Air Force as being in the dominant position with respect to ANP.[52]

On the technical level, how to make the reactor light and small enough for an airplane yet sufficiently shielded to protect the crew continued to worry those still interested in the program. For example, in January 1957 even AEC advisor Alvin M. Weinberg, a staunch proponent, remarked that "the main problem of nuclear flight is the problem of obtaining adequate thrust with sufficiently low weight."[53] The weight of scientific opinion continued to be against the program. Nonetheless, the Defense Department, though it had by now formally released Navy ANP funds, in fact authorized no spending in that account throughout most of 1957.

Then, on 4 October 1957, the Soviet Union launched Sputnik. This event raised the specter of an intercontinental missile launched from Russian soil striking the United States. That missiles might strike the nation from halfway around the world seemed even more revolutionary than the nuclear weapons they would carry, and as appalling.[54] The event sparked a crisis, fueled by media and congressional reactions, far broader than the national-security community alone. How on earth, or otherwise, would the United States respond?

The president received plenty of advice, some solicited and some not. A press conference held a few days later was characterized by pointed questions about the Soviet satellite and by what now would be called "spin control" on Eisenhower's part.[55] The journalists' questions focused on whether the United States had fallen behind the USSR in science and technology, most notably in areas with real or potential application to weapons. The president responded by blaming Congress for cutting his recommended appropriations for national security purposes. He also asserted, however, that the 180-pound weight of the Soviet satellite—heavier than any model

the United States hoped soon to deploy—was not a cause for concern: "Well, certainly again I am quoting the scientists, there is no indication that this will be scientifically more valuable."[56]

On 10 October the president met with the National Security Council and confronted the political problem posed by the Soviet satellite. Secretary of State Christian Herter summed up foreign policy reactions as "pretty somber." At one point the group even spoke openly of the prospect of losing support in the United Nations as a result of the Soviet breakthrough. However, good reasons against that conclusion quickly emerged. Sensing that both the government and general public were overreacting, General Nathan F. Twining, the Chief of Staff of the Air Force, "cautioned that we should not permit ourselves to become hysterical about the Soviet achievement."[57]

Reports were emerging that the Soviets had successfully tested a nuclear-powered aircraft. Although they had no scientific credibility, these rumors compounded the administration's problems and gave aid and comfort to advocates of the ANP.[58] One report, later debunked, arose from a sensational story spread by Representative Melvin Price (Democrat of Illinois), an avid supporter of ANP, following a visit to the Soviet Union.[59] The rumor, false as it was, reflected a fervent hope that had existed since the end of World War II among the public and even high-level decision makers for panaceas from science and technology. The result was renewed pressure on science to answer national-security threats. In that view, ANP must "fly first," before the Soviet Union embarrassed the United States again.

The Navy did not hesitate to join the post-Sputnik enthusiasm to beat the Soviets in the science and technology race and to extend the interservice argument to an influential target within the executive branch. On 21 November 1957, Captain E. P. Aurand, naval aide to the president, sent a memo to James R. Killian, Jr., the chair and special assistant for science and technology of the newly created President's Scientific Advisory Committee (PSAC). Captain Aurand pushed three points. First, "fly first" could not be achieved in a "militarily useful vehicle." However, second, it could be accomplished for the equally important purposes of scientific advancement and global propaganda. Third, a Navy seaplane was best suited for this effort, since existing airframes could be used and they could travel anywhere there was water to land on, precluding dependence on foreign

landing fields.[60] Killian responded that the matter had not yet been addressed in any detail.[61] In December 1957, the Chief of Naval Operations, Admiral Burke, presented a proposal to use for this purpose the British-made Princess flying boat, then in mothballs at Cowes. This huge aircraft, with its ten PW T-57 engines, would use a turboprop propulsion system with a reduced-size GE direct-cycle reactor. Admiral Burke described the Navy's intention as meeting the national objectives of early flight of a nuclear-powered aircraft.

The Air Force response was quick and heated. Secretary of the Air Force James H. Douglas pressed upon the secretary of defense four reasons why the Navy's nuclear seaplane should not supercede the Air Force's bomber program. First, the turboprop system for Princess had not left the drawing board, while the Air Force's turbojet was in a "hardware state of development." Second, the problems confronting the two systems were the same; the Navy could proceed no more quickly. Third, the Navy, unlike the Air Force, had no test facility. Finally, both systems used General Electric's direct cycle, and additions to the company's workload would result in overall delay, not earlier flight. Congressman Price supported the Air Force, convinced that competition would divert energies and slow results.[62]

The Air Force and Navy staffs were also pushing Deputy Secretary of Defense Donald A. Quarles and the service chiefs, who also were indecisive, for a firm decision in their respective favor. Meanwhile, the ANP's opponents were receiving support from the President's Scientific Advisory Committee. James Killian selected from PSAC a panel of scientists and engineers, headed by Robert F. Bacher, to submit a recommendation on the ANP project. Its report, issued in February 1958, held little good news for advocates of aircraft nuclear propulsion. The report began with review of previous studies, in order to preclude criticism that yet another committee with no experience in the subject area had produced an unfair judgment.[63] It did not directly confront the basic issue of whether a nuclear-powered aircraft could be built but moved quickly to the enormous projected expense of bringing the idea to reality: "Total costs of the project from the present up to the achievement of first nuclear powered flight are estimated by the Air Force to be $1,357 million. This program would require somewhat greater annual expenditures than the present limit of $150 million." The report also emphasized the hazards of nuclear-powered flight in general. It specifically criticized the Navy's

new approach, on technical grounds: "The control problems of the reactor coupled to the variable propeller load through the engines are serious and unsolved. . . . We recommend that neither Air Force nor Navy accelerated programs for early manned nuclear flight be implemented at this time."[64] The panel concluded that "a rushed nuclear flight program poses serious technical risks and radiological hazards."[65]

Eisenhower met in late February 1958 with Killian, Bacher, Quarles, and several other high-level officials, including military officers, to discuss the building confrontation over the ANP project. AEC chairman Lewis L. Strauss emphasized the psychological factors in favor of early flight. (Rumors continued to circulate about a Soviet ANP, and clarion calls from congressional proponents of aircraft nuclear power had spilled over into the media. The furor reached a peak with the publication of a so-called Air Force leak that the Soviets had already test-flown a nuclear-powered long-range bomber.)[66] He then, in a remarkable sleight of hand, asserted that the ANP work in progress would produce a reactor that could also propel a long-range missile.[67] His tactic represented a concession to the fact that missile development had been moving forward rapidly and that the balance had been swinging against the costly, even ponderous ANP. An association with missile development might co-opt some of the opposition, especially among scientists.

Meanwhile, the Navy had been pushing ahead with the nuclear Princess. During 1958 the Navy let contracts with General Electric, Pratt & Whitney, Convair, and Martin, among others, related to the project. By October, the Navy had forwarded to the Defense Department a paper arguing that its ANP project was feasible and that early flight was critical to long-term success. The Navy asked for immediate approval of a five-year ANP project with an estimated budget of two hundred million dollars, to include seventy-five million from the AEC. There was no formal reply from DoD; instead, the answer came in the 1960 fiscal budget: there would be no Princess. The only hope for a Navy ANP would be in conjunction with existing programs.

In view of the public outcry for a nuclear-powered jet as soon as possible, arising from anxiety over the apparent Soviet high-technology threat, it is not surprising that the president did not directly cancel the ANP. Nonetheless, convinced that the "fly first" goal was impractical, Eisenhower had cut funding and shifted remaining

resources to basic power-plant research. The AEC had argued that conventional aircraft already at the development stage could perform as well or even better in certain areas.[68] Still, the Navy continued to push for this costly and controversial program. Why?

One reason was that nuclear-powered flight still promised advantages that conventional propulsion could not match. Consider, for example, fuel requirements. A single pound of the uranium isotope U^{235} could produce the same amount of heat as 1,700,000 pounds of gasoline.[69] The needs for airborne refueling and for determining points of no return are eliminated. The gross-weight variance during a mission for an ANP aircraft would be 20 percent, while that of conventional aircraft runs between 50 and 70 percent, affecting optimum cruise altitudes and speeds.[70] It also appeared that improvements in reactor and shielding technology would translate into increased payload almost entirely, a ratio that could not be equaled by technological breakthroughs in conventional flight.[71]

Notwithstanding, presidential advisors asserted that the project should remain "essentially unchanged for the time being"—restricted to research on the power plant. The Navy's proposal for a sea-based aircraft languished, with feasibility as the main reason for lack of support in the White House: "With respect to this proposal, we do not believe that the technical status of the reactor development and the evaluation of the prospective applications have reached the point where the adoption of a specific program in that direction can be justified."[72]

Yet another attempt by the Navy to salvage an ANP program for itself began in January 1959, when Secretary of the Navy Thomas S. Gates informed the secretary of defense that the Navy was convinced of the benefits of the indirect-cycle reactor. In fact, the Navy was willing to pay for research at Pratt & Whitney's Connecticut Aircraft Nuclear Engine Lab (CANEL). One obstacle was the fact the Air Force already had contracted CANEL. In March the Navy requested a joint arrangement between the two services, if the Air Force approved. The partnership would never occur; the Air Force claimed that its facilities contract specifically restricted all work to original objectives. The Defense Department finally settled the matter: the Navy's indirect cycle envisioned a sodium-based heat-transfer system, whereas the Air Force (requiring higher performance) used lithium, and their divergent requirements prohibited joint research.

The Navy could still, however, use any advances made at CANEL, and the services were to prepare cooperative plans. Moving toward consideration of an intermediate-power indirect cycle with a lithium-cooled reactor, the Navy altered its Pratt & Whitney contract to concentrate on propulsion components outside the reactor and its shielding.[73]

The last chapter for ANP would be written primarily by a civilian scientist raised to a new and powerful post in DoD—Herbert York of the University of California's Radiation Laboratory at Livermore, now Director of Defense Research and Engineering (DDRE). The DDRE was a particularly powerful position, referred to in some circles as the "vice president for science;"[74] the new DDRE personally had an excellent reputation in the Defense Department and at the White House, and this magnified his influence. York made a convincing argument against any notion of nuclear powered flight, expressing the opinion that no such aircraft with any useful military application could be developed before 1970.

Killian reinforced York's view. Killian's private notes for a meeting in June 1959 with the president indicate a commitment to basic research and some applied research, a definite rejection of development as premature. This document reiterated a series of conclusions reached by York. Ironically, it cited the Vanguard program—which had finally launched a satellite the year before—as evidence against an accelerated program; the long, checkered history of Vanguard "emphasize[d] the wastefulness and embarrassment of marginal design."[75] Instead of reacting hysterically to the Soviet satellite breakthrough, Killian simply noted the risk of future embarrassment, stressing the scientific as opposed to political dimensions of security policy.

The final attempt to resuscitate ANP was made in an open hearing of the Subcommittee for Research and Development of the JCAE on 23 July 1959. Representative Price in particular was desperate to see the project come to fruition. There were two witnesses for the Navy: Under Secretary Fred A. Bantz and Admiral John T. Hayward, Deputy Chief of Naval Operations for Development. Under Secretary Bantz could be described as pessimistically cautious. He reported to the committee that the Navy needed much more information before it would be able to move beyond the $6.5 million research contract with Pratt & Whitney included in the fiscal 1960 budget. Admiral

Hayward took the opportunity to say something that others were to say as well: "As I have said before, this particular program is a pretty good monument of how not to run a technical program." He pointed out that repeated changes in requirements, coupled with the failure to secure a functioning power plant before the airframe was developed, had resulted in an enormous waste of time and resources. If properly managed, he felt, ANP could have experienced the same success as the nuclear-powered submarine USS *Nautilus*. Research and development costs for *Nautilus* had been between $800 and $850 million; spending for ANP through fiscal 1960 amounted to almost $991 million, yet even a prototype was years away.[76]

The arguments made in July 1959 had little effect on the future of aircraft nuclear propulsion. The program dwindled to almost pure research and then faded away, despite all efforts to keep it alive. With his administration winding down, Eisenhower was reluctant to kill ANP once and for all, but work on the program, by whatever service or agency, ended with the stroke of a pen in the spring of 1961, when the Kennedy administration came to power.[77] ANP became one of the first cancellations by the new secretary of defense, Robert McNamara. As one official put it many years later, it took "a new administration that wasn't being hounded to death" to finish off the program.[78] By the time McNamara terminated the program, the massive expenditures needed to solve the remaining technical problems with ANP could simply no longer be justified. The new secretary of defense feared a highly publicized accident if the plane ever flew (concerning which, the public-relations hazard worried him as much as any physical damage). A nuclear airplane might be possible, but the investment in time and money was still prohibitively high, and the environmental dangers remained controversial.[79]

A former official of Idaho National Laboratory who was involved in the ANP reactor development and testing in the 1950s expresses today no surprise that ANP was finally canceled. He still considers the program extremely dangerous, because of the risk of radioactivity, and is dismayed that it lasted as long as it did. One of his peers also addresses the longevity issue: "You can't kill that stuff [programs] with a stick." Experienced "Washington Beltway" players know how to work the system and are not beyond manipulating a situation to personal advantage, especially when enormous contracts may be on the line. However, widespread discussion of what the

nuclear airplane could achieve, assuming that it ever reached the deployment stage, produced a consensus that time had passed it by.[80] Evidence presented to the 23 July 1959 congressional hearing clearly shows that after over a decade of research and development, aircraft nuclear propulsion still had formidable technological challenges to overcome (see Table 1).

A Long and Costly Odyssey

Even after the ANP was cancelled, the general idea did not go away. At a hearing of the Joint Committee on Atomic Energy in 1962, Vice Admiral W. F. Raborn, Jr., Deputy Chief of Naval Operations, with supporting testimony from Secretary of the Air Force Eugene M. Zuckert, fought to keep Project PLUTO alive. PLUTO, begun in 1956, was a nuclear ramjet–driven missile that would fly at low altitude at supersonic speeds. The PLUTO missile would be able to change direction, or "dogleg," after launch and deliver weapons with state-of-the-art accuracy. Seven million dollars had been spent in 1961, with an additional twenty-four million requested for fiscal year 1963, since the reactor had already proved successful. Admiral Raborn stated that the Navy wished to pursue this technology for deployment on surface ships and submarines. The missile also was believed to have space-flight potential.[81]

Two other related projects were being conducted at the time of ANP's demise. Project ROVER applied nuclear-propulsion technology to rockets capable of space travel. A second was considered by the Navy as late as 1971. In May of that year, two scientists of the Naval Research Laboratory in Washington, D.C., submitted a study finding that certain lighter-than-air craft, specifically rigid airships, were perfectly suited to nuclear propulsion, since the weight problems were virtually eliminated. One proposed airship, the ZRCV, would enclose almost ten million cubic feet and carry nine air-launched bombers. This flying aircraft carrier would have no reactor-size problems, and shielding the crew would be simpler. As to radiation exposure following an accident, "airship crashes have generally been relatively leisurely affairs, so that there should be less danger to the public."[82]

Even today these ideas have not fallen by the wayside. For example, debate among those who envision a manned space flight to Mars

Table 1
ANP Areas under Development as of 1959

Power Plant	High-temperature fuel materials Turbomachinery Integration problems-reactor/engines Refinement & proof of shielding Practical controls Determination of installation requirements (cooling, ducting, mounting points, loads, clearances) Establishment of power plant performance under flight altitudes, speeds, loads & attitudes (thrust available, control response, transition behavior, afterheat removal, engine-out behavior)
Maintenance and Handling Equipment & Procedures	Installation and removal equipment for power plant & A/C systems Effects of aircraft activation on procedures & equipment Quick-disconnect requirements Afterheat removal Emergency equipment & procedures Special facility requirements & design criteria Aircraft handling equipment
Shielding Design	Exposure to design radiation fluxes shaping for minimum weight Selection of n/y ratios & degree of division Evaluation of internal equipment shielding effects Evaluation of shield augmentation requirements as related to ground handling Design & test of duct & cable shield penetrations
Environmental Development Testing & Evaluation of Location Requirements of Aircraft Subsystems for Max. Reliability	A/C (air conditioning, MTC [airbase & short range navigation & communication equipment], secondary power, flight control systems) Weapon systems (B&N, long range communications, ECM & IR equipment, active defense equipment)
Demonstration of the Practicability of Nuclear Powered Aircraft through the Effective Integration of the Above Factors	Sustained flight on nuclear power only Demonstration of reasonable & effective handling procedures Acceptable flight techniques Verification of design solutions Verification of operational capability, reliability, and safety

Source: Joint Committee on Atomic Energy, *Aircraft Nuclear Propulsion Program: Hearing before the Subcommittee on Research and Development of the Congress of the United States*, 86th Congress, First Session of the Aircraft Nuclear Propulsion Program, 23 July 1959, Y4.AT7/2:Ai7., pp. 30–1.

has arisen over whether to use a nuclear power plant. In fact, decades after its cancellation, the aircraft nuclear power project enjoys an ironic postscript. First, although shielding from radiation was one of the most difficult obstacles to overcome, the research begun by ANP eventually matured into the tiles whose performance has been so critical to the success of the NASA space shuttle. Many other success stories eventually arose from the years of ANP development, in particular in the areas of materials and shielding (see Table 2).

* * *

To say that there is no use for a nuclear-powered plane is to immediately discount the Air Force argument for a cruising missile platform—and to discount this is tantamount to admitting that the entire Polaris missile program has been a waste of time and money.

—Fred Hamlin[83]

But none of these technological advances have ever truly opened the way to a nuclear-powered aircraft. Why did the Navy not see that ANP was doomed? What is to be learned from the long and costly odyssey of the ANP? It would be in the realm of "counterfactuals" to speculate whether ANP would have been successful had efforts been concentrated on a single reactor design to be engineered for an airframe with constant mission requirements. As it was, the rivalry of the Navy and the Air Force for unique ANP missions and, accordingly, aircraft resulted in an enormous waste of resources and time, and not enough to show for the investment; the patience of critical decision makers ran out.

The ANP was not the first costly research project fought over by military services but never fully developed, nor will it be the last. Indeed, had the Air Force or the Army been able to produce coherent arguments against nuclear submarines, perhaps the *Nautilus* experience would have been as unsatisfying. Since then, measures have been taken to reduce interservice rivalry, especially the 1986 Goldwater-Nichols Act, which eliminated specified (that is, service-specific) commands at the joint level. It would be worthwhile to examine long-range research and development projects over the past decade for indications as to whether another ANP-like scenario could occur.

Table 2
Contributions of the ANP Program to Reactor Technology

Indirect-Cycle Program	Extensive liquid metal technology including development of an advanced high-temperature lithium-cooled reactor system, including: • High-strengrh refractory metal-columbium-zirconium alloy to reach previously unattainable temperatures at light weight • Applications for space, mobile packaged power, central station and marine power plants • Reliable, high-power-density fuel element permitting smaller cores, higher specific power, higher fuel burn-up, and lighter-weight systems
Direct-Cycle Program	Metallic dispersion fuel element Zirconium hydride solid moderator technology Separation, purification, and fabrication of yttrium used as an alloying material to provide high strength and oxidation resistance to stainless steel Rhenium-tungsten thermocouples operating up to 3000°F in a nuclear environment Information on radiation effects on organic materials Ceramic fuel-element technology, including ceramic-coated wires resistant to high temperature and nuclear radiation Information on electrostatic precipitator systems to filter effluent air Calculation methods programmed for computer use, such as heat-transfer calculations Instruments and devices for determining test results and reactor control, including miniaturized items Operation of a turbojet aircraft engine on heat supplied by a nuclear reactor (65 continuous hours of operation at temperatures approaching 2000°F using metallic fuel elements)
Circulating Fuel Reactor Program[a]	Molten-salt reactor program for civilian power at Oak Ridge National Laboratory New nickel-molybdenum alloy (INOR-8), which increased the operating life of reactors using lithium-based fused salts High-temperature liquid-metal pumps, valves, seals, heat exchangers, and instrumenration technology used in reactor development Corrosion data on various alloys with lithium, sodium, sodium-potassium, lead, bismuth, and various types of fused salts New materials, reactor grade inconel and stainless steels, and new fabrication techniques for large beryllium components Bulk shield reactor (swimming pool reactor) designed and built to obtain shielding data 5 MW spherical-geometry tower shielding reactor designed and built for use in radiation shielding development

Source: U.S. Comptroller General, *Report to the Congress of the United States: Review of Manned Aircraft Nuclear Propulsion Program, Atomic Energy Commission and Department of Defense* (Washington, D.C.: General Accounting Office, February 1963), pp. 182–5.

a. This program was an earlier effort that was not pursued after initial research. It did not play an inherent role in the Navy ANP.

When considering the current phenomenon of the so-called "revolution in military affairs," it is wise to remember the programs that failed, not just those that have been actually deployed. Breakthroughs in communications and computer science, for example, appear to promise technological "fixes" like those that ANP once seemed to offer. Critical and independent reviews of such projects are vital; more importantly, negative assessments must be given appropriate credence by decision makers within and outside the services, and kept in proper balance with other concerns. This is perhaps the most difficult task of all.

Notes

1. For a review of Navy support for technological innovation, see Vincent Davis, *The Politics of Innovation: Patterns in Navy Cases*, Social Science Foundation and Graduate School of International Studies Monograph Series in World Affairs (Denver: Univ. of Denver, 1967), vol. 4, no. 3, pp. 1–53; Bradd C. Hayes and Douglas V. Smith, eds., *The Politics of Naval Innovation*, Strategic Research Department Research Report 4-94 (Newport, R.I.: Center for Naval Warfare Studies, 1994); and Harvey Sapolsky, *Science and the Navy: The History of the Office of Naval Research* (Princeton, N.J.: Princeton Univ. Press, 1990).

2. The Aircraft Nuclear Propulsion Project was initially known as NEPA, for Nuclear Energy for the Propulsion of Aircraft. The choice of acronym depends on what stage of the project is at issue; "ANP" was used from 1951.

3. Giulio Douhet (1869–1930), who commanded the Italian aviation service in 1918 and published *Il dominio dell'aria* in 1921, believed that aerial attacks on cities and factories would reduce the support a military required and destroy the morale of the population, which would demand an end to the war. Bernard Brodie, *Strategy in the Missile Age* (Princeton, N.J.: Princeton Univ. Press, 1965.), pp. 71–106.

4. Letter from Harry S. Truman to Henry Stimson, 8 August 1945, Truman Presidential Library [hereafter TPL], Records of the President's Air Policy Commission [hereafter APC], box 28.

5. For further details about the historical context, consult Donald J. Keirn, "The USAF Nuclear Propulsion Programs," in *Nuclear Flight: The United States Air Force Programs for Atomic Jets, Missiles and Rockets*, ed. Kenneth F. Gantz (New York: Duell, Sloan and Pearce, 1960); W. Henry Lambright, *Shooting Down the Nuclear Plane*, Inter-University Case Program 104 (Indianapolis: Bobbs-Merrill, 1967); and Richard T. Sylves, *The Nuclear Oracles: A Political History of the General Advisory Committee on the Atomic Energy Commission, 1947–1977* (Ames: Iowa State Univ. Press, 1987).

6. It is not uncommon for technological advances to increase in frequency and magnitude as each side in a conflict tries to improve its relative strength. To cite just one example, the breakthroughs in World War II associated with Allied victory include the atomic bomb, radar, and the proximity fuse. Hitler's decision not to push research and development until 1942 is seen as one explanation for Germany's ultimate defeat; see Bernard and Fawn M. Brodie, *From Crossbow to H-Bomb* (Bloomington: Indiana Univ. Press, 1973), pp. 200–9. The role of science advisors also is significant. Once again, examples from World War II make the point very well: F. A. Lindemann and Henry Tizard of the British Science Advisory

Committee to the Royal Air Force persuaded the air marshals to recognize the new radar technology, acquire sufficient confidence in this untested discovery, install radar sets on airplanes, and train flyers to use them. Lindemann and Tizard also had to convince the military leadership to respond to the intelligence the new systems produced. Gerard Peil, "The Presidency and Science Advising: A Modest Proposal," in *The Presidency and Science Advising*, vol. 2, ed. Kenneth Thompson (Lanham, N.Y.: Univ. Press of America, 1987), p. 61.

7. Herbert F. York, *Arms and the Physicist* (Woodbury, N.Y.: American Institute of Physics, 1995), pp. 145–7. York describes himself as having been one of the "technological optimists" until he served in the nation's capital, from which he came to believe that many security threats actually originated; see also Lambright, p. 4. For negative opinions about the concomitant progress of science and society, see Eugene B. Skolnikoff, *The Elusive Transformation: Science, Technology, and the Evolution of International Politics* (Princeton, N.J.: Princeton Univ. Press, 1991); and C. P. Snow, *The Two Cultures: And a Second Look* (New York: Mentor Books, 1963).

8. The B-52, the first long-range, intercontinental bomber, took to the air in April 1952. Kosta Tsipis, *Arsenal: Understanding Weapons in the Nuclear Age* (New York: Simon and Schuster, 1983), p. 151.

9. Harry S. Baer, "Nuclear Power of Flying," *Flying*, June 1957, p. 25.

10. Keirn would retire at the rank of major general.

11. Engineering Division, Air Service Technical Command, "Proposed Air Engineering Development Center," 10 December 1945, pp. iii, vi, vii, TPL, Records of the President's APC, box 28.

12. Statement by Rear Adm. P. F. Lee, Chief of Naval Research, to the President's APC, 21 March 1946, pp. 2, 3, TPL, box 38.

13. Letter contract W-33-038ac-14801 (16250) came into force in May 1948; it specified a feasibility investigation, and research toward adoption, of nuclear energy as a means of propulsion for tactical aircraft. U.S. Comptroller General, *Report to the Congress of the United States: Review of Manned Aircraft Nuclear Propulsion Program, Atomic Energy Commission and Department of Defense* (Washington, D.C.: General Accounting Office, February 1963), p. 15.

14. J. S. Butz, Jr., "Navy Aims at Low Power Atom Seaplane," *Aviation Week*, 15 April 1957, pp. 30–2. The information in this article was obtained from a presentation by Cdr. A. D. Struble, Jr., at a Society of Automotive Engineers National Aeronautical Meeting in New York.

15. U.S. Comptroller General, p. 17.

16. The direct-cycle reactor, since it heated air directly, did present fewer technological difficulties, but it had the fundamental weakness that air does not absorb heat as well as liquid metal. In an indirect cycle, the surface needed for heat transfer to liquid metal is many times smaller than that needed to heat air, resulting in a smaller and lighter reactor. Overall engine weight is greater, but a single reactor can power multiple engines. The result for the direct cycle was that a larger amount of air had to go through the reactor, which also had to be larger to create enough energy to produce sufficient engine thrust. The direct cycle also, by necessity, being less compact, would require considerably more shielding than would the more efficient indirect-cycle plant, adding even more weight. Advocates of the indirect cycle thus argued that long-term considerations favored the indirect cycle. A third type of reactor also was considered; see Table 2.

17. Butz; and William A. Tesch [Col., USAF], "Nuclear Aircraft Presentation to Washington Chapter of Institute of Aeronautical Sciences, April 14, 1959," in Joint Committee on Atomic Energy, *Aircraft Nuclear Propulsion Project: Hearing before the Subcommittee on Research and Development* [hereafter Subcommittee Hearing], 86th Cong., 1st sess., 23 July

1959, pp. 154–8. Maintenance was not considered to be much of a problem. The reactor would have a modular, plug-in design, and remote control equipment would remove and reinstall it. With the reactor removed, the aircraft could be serviced in a conventional hangar. The Navy also was planning to conduct maintenance at sea.

18. Lambright, pp. 2–3.

19. One year earlier, Conant had told Keirn that "NEPA should be exclusively an AEC project, and that the Air Force should not be involved in it." Sylves, p. 136.

20. The National Advisory Committee on Aeronautics.

21. President's APC, *Survival in the Air Age: A Report by the President's Air Policy Commission* (Washington, D.C.: U.S. Govt. Print. Off., 1 January 1948), p. 80.

22. This prediction proved to be near the mark for the amount final spent, but without producing an operational aircraft. As will be seen, administrative practices were to be blamed, as well as insufficient technological progress.

23. Feasibility studies took so long because the Defense Department failed to respond in a timely manner to AEC requests that it identify military requirements; U.S. Comptroller General, p. 123. For costs, ibid., p. 124.

24. Thomas S. Gates, Jr., Oral History Research Office, Columbia University, 1972, Eisenhower Presidential Library.

25. Lambright, p. 9.

26. Subcommittee Hearing, pp. 7–8.

27. Lambright, p. 9. By law, only the AEC could conduct reactor research. The Navy and Air Force, therefore, funded only the remaining systems, such as the airframe and the conventional portions of the engines. This was significant, since it meant that over half the cost of ANP (over half a billion dollars) was to be borne by the AEC.

28. The Strategic Air Command after World War II did not exhibit much interest in this kind of long-term research and development project, concentrating instead on procuring conventional, long-range bombers. Ibid., p. 4.

29. Harry S. Baer, Jr., "Power for Aircraft: Though Many Problems Still Exist, the A-Powered Plane's Future Looks Brighter," *Flying*, June 1957, p. 65.

30. Lionel W. Credit, "Flight Reliability in Nuclear Aircraft" (prepared for presentation at the Society of Automotive Engineers National Aeronautic Meeting, New York, 5–8 April 1960). Mr. Credit was an employee of Martin, which had by now determined that turboprop engines would be the best choice.

31. Butz, p. 30.

32. Ibid., pp. 30–2.

33. *Science News Letter*, 13 August 1960, p. 105.

34. Lambright, p. 8. Teller's views carried a great deal of weight, as evidenced by his influence on the development and ultimate deployment of another initially unpopular project, the thermonuclear bomb. See McGeorge Bundy, *Danger and Survival: Choices about the Bomb in the First Fifty Years* (New York: Random House, 1988); and Richard Rhodes, *Dark Sun: The Making of the Hydrogen Bomb* (New York: Simon & Schuster, 1995).

35. Richard G. Hewlett and Francis Duncan, *Atomic Shield, 1947–1952* (University Park: Pennsylvania State Univ. Press, 1969), passim.

36. Memorandum, 13 October 1953, p. 47, Eisenhower Presidential Library (EPL), NSC Series, box 4.

37. Edward Rhodes, *Power and Madness: The Logic of Nuclear Coercion* (New York: Columbia Univ. Press, 1989), pp. 98–100.

38. Lambright, p. 9.

39. U.S. Comptroller General, p. 134.

40. "Atom-Driven Ship Tour for Peace Is Planned by U.S.," *New York Times*, 26 April 1955, p. 1. The initiative produced the *Savannah*, launched in 1959 as the world's first nuclear-powered cargo ship. It made several demonstration cruises in the 1960s, but high costs prevented profitable commercial operation and resulted in its early retirement. "Savannah," *Encyclopedia Britannica Online*, retrieved January 2000 from the World Wide Web: http: www.eb.com.

41. *Bulletin of the Atomic Scientists*, March 1954, p. 107; September 1954, p. 303; and January 1957, p. 37.

42. Lambright, p. 11.

43. Fearing the loss of the ANP to the Navy or to unmanned flight, the Air Force also now proposed augmenting the nuclear reactor-powered engines with chemical engines to boost the plane's speed to two thousand miles per hour.

44. Lambright, p. 13.

45. One of these advisors, Edwin M. McMillan, asserted, "It would be sensible to fly one nuclear airplane [that is, the Air Force variant] before getting deluged with others." General Advisory Committee [hereafter GAC] of the Atomic Energy Commission, minutes of Meeting 46, 21–23 September 1955, p. 28.

46. Tesch, p. 155. The engine (a modified J-47) ran for 150 hours and generated over five thousand megawatt-hours.

47. "Memorandum for Director of the Budget," n.d., EPL, Department of the Navy (1), Office Staff Secretary: Paul T. Carroll, Subject Series, Alpha Subseries, box 20.

48. "Memorandum of Conference with the President," June 23, 1959, Eisenhower Presidential Library, Department of Defense, vol. 3 (6), box 1, p. 3.

49. Butz, p. 31.

50. Memorandum of Conference with the President, 26 December 1956, p. 3, EPL, Papers of the President, Dwight D. Eisenhower Diary Series, box 20. Adm. Arthur W. Radford, who was chairman of the Joint Chiefs of Staff, and Admiral Burke were in attendance. The ANP was mentioned only briefly, and no significant changes or decisions were made.

51. Ibid., p. 5.

52. Baer, pp. 24–5, 60, 64–6.

53. GAC minutes, meeting 52, 17–19 January 1957, p. 21.

54. Vincent Davis, *The Admirals' Lobby* (Chapel Hill: Univ. of North Carolina Press, 1967), pp. 58–60.

55. Official White House Transcript of President Eisenhower's Press and Radio Conference 123, 9 October 1957, p. 3, EPL, Dwight D. Eisenhower Press Conference Series, box 6. Eisenhower reminded the journalists of his remarks at a 1955 press conference on U.S. progress toward satellite deployment: "At this press conference it was specifically stated that the 'data which will be collected from this program will be made available to all scientists throughout the world.'" In other words, the president tried, arguably without success, to give the impression that the United States did not see Sputnik as a threat to security. The Unired States would launch its first successful satellite, Explorer I, on 31 January 1958 and a second, Vanguard I, on 1 March.

56. Ibid., pp. 13–4.

57. Memorandum, 11 October 1957, EPL, Dwight D. Eisenhower Papers as President, NSC Series, box 9.

58. Soviet scientific documents of the era make it clear that nothing of the kind could have occurred for a very long time. They emphasize the same problems that plagued nuclear propulsion of aircraft in the United States: thrust relative to weight, diversion of expensive and scarce resources from other projects, problems with recovering nuclear fuel,

and most importantly, how to remove heat from the reactor. None of these problems was even close to solution. See G. N. Nesterenko, A. I. Sobolev, and Yu. N. Sushkov, *Application of Atomic Engines in Aviation* (Moscow: Military Press of the Ministry of Defense of the USSR, 1957), pp. 267, 303, 304; and Yu. N. Sushkov, *Atomic Energy in Aviation* (Moscow: All-Union Society for the Dissemination of Scientific and Political Knowledge, 1958). Much of the technology described in these reports had come from U.S. and British publications. These documents are also available as appendices to Subcommittee Hearing.

59. Harold P. Green and Alan Rosenthal, *Government of the Atom: The Integration of Powers* (New York: Atherton Press, 1963), p. 243.

60. Memorandum from Aurand to Killian, 21 November 1957, p. 1, EPL, Office of the Special Assistant for Science and Technology, James R. Killian, Jr., and George B. Kistiakowsky, Records 1957–61, box 4.

61. Memorandum from Killian to Aurand, 4 December 1957, White House Office of the Special Assistant for Science and Technology, Records 1957–61, box 4, A76-16.

62. U.S. Comptroller General, p. 148; and "Navy Atom Plane Plan Disputed by Rep. Price," *Aviation Week*, 13 January 1958, p. 33.

63. For similar reasons the panel also met with representatives of the Navy, Air Force, and AEC; in addition, it visited the Pratt & Whitney plant at Middletown, Connecticut, and the General Electric offices in Evendale, Ohio. Robert F. Bacher et al., Memorandum for J. R. Killian, Jr., 11 February 1958, pp. 1–2, EPL. Among the earlier studies cited were those of the Littlewood group (April 1957), the Canterbury board (May 1957) and the Mills board (June 1957).

64. Ibid., pp. 3–4. An interview with an official from the Idaho National Laboratory who had been a top-level expert on the nuclear ramjet for missiles elicited the same reaction. The expert pointed to any number of technical problems, including the primitive state of development of its proposed floating dock.

65. Ibid., pp. 5, 7–8.

66. Robert Holtz, "The Soviet Nuclear-Powered Bomber," *Aviation Week*, 1 December 1958.

67. Memorandum of Conference with the President, 25 February 1958, p. 2, EPL, White House Office, Office of the Staff Security: Records, 1952–61: Subject Series, Department of Defense Subseries, box 10.

68. Richard G. Hewlett and Jack M. Holl, *Atoms for Peace and War, 1953–1961* (Berkeley: Univ. of California Press, 1989), p. 517.

69. Tesch, p. 155.

70. On the other hand, the heavier ANP aircraft would need more substantial, and thus heavier, landing gear and braking systems.

71. G. W. Newton, "Nuclear Engine Operating Considerations" (paper presented to the Society of Automotive Engineers National Aeronautical Meeting, New York, 1961), p. 2.

72. Letter from John A. McCone and Donald A. Quarles to Dwight D. Eisenhower, 2 January 1959, pp. 2, 3, EPL, Dwight D. Eisenhower Papers as President of the United States, 1953–61, Administrative Series, Box 25.

73. U.S. Comptroller General, pp. 158–60.

74. The DDRE advised the secretary of defense "in the functional fields of scientific and technical matters; basic and applied research; research, development, test, and evaluation of weapons, weapons systems, and defense material; and design and engineering for suitability, producibility, reliability, maintainability, and materials conservation" and "supervise[d] all research and engineering activities in the Department of Defense." U.S. Comptroller General, pp. 162–3.

75. James R. Killian, Jr., "Notes for Meeting with the President," 23 June 1959, p. 1, EPL, White House Office, Office of the Special Assistant for Science and Technology (James R. Killian, Jr., and George B. Kistiakowsky): Records 1957–61, box 4.

76. Subcommittee Hearing, pp. 49–56. General Keirn, in the same hearing, disagreed with Admiral Hayward's assessment and argued for "fly first" as the most practical way to move development forward (p. 32).

77. The Eisenhower administration had allotted thirty-five million dollars for DoD ANP research. The new administration cut twenty-five million dollars and diverted the remainder to the AEC. Papers of President Kennedy, Kennedy Presidential Library (KPL), Presidential Office Files, Departments and Agencies, box 77, Defense, 1/61–3/61, p. 7.

78. Dudley C. Sharp, Eisenhower Administration, Oral Research History Office, Columbia University, 1973, p. 64.

79. For instance, McNamara pointed out that the indirect cycle—the smaller and more compact approach—required over fifteen miles of fine tubing and merals as hot as two thousand degrees. Such an aircraft would weigh at least a half-million pounds; it would be subsonic, and it could not climb above thirty-five thousand feet. The cost of reaching flight testing was estimated at three to four billion additional dollars. Papers of President Kennedy, KPL, National Security Files, Departments and Agencies, box 273, Department of Defense, General, McNamara Testimony before Senate Armed Services Committee 4/4/61, pp. 22–5. Not all estimates were as negative; papers from NASA files indicate that flight testing required only $700 million. Papers of President Kennedy, KPL, Presidential Office Files, Departments and Agencies, box 82, NASA, 1/61–3/51, p. 1.

80. Interviews with officials whose identities, as was agreed with them, will be protected.

81. *Science News Letter*, 13 October 1962, p. 241.

82. E. W. Clements and G. J. O'Hara, "The Navy Rigid Airship," Applied Mechanics Branch, Ocean Technology Division, Naval Research Laboratory, Washington, D.C., July 1972, pp. 17–20; quote on p. 18.

83. Fred Hamlin, "Why an A-Plane Crash Program Won't Work," *Armed Forces Management*, January 1959, p. 185.

Ψ

IN MY VIEW . . .

The Naval Battle of Yeon Pyung, the West Sea

Sir:

As a 1985 graduate of the Naval War College, I was pleased to read in the Winter 1999 issue of the *Naval War College Review* an excellent analysis of the naval situation in Northeast Asia by Lt. Cdr. (also Dr.) Kim Duk-ki, Republic of Korea Navy ["Cooperative Maritime Security in Northeast Asia," pp. 53–77]. Since Commander Kim completed his study, events have increased the danger of conflict in that region, specifically on the Korean Peninsula—one of the most volatile areas in the world. As the only divided nation on the face of the earth where a Cold War atmosphere still exists, the Koreas have not joined the global trend toward reconciliation and cooperation. The South and the North, with their competing political ideologies and structures, still confront each other militarily.

The Republic of Korea (ROK) government has committed itself to bringing peace and stability to the peninsula by improving South-North relations. The North, however, adheres fiercely to its strategy of "red unification by force." The North Korean leadership has raised the level of tension on the peninsula by constant provocative actions and by violations of the armistice agreement with the South.

Those provocations resulted last year in the naval battle of the West Sea (known in the West as the Yellow Sea), the first large naval engagement between regular naval forces of the two Koreas since the armistice agreement of 1953. On 15 June 1999, North Korean patrol boats illegally invaded the Northern Limit Line (NLL) under the guise of protecting crab-fishing boats in the vicinity of Yeon-Pyung Island (about fifty miles northwest of Inch'on, and well south of the demarcation line). The battle began when a North Korean patrol boat opened fire as our ships were approaching. The battle—which certain Western periodicals incorrectly described as a "skirmish"—was a

complete ROK victory; our navy sank a North Korean torpedo boat and significantly damaged numerous patrol boats.

The victory can be explained in part by our superior weapon systems, but the main credit should be given to our sailors' high morale. The victory was a result of our combat-oriented training and education, which can best be summed up in the phrase, "When we fight, we win." Our crews were thoroughly imbued with that mentality.

The engagement in the West Sea taught new lessons to both sides concerning security aspects of the South-North relationship. First of all, it was an opportunity for the North to recognize the severe limitations of its ability to deal with problems through military provocation. Fundamentally, the battle was caused by an attempt by the North Korean military to revitalize its declining position in national affairs in comparison to the political and economic sectors. Our assessment is that hard-liners and the military commanders deliberately violated the West Sea NLL in order to interfere with the South's "Sunshine Policy"—a comprehensive effort to bring the North to the path of openness, reform, and inter-Korean reconciliation. They have resisted this approach, and the well-known disagreements in international law over the NLL may have seemed to offer them an opportunity.

However, the results of the naval battle shattered the North Korean military's strategic intentions. It appears that the battle was a major turning point for North Korea's leaders, in that it altered their perception of the South. They were forced to recognize the operational effectiveness of our navy's autonomous command structure, its advanced weapon systems, the strong security mindset of our citizens, the comprehensiveness and resolution of our government's policy, and the importance of the ROK-U.S. alliance.

In the past, we were overly concerned that any given crisis might escalate into full-scale war; accordingly, we responded somewhat passively to North Korea's various local provocations. This time, things were different. Our navy's immediate response fully and effectively displayed its freedom of action in regard to North Korea and neighboring states.

In military and security terms, the incident turned out to be a valuable confirmation of our armed forces' superiority in firepower, maneuverability, and overall operational capability. This confirmation of superiority has had a major influence on our sailors' attitudes; it has given them new confidence. It has also deepened our citizens'

trust in the armed forces and strengthened their focus on security. Finally, the battle displayed and reemphasized the importance of the close ROK-U.S. alliance.

However, one important issue requires our attention. The potential still exists that North Korea will continue its campaign of selective and localized provocations despite the increasing civilian exchanges and humanitarian support to the North, which are having the effect of sustaining the Kim Jeong-Il regime. That is a critical fact, of which we must remain aware.

With this threat in mind, our armed forces today are maintaining their seamless readiness, pursuing military cooperation with neighboring nations, and continuing to strengthen the combined ROK-U.S. defense structure based on our nations' close alliance. These efforts are necessary to deter future provocations by the North. We are committed to supporting our government's comprehensive policy through maintaining force superiority.

Vice Admiral Suh Young-Kil
Republic of Korea Navy

Vice Admiral Suh is Commander in Chief, Republic of Korea Fleet. He would like to inform the readers of the ***Naval War College Review*** *that, under his direction, a more extensive article on the same topic is being prepared.*

Ethnic Conflict

Sir:

I was delighted to see the article on ethnic conflict [*NWCR*, Autumn 1999] by Dr. Pauletta Otis. Many of us, including myself, who joined the Navy after the collapse of the Soviet Union have been engaged in what has been called "low-intensity conflict" around the globe. There is nothing "low intensity" about such conflicts; Dr. Otis has pointed out the complexities and haziness our forces face in trying to make sense of these tribal, ethnic, or religious wars.

Dr. Otis says that a country involved in ethnic conflict has never tried democracy or has tried it but failed. I do not disagree that a lack of representation in government is what sparks tribal and

nationalistic hatred, but I wonder what kind of democracy we should promote in areas of ethnic conflict. Should it be a bicameral government, created in our image? That is too simplistic a view. Maybe this issue should be studied further, taking the best features of each tribe's government, highlighting their similarities, and bringing forth a representative democracy that is in the image of those engaged in the fighting, and recognizable to them.

I have observed democracy in its primitive form among the tribes of Arabia, and it involves free access to their *sheikhs* (tribal leaders), the right to petition and complain, and a government in which a *majlis* (literally, gathering) is formed and decisions are made with input from the whole tribe. I have also encountered tribesmen in Egypt and Arabia who are content with their patriarchal society and are inclined culturally to serve the interests of the tribe before their own. Simply instituting methods that we have had over two centuries to develop is not feasible, from either a historical or cultural viewpoint. I would be glad to read an elaboration by Dr. Otis of her views, what she means by democratization in a nation riddled by ethnic conflict or in a culture where individualism is not the rule but the exception.

Youssef H. Aboul-Enein
Lieutenant, Medical Service Corps, U.S. Navy

"Ready or Not"

Sir:

James Levy's article "Ready or Not" about the Royal Navy's preparations and capabilities in September 1939 is useful and offers a long-overdue tribute to Admiral Sir Charles Forbes.

A supplementary point of value can, however, also be made. In the spring and summer of 1939 staff talks were held with the French Navy—at the time one of the finest navies that France had ever put to sea. Containment and destruction of the big German warships *Gneisenau* and *Scharnhorst* (both thirty knots) and the three pocket battleships (all three twenty-six knots) was to have been the mission of joint Anglo-French task forces comprising two of the Royal Navy's battlecruisers (thirty-one or thirty knots, faster than Levy allows) and the two fast, modern French battleships *Dunkerque* and

Strasbourg (thirty knots). From the British strategic perspective the French Navy was very important—in the Atlantic as well as the Mediterranean. In November 1939, for example, a task force under a French admiral aboard *Dunkerque* had the pride of the Royal Navy, *Hood*, under command. Naval operations in western European and Atlantic waters at this time have to be seen from an Anglo-French perspective.

It is, I think, also worth pointing out that the Royal Navy's belief that, for the most part, the German Navy could be contained in the North Sea by means of antisubmarine booms and nets in the Channel, Coastal Command aircraft, and heavy units in northern waters was not unsound. The strategy unraveled with the seizure of Norwegian and French Atlantic coast ports, and the loss of the French Navy as an ally—events not foreseen, or foreseeable, in 1939. A Battle of the Atlantic on a scale that it eventually assumed was not envisaged; the Admiralty staff requirement for the vessel needed for Atlantic warfare, the frigate, was only set out in July 1940.

Anthony Clayton
Farnham, Surrey, United Kingdom

Ψ

Call for Papers
"World War II: A Sixty-Year Perspective"
Siena College, 31 May–1 June 2001

Siena College is sponsoring its sixteenth annual international, multidisciplinary World War II conference. The focus for 2001 will be 1941. Topics welcomed include, but are not limited to, fascism and naziism, the war in Asia, Spain, literature, art, film, diplomacy, political and military history, popular culture, women's studies, and Jewish studies dealing with the era. Obviously Pearl Harbor, Japanese expansion and occupation, Greece, Yugoslavia, the Soviet Union, North Africa, and collaboration and collaborationist regimes will be of particular relevance. Inquiries from persons wishing to chair, or comment, are also welcomed.

Replies and inquiries 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. Deadline for submissions is 15 November 2000. Final papers are due 15 March 2001.

SET AND DRIFT

Navy 2001
Back to the Future

Robert Wilkie

FOR THE FOURTH TIME IN A HUNDRED YEARS, the United States is in an interwar period. However, unlike the days of Nazi Germany, imperial Japan, or the Soviet Union, there is no *single* clear and present danger to the security of the United States. Even with an awakening China and a nuclear India on the horizon, the American giant is swimming in a sea of minnows. America's military, particularly its navy, has little idea where, how, or whom it will fight. It is a truism that the accelerating pace of technological change will transform the way we think and act about national security. If there is a coming clash between "star wars" and "muddy boots," the ultimate question is whether U.S. grand strategy can adjust to anticipate that fight.

The conventional wisdom is that "star wars" is in permanent ascendancy and that a "revolution in military affairs" is transforming warfare. The advocates of the "revolution" argue that since computer technology is redrawing the boundaries of civilian life, it will completely unhinge the traditional military art. Yet no matter how profound the change, one must ask if technical wizardry is merely evolutionary, with historical experience and human passion still relevant to tomorrow's battlefield.

Naval War College Review, Spring 2000, Vol. LIII, No. 2

The roles of the U.S. Navy are conceptually simple: to deter attacks on the United States and its allies, ensure freedom of the seas, project American power abroad, sustain a forward presence, and support joint and combined operations. Given those missions, will the strategic lodestar of the Navy be very different in 2001 from that of 1901, when the "Rough Rider" entered the White House? Was Alfred Thayer Mahan correct in stating that there are certain strategic constants in naval affairs that are not subject to change, despite quantum leaps in technical development?

The term "revolution in military affairs" (or RMA) evolved from a concept developed by Soviet military theorists, the "military technical revolution." [1] The Soviets pointed to two periods of "revolutionary" change in military affairs during the twentieth century to bolster their theory. The first was the emergence of the airplane, the submarine, and mechanized warfare during World War I.[2] The second was the development of guided missiles, rudimentary computers, and nuclear weapons during World War II.[3] In the mid-1980s, the Soviet General Staff suggested that another new era in warfare was on the horizon—this based on precision guided conventional ordnance, comprehensive sensors, and stealth technologies.

The Soviets further defined an MTR, or RMA, as an occasion when one side in a conflict incorporates changes in militarily relevant technology and operational and technical theory in order to achieve an abrupt victory.[4] However, since the industrial revolution, technological advancement has been a constant in Western military and societal development. Michael O'Hanlon of the Brookings Institution has observed that "RMAs don't simply happen; they are created by a combination of technological breakthrough, institutional adaptation, and war fighting innovation."

Since technological progress is so commonplace, changes in that spectrum can rarely be called revolutionary. Nevertheless, the debate has begun, and how the services deal with it will determine the nature of American security policy in the next century.

Of all the armed services, the U.S. Navy is the most technically complex. Its platforms are sophisticated and varied, and it is the only service that can wage war at sea, in the air, in space, and on land. If there truly have been revolutions in military affairs in the twentieth century, the U.S. Navy has participated in all of them.

The introduction of steam and propulsion, coupled with knowledge gained from the early ironclads, produced the dreadnought battle line of which Theodore Roosevelt's Great White Fleet was an early exemplar. In addition, the modern submarine (a child of the

America's military, particularly its navy, has little idea where, how, or whom it will fight.

Confederate navy) rearranged the hierarchy of power at sea. The development of aircraft and missile systems extended naval striking power hundreds of miles inland.

The explosions at Hiroshima and Nagasaki changed the Navy as well. After winning a place in the delivery of nuclear weapons to complement the newly formed Air Force, the Navy took the atomic age to new levels by creating an invaluable weapon system with the marriage of the nuclear submarine and the long-range ballistic missile, which soon became the most important arm of the nuclear triad.

During this century, as the Navy's weapons of choice moved from dreadnought to Trident, the naval service constantly reconfigured itself. In the immediate post–World War II period, the Navy created a "balanced fleet," whose mission was to take and support forward bases for general strategic bombing as well as to prepare to invade the Soviet Union itself.[5] The balanced fleet could also, of course, project American power into third-world conflicts, such as in Lebanon, the Dominican Republic, and Vietnam.

After the Vietnam War, the Navy reduced its amphibious assets and became a force whose strategy Mahan himself would have recognized and appreciated. The Navy of the 1980s aimed to seize control of Mahan's "oceanic commons" and destroy Soviet naval power, afloat and in port.[6] In that regard, the Navy was not driven by revolutionary doctrine, much less technology. If anything, the Navy

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Robert Wilkie received his juris doctor degree from Loyola University School of Law, New Orleans, in 1988, and a master of laws in international law from Georgetown Law School in 1992. He has served as legislative counsel to Senator Jesse Helms and is currently counsel to the Majority Leader of the United States Senate, the Honorable Trent Lott. Mr. Wilkie also serves as an intelligence officer in the U.S. Naval Reserve.

portrayed its role in classic Mahanian teams: to seek out and destroy the enemy fleet and drive it from the oceans. Nuclear weapons and super-computers had not changed the Navy's fundamental mission.

Correctly or not, the Persian Gulf War accelerated the notion that a revolution in military affairs was already a reality. The swift and devastating victory over Iraq gave many in and out of governing circles the impression that the nature of warfare itself had changed. The coalition destroyed the morale of the Iraqi military with a lethal barrage of airpower, stealth, anti-radio-frequency technology, and cruise missiles. The precision firepower that had been predicted by the Soviet General Staff shifted the battlefield advantage away from the tactical defensive toward attack by a force that often could not be detected before it struck.[7] It is instructive to look back at 1991 and remember how many times media commentators portrayed the Iraqi army (then the fourth-largest in the world) as a deadly and modern mechanized force; in the end, however, Iraq was overwhelmed by a force that had complete mastery of the conventional, radio-frequency, and digital spectrums.

There is a tendency among strategists, and more so with politicians, to read too much into the outcome of the most recent conflict. The cliché is that generals are always fighting the last war. The Gulf War could become a case in point, unless its unique features are appreciated. To begin with, the United States and its coalition partners confronted an imbecilic enemy. One commentator, Eliot Cohen of the Begin-Sadat Center for Strategic Studies, even contends that "the Iraqis presented the American military with an ideal array of targets. Had the Iraqis fought with somewhat greater determination and cunning (had they been as tough and as clever as the North Vietnamese, for instance) they would have administered a severe battering to the coalition."[8]

An unfortunate by-product of victory in the Gulf may have been that it convinced a political leadership with little knowledge of the intractable demands of battle that war is little more than an expensive video game and that unleashing the high-tech genie produces bloodless victories—that war can be waged on the cheap. There is, of course, nothing new in this fallacy. Military innovators throughout history have heralded their wonder-weapons as keys to fewer casualties, even as harbingers of peace itself. Alfred Nobel and Richard Gatling are cases in point.

Some in the Clinton administration are predisposed toward the many tactical myths emanating from the victory in the desert; in addition, they have a peculiar notion of what the military is built to do. It is not crass partisanship to argue that some people believe the U.S. military exists principally not to deter or kill the enemies of the Republic but to perform the missions that are more sensibly the province of the Red Cross and UNICEF—in other words, it is an olive-drab Peace Corps. In the last six years, the XVIII Airborne Corps and any number of Marine expeditionary units have routinely confronted cases of mass starvation, political murder, and authoritarian and tribal excess.[9]

The military's current strategic plan centers on an expeditionary role for the Navy and Marine Corps, and it advocates turning U.S.

The greatest damage to the U.S. Navy in the Gulf War came from weapons that were of World War I vintage—mines.

technical superiority into "full-spectrum dominance."[10] The Joint Chiefs' *Joint Vision 2010* maintains that the United States must have full-spectrum dominance over any aggressor or combination thereof.[11] Such a doctrine envisions a military that can "overawe" America's adversaries with machines, thereby rendering traditional fighting obsolete.[12]

In current parlance, full-spectrum dominance means sending cruise missiles into Sudan, Bosnia, Afghanistan, and Kosovo at little apparent cost in American lives and treasure. Coupled with "operations other than war" in such places as Haiti, Liberia, Somalia, and Rwanda, these practices are not grounded in real-world military experience, and in the long run they deprive the defense establishment of training and resources needed to advance the RMA. Worshiping at the high-tech totem also gives short shrift to the Marine rifleman and the destroyer sailor. Low-value sideshows in theaters where there is little danger to American interests lull both the nation's leaders and its citizens into a false sense of security. Moreover, the sheer number of overseas adventures can produce overextension and civic exhaustion.

In one sense, the Gulf War left the Navy in an awkward position. While the Army and Marine Corps had in that war validated their maneuver-warfare doctrines developed in the 1970s and 1980s, and

Air Force weapons had dazzled worldwide television audiences, the Navy seemed adrift in a high-tech world that it should, in theory, dominate. Admiral William Owens, then vice chairman of the Joint Chiefs of Staff, bemoaned the Navy's plight:

> We left [Iraq] knowing that the world had changed dramatically but that our doctrine had failed to keep pace. Little in Desert Storm supported the Maritime Strategy's assumptions and implications. No opposing naval forces challenged us. No waves of enemy aircraft ever attacked the carriers. No submarines threatened the flow of men and material across the oceans. The fleet was never forced to fight the open-ocean battles the Navy had been preparing for during the preceding twenty years. Instead, the deadly skirmishing of littoral warfare dominated.[13]

However, there actually appears to be little cause for concern. In the Gulf War, the Navy transported ground forces over the sea to fight the enemy. Despite all the hyperbole about revolutions in information systems and high-tech weaponry, the old pattern of naval warfare has remained constant. Granted, there was no blue-water threat in the Gulf, but the Navy's precision fire (cruise missiles, airpower, and gunfire support from the sea), along with impressive logistics, would have been familiar in essence to commanders at Iwo Jima and at Inchon. The Navy delivered ordnance and men to a place of its choosing, to the detriment of the enemy.

Still, let us assume, *arguendo*, that the Gulf War was a turning point and that a revolution in warfare is under way. What is driving it? Does it apply to the future of the Navy?

Admiral Owens is a firm believer in the revolution, arguing that the explosion in information technologies and the application of its instruments constitute an RMA. As Cohen notes, Owens also believes that the United States is the only nation with sufficient economic and political sophistication to exploit these changes.[14] Owens is not primarily interested in creating new technology but in exploiting current technology, by building an integrated web of systems that can "look, shoot, and communicate" across service lines.[15] He looks at war in the new century as a matter of protecting, gathering, evaluating, and managing information faster and more efficiently than any potential adversary.

There is nothing new in seeking to manage intelligence and combat information more efficiently. However, Owens envisions a military that will merge the individual services into one joint defense organization.[16] His solution builds upon the reforms begun by the 1986 Goldwater-Nichols Defense Reorganization Act. Goldwater-Nichols gradually transferred authority from individual service chiefs, where it had resided for most of the century, to the theater commanders in chief. What Owens does not focus on, however, is the implication of such a new joint defense organization—the need to rethink how the United States should finance and build its weapons. If the Navy is to respond to multilevel threats, the civilian bureaucracy can no longer think of funding platforms and sailors as single systems designed solely for the Navy or Marine Corps.[17]

Owens also argues that his information-based military necessitates the creation of an officer corps whose primary professional training is in science and technology.[18] Because of America's technical and economic predominance, Owens recognizes no current external threat to the United States, but he is most concerned about resistance to change from within the U.S. military establishment.

Another group of theorists believes that a revolution is on the way but is only in its early stages.[19] They see innovation rather than radicalization as the key to the future. They are more concerned with keeping technologies like stealth and miniaturization on the production line and out of the hands of potential enemies. Unlike Owens, they do see the emergence of a new superpower as a threat. The future threat is China, but they also fear other nations or alliances (a coalition of militant Islamic powers, a revanchist Russia, or a narco-criminal empire) that will seek regional hegemony and thereby force a fight with the United States within their spheres of influence. Terrorist activity in various forms could also threaten the United States and allied nations, particularly given increasing access to weapons of mass destruction. These theorists also see the increase in unconventional military operations, such as peacekeeping and nation building, as obstacles to the development of new technologies, since they drain resources and money away from more relevant military endeavors. The arsenal ship, advanced composite hulls, drone vehicles, information superiority, and sea-based strategic or theater missile defense are examples of innovations that require long lead-times for research and development. These systems are

threatened by the costs associated with the proliferation of operations other than war (OOTW) and increasing constraints on the federal budget.

One common thread among both schools of thought is that they require a highly educated and well motivated soldiery to master the new machines of war. Sophisticated weaponry needs a continuous supply of technical experts to maintain its base. That not only requires continued political and budgetary support from the national government but high educational standards at the secondary and collegiate levels. Those are matters beyond the military's control but ones nonetheless that must be addressed by the national leadership. Obviously, if the military continues to augment its ranks with educationally marginal recruits to meet staffing shortfalls, its ability to field and operate the weapons of the new century will be problematic.

Admiral Owens's jeremiad that the maritime strategy of the 1970s and 1980s is passé is correct but misplaced. The future will require a

Will the strategic lodestar of the Navy be very different in 2001 from that of 1901, when the "Rough Rider" entered the White House?

balanced U.S. fleet that can claim the littoral while stifling any attempts by any future enemy to contest control of the high seas. There are no immediate threats to America's control of the sea. Many weapons of the so-called RMA—computer-guided munitions, long-range sensors, and supercomputers—are already in the inventory and light-years ahead of those of potential adversaries. However, that is not to say that threats are not proliferating. While the new members of the nuclear club (China, India, and Pakistan) are in no position to offer substantive global strategic threats to American interests, each could be in a position to challenge American power in individual theaters.

What must not be lost sight of in the search for technical panaceas is the existing conventional threat. The greatest damage to the U.S. Navy in the Gulf War came from weapons that were of World War I vintage—mines. The USS *Samuel B. Roberts* (FFG 58), the USS *Princeton* (CG 59), and the USS *Tripoli* (LPH 10) were victims of weapons that would have been familiar to Jellicoe and Beatty, even Farragut

and Porter. Sophisticated weapons proved their worth in the Gulf War and Kosovo, but they are expensive and sometimes fragile, and more often than not they require ideal conditions to work.

The Navy also will be required to adjust its force to fit into a shrinking discretionary federal budget. There will be a decreasing awareness on the part of the public and civilian leadership of the need for a large defense establishment. The halcyon days of the six-hundred-ship navy are gone. Utility will be the key to future weapons procurement. It is probable that expensive breakthrough technologies will have to be assimilated at the expense of traditional naval communities and forces in being.

For the next thirty years, it should be possible to suspend the notion of a superpower confrontation of the *Doctor Strangelove* variety. In that era, warfare in all likelihood will revert to the experiences of Korea and Vietnam—high casualties inflicted by an aggressive opponent, fighting on ground of his choice. "Ground of choice" is not just a figure of speech. Recent history shows that access to facilities ashore is not guaranteed. The United States lost bases in the Philippines, is always on a short tether in the Middle East, and cannot count on Japan when it comes to deploying ships of the nuclear fleet. Accordingly, naval operations from forward-deployed staging areas, with a paucity of prepositioned equipment, might become the norm, however burdensome.

The Marine Corps is already preparing to fight in hostile, highly populated, urban environments. If the British experience in Northern Ireland is any indication, a dramatic change will be required in the Corps' doctrine, toward a revised canon focused on counterterrorism, unconventional warfare, and intelligence gathering. This is not a new problem for the Marine Corps, which cut its teeth in the early part of the twentieth century chasing insurgents through the streets and mountains of Nicaragua, Haiti, and the Dominican Republic. The young "Chesty" Puller first gained notoriety tracking the Nicaraguan bandit César Augusto Sandino.

In general, the United States will require more dispersed forces with enhanced mobility. Sealift and airlift commands should be given a seat at the Pentagon table equal to that of their combat-arms counterparts. Sealift is not a glamorous subject that turns the heads of congressional committees, but we ignore it at our peril. The ability to dominate the space and information spectrum will be negated if

U.S. forces cannot sail or land where they wish to for want of the basic tools of the naval trade.

In the rush to unleash the high-tech military, one easily forgets that in Korea and Vietnam the United States enjoyed an exponential technical superiority over its "third-world" foes but still suffered more than a hundred thousand deaths.[20] Retired Marine Corps general Paul Van Riper has noted that United States forces had "information dominance in Somalia" but still had no idea how to find, much less fight, a technically primitive army.[21] Van Riper's assessment is correct. America had "full-spectrum dominance" on the streets and in the alleys of Mogadishu; unfortunately, Mohammed Aideed's ragged tribesmen had little use for the Internet or vulnerability to laser-guided munitions.

It is folly to believe that computers, fiber optics, lasers, and composite materials have rendered all military experience and logic obsolete. Clausewitz was correct in noting that there is an inevitable fog of war, which planners cannot dispose of antiseptically. Robert McNamara attempted to fight the Vietnam War with scientists and statisticians rather than with soldiers grounded in the historical experiences of the craft. The result of his folly was fifty-six thousand dead and an ignominious retreat for the American colossus.

This is not to say that technological advancement is not an integral part of war. It is. That was true when the arrowhead replaced the club. However, warfare still comes down to a human being who must train with, staff, and ultimately decide how to use that new weapon. More importantly, for that soldier to be effective, society must be prepared to see that soldier fall in action.[22] No amount of technology can make war civilized or replace the soldier as the focus of combat. As a former Army Chief of Staff, Gordon Sullivan, remarked, "Death and destruction will remain the coins of war's realm. And the value of these coins will not diminish, regardless of how much technology is available to the information-age army."[23]

As we head into a new millennium, the Navy must be ready to reclaim its heritage. It will have to control the expeditionary littoral and deep water. Technical revolutions cannot change that reality. Theodore Roosevelt and Alfred Thayer Mahan would agree.

Notes

1. Theodor W. Galdi, *Revolution in Military Affairs?* (Washington, D.C.: Congressional Research Service of the Library of Congress, December 1995), p. 4.

2. Ibid., p.5.

3. Ibid.

4. See *Report on the Revolution in Military Affairs* (Washington, D.C.: Center for Strategic and Budgetary Assessments, March 1999).

5. Edward Rhodes, "'. . . From the Sea' and Back Again: Naval Power in the Second American Century," *Naval War College Review*, Spring 1999, pp. 13–54.

6. Ibid., p. 22.

7. Lost in the high-tech ballyhoo of the 1991 Gulf War was the fact that it took highly trained armored, infantry, and airmobile units, plus forty-year-old B-52s, to sweep the Iraqis out of Kuwait. In some respects, the greatest damage inflicted on the Ba'athist regime came from a blitzkrieg taken right out of the pages of Heinz Guderian and General Patton, not from a script written by George Lucas or Gene Rodenberry. DESERT STORM was a low-tech victory.

8. Eliot Cohen, "American Views of the Revolution in Military Affairs," *Mideast Security and Policy Studies*, no. 28, p. 7.

9. One of the more infamous and disquieting statements made by a public official in recent years about the role of the military has been attributed to Madeline Albright. While serving as ambassador to the United Nations she reportedly told then chairman of the Joint Chiefs of Staff, Colin Powell, "What's the point of having this superb military you are always talking about, if we can't use it?"

10. Andrew Bacevich, "Policing Utopia: The Military Imperatives of Globalization," *National Interest*, Summer 1999, pp. 5–13.

11. In one sense, there is little to distinguish this idea from the strategy pursued by the Royal Navy from the defeat of the Spanish Armada to the end of World War II. The Admiralty's policy was to produce a naval force stronger than the combination of Britain's two closest naval rivals. Nelson validated that doctrine off Cape Trafalgar, where he crushed the combined French and Spanish fleets in 1805.

12. Colin L. Powell, *My American Journey* (New York: Random House, 1995), p. 576.

13. William A. Owens, *High Seas: The Naval Passage to an Uncharted World* (Annapolis, Md.: Naval Institute Press, 1995), p. 4.

14. Cohen, p. 2.

15. Ibid.

16. Ibid. Owens's argument actually lays the foundation for *basic reform* in the Pentagon structure. Although he has not made this direct case, eliminating the individual service departments as they now exist could facilitate the joint service organization he foresees. The Army, Navy, and Air Force Departments are anachronisms, left over from the immediate postwar defense reorganization. These bureaucracies foster parochialism and creare expensive redundancies that impede progress in the new "joint" environment. The elimination of the service departments would mark a dramatic break from the old order and expedite the broad implementation of the new technologies across service boundaries, including mission and equipment sharing and increased interoperability of forces. Such reforms will not only demand new thinking from the services but boldness from Congress and the White House.

17. See "Technology for the U.S. Navy and Marine Corps, 2000–2035," *Report of the National Academy of Sciences* (Washington, D.C.: U.S. Govt. Print Office, 1997).

18. This is quite a contrast to the doctrine championed by retired vice admiral James Stockdale. One of the most decorated sailors of this century, Admiral Stockdale has long argued that technical proficiency can never replace the classical study of military art as the foundation for a naval officer's education.

19. Cohen, p. 14.

20. A detailed discussion of Navy–Marine Corps doctrine for OOTW and operational maneuver from the sea is found in *The Navy and Marine Corps in Regional Conflict in the 21st Century* (Washington, D.C.: National Academy Press, 1996).

21. See Michael O'Hanlon's speech, "Beware the RMA'nia," National Defense University, 9 September 1998, for reference to Van Riper's remarks. O'Hanlon also notes that America also had dominant information and situational awareness over Iraq and still could not find Saddam Hussein's chemical and biological weapons.

22. Andrew P. Erdmann, "The U.S. Presumption of Quick Costless Wars," *Orbis*, Summer 1993. Erdmann notes that the presumption has been since the 1980s that the United States must end future conflicts quickly and at minimum cost. Such a presumption necessarily means that military action must be short and efficient. U.S. history does not support this kind of expectation. The U.S. Civil War, World War II, Korea, and Vietnam were protracted, bloody conflicts. Even in Vietnam it was not the public will that cracked but the political and military will. Our retreat from Somalia was not due to the public's revulsion of seeing casualties on television but to their sense that the political leadership had no clear policy in Africa and that lives were being wasted.

23. Harry G. Summers, *The New World Strategy* (New York: Simon & Schuster, 1995), pp. 222–3.

REVIEW ESSAYS

Guadalcanal
A Reevaluation

Wayne P. Hughes, Jr.

Grace, James W. *The Naval Battle of Guadalcanal: Night Action 13 November 1942*. Annapolis, Md.: Naval Institute Press, 1999. 234pp. $32.95

WHEN I ATTENDED THE NAVAL ACADEMY, rooms in Bancroft Hall were named after Medal of Honor recipients, to inspire the midshipmen. One of my four years there was spent in the Daniel J. Callaghan room on the zero deck of the third wing. By the time I reported to my first ship in the fleet, USS *Cushing* (DD 797), I knew the book on Callaghan: if he had not been a former presidential aide and had not died in battle, he would have been court-martialed for incompetence. The Monday-morning quarterbacks described how the destroyer USS *Cushing* (DD 376), for which mine had been named, was literally in the midst of the Japanese before Callaghan gave the order to open fire. He was blamed for losing control of his unwieldy formation, so that in only eleven minutes in the mêlée that followed (0150–0201), five American cruisers and destroyers were fatally damaged, DD 376 among them. The following morning a sixth, the crippled light cruiser *Juneau*, was torpedoed by a submarine and sunk with great loss of life, including the five Sullivan brothers.

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In the wee hours of 13 November 1942, Rear Admiral Daniel Callaghan saved the Marines on Guadalcanal and lost his reputation. He and his force of eight destroyers and five cruisers turned back two Japanese battleships, a light cruiser, and eleven destroyers that were set on pasting Henderson Field with the battleships' fourteen-inch shells. The bombardment was to be the precursor of the decisive ground attack that would overrun U.S. Marine Corps major general A. A. Vandegrift's defensive perimeter around Henderson Field.

James Grace leaves the postmortems to others. He explains that he wrote this book as "the result of a childhood memory. . . . When I was in grade school, I read a book [saying] that while cruisers were never intended to fight battleships, that had actually happened at Guadalcanal, and the U.S. cruisers had *won*." As he gathered his facts over many years, he came to know that winning had been costly for the U.S. Navy. The wild alley-fight was the first of two intense battles set in motion by Vice Admiral William Halsey, who was determined to restore the Marine Corps' faith in the U.S. Navy, which had been lost when the Navy was crushed by the Japanese in the Battle of Savo Island and pulled out immediately after the landings in August.

The naval battle of Guadalcanal comprised two bitter engagements over the span of three nights. On the second night, the Japanese bombarded the Marines from cruisers and destroyers, while U.S. opposition consisted only of PT boats. On the climactic third night, however, Rear Admiral Willis A. Lee, with the battleships *Washington* and *South Dakota*, defeated another Japanese bombardment force, which included the battleship *Kirishima*. Though it was not yet evident to either side, the tide had turned, and Henderson Field was safe. Taken together, these three nights are the equivalent for surface warships of the three-day battle of Midway for aircraft carriers.

There is no lack of coverage on those night engagements. This book is a noteworthy addition to the literature because of the author's use of research on the U.S. and Japanese participants, research that involved interviews by phone, in person, and by mail. The bibliography lists 213 participants who were contacted.

James Grace, a retired high school teacher and Army Reserve officer, wisely avoids adding his own spin to those of many professional historians and naval officers who have concluded that the battle was badly led. Instead, he has assiduously sought out participants,

logbooks, and historical records of both sides and has let them tell their own stories. With diagrams of the Japanese approach and tactical formations, and details of their activities, Grace permits insights from the Japanese side of things that were missing from early assessments by S. E. Morison, E. B. Potter, and other premier naval historians who denigrated Callaghan's combat leadership.

My own reappraisal of Callaghan's performance started in late 1994, with the receipt of a letter from Frank Uhlig, former editor of the *Naval War College Review*, which contained correspondence by Charles R. Haberlein of the Naval Historical Center in Washington, D.C. Haberlein's research (cited in Grace's exhaustive bibliography) includes charted ship movements, the record of all TBS (voice "talk between ships") transmissions, and USS *Helena*'s radar log. Grace has added details of Japanese ship movements that were unavailable even to Haberlein. This is not the place to reply to all the charges against Callaghan and explain my own personal epiphany, but it is appropriate to show here how Grace's information helps us reassess Callaghan's performance.

Here is an example that adds to the defense of Callaghan (a defense that was never delivered, of course, because he and Norman Scott, our other flag officer present, died at their posts in the *San Francisco* and *Atlanta* early in the battle). Haberlein and others observed a mysterious jump in the approach by the Imperial Japanese Navy formation. At 0126 USS *Helena*, whose radar was the principal tracking instrument, reported large contacts (the two battleships) at fifteen miles, which appeared to give ample time for the right

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Captain Wayne Hughes is senior lecturer at the U.S. Naval Postgraduate School, Monterey, California, in the Department of Operations Research. He is the author of *Fleet Tactics: Theory and Practice* (1986), of which a revised edition was published by the Naval Institute Press in November 1999; and *Military Modeling for Decision Making*, 3d ed. (Alexandria, Va.: Military Operations Research Society, 1997; see review in *Naval War College Review*, Autumn 1999). He is also the author of the article "Naval Tactics" in the *Encyclopedia Britannica*, two U.S. Naval Institute prize essays, and four articles in the *Naval War College Review*. On active duty he commanded the USS *Hummingbird* (MSC 192) and USS *Morton* (DD 948), was executive assistant to the Under Secretary of the Navy, and served in the Korea and Vietnam conflicts.

response by the tactical commander. Starting three minutes later, Callaghan turned the ships of his formation sequentially (a "corpen" maneuver) due north to cross ahead of the Japanese contacts. Seven minutes after that, while his long column was still turning, the fourth ship in line (the destroyer *O'Bannon*) reported radar contact at only seven thousand yards! Minutes later a van destroyer, probably the *Cushing*, reported visual contact on Japanese ships crossing its bow from port to starboard distant "four thousand yards at the most." To quote Grace, seconds later "bedlam reigned," and the American formation disintegrated. Forever after, critics said that if Callaghan had only been in the *Helena*, he would have had the picture and not lost control.

Let us first consider the facts from Grace's account and then ask the following question: would the American ships have been better off had they held to their column and crossed ahead of the Japanese? Keep in mind that although the battle of Tassafaronga had not yet been fought, in that engagement U.S. cruisers and destroyers (facing destroyers only) would be devastated by Japanese torpedoes *because* they were in a tight, orderly column with their beams to the salvos.

Here is what Grace tells us. Coming down from the north before midnight, the Japanese passed Savo Island to port. Vice Admiral Hiroaki Abe had his ships in a relatively tight formation, ten or eleven thousand yards from van to rear. In a severe rainstorm, however, his navigator missed the turn, and the ships continued past Cape Esperance, the northwest point of Guadalcanal. Abe had to reverse course to clear the cape before he could pass east-southeast between Guadalcanal and Savo. The visibility was dreadful in the storm, and his complex double-fan-shaped formation could not easily be restored after two radical course changes. His destroyer screen fell into disarray, so that there were at least eight thousand yards between the battleships and the lead destroyers. Thus *Cushing* and three other van destroyers in the long U.S. column found themselves cutting through what they and Callaghan wrongly took to be an orderly Japanese formation. While everyone (including me) believes Callaghan should have been commanding from the *Helena* (because of its SG surface-search radar) we now see, with the aid of Grace's details, why the Japanese ships appeared *twelve minutes* earlier than expected. Callaghan's attempt to corpen his long, unwieldy column of thirteen ships in front of the Japanese formation was doomed to

drive them right into the Japanese. Haberlein aptly notes that Callaghan knew he had to close for his light guns to be effective against battleships. It would have taken the greatest perspicacity, with or without a good surface-search radar at his metaphorical elbow, to be close enough but not too close.

I go farther and say that Callaghan was right to create a mêlée, whether or not that was his intention. No battleship wants to be surrounded by enemy cruisers and destroyers at point-blank range. Moreover, an orderly U.S. column attempting to employ guns would have been destroyed by torpedoes from, all told, eleven Japanese destroyers and a light cruiser. On our side we had unreliable torpedoes (Grace's narrative is conclusive on that score, if any doubt remains). During the event, two U.S. destroyers nearly *collided* with the lead battleship, *Hiei*, while many of our cruisers and destroyers rained shells into its topsides. By confusing both sides, Callaghan assured mission success.

A second great service done by Grace is to paint an intimate picture of what the participants saw and were thinking, from commanding officer to seaman. I have attended *Cushing* reunions and met survivors from DD 376. They do not talk much about the battle (they mostly exchange liberty-port tales), but if you draw them out, they will tell you that what they remember is about five minutes of ferocious fighting followed by interminable efforts to save the ship and then to survive in the water. Grace's picture corresponds precisely.

This book parallels C. Raymond Calhoun's *Tin Can Sailor: The Story of the USS Sterett* (reviewed in the Winter 1995 *Naval War College Review*); *Sterett* was the third ship in column that night. The reader of either book has the vicarious experience of down-and-dirty combat in all its confusion. This reviewer is sure the messiness of intense sea battle will not be dispelled by modern information technology.

A third benefit of Grace's book is that it offers a better understanding of Japanese surface combat leadership than we have had. Grace's biographical research is very useful on why the Japanese were such capable night fighters despite their inferior radar. For instance, all three of the Japanese flag officers in the battle were torpedo specialists. Surely this says much about where the Imperial Japanese Navy's emphasis lay and why the United States faced such a worthy opponent in every 1942 surface action.

I have three short footnotes. When I arrived at my conclusion that Callaghan had done well, I asked myself: what would Arleigh Burke, the premier surface tactician of the Solomons, have done differently? On one hand, the answer was "quite a bit"; on the other hand, in view of the fact that Callaghan had to block battleships by coming to close quarters, I cannot see how Burke's tactic of hitting and standing away with small divisions would have been more successful than Callaghan's disorganized but ferocious attack. In addition, when we outfought the Japanese in 1943, it was with the benefit of a lull of several months in which to practice new cruiser-destroyer tactics—and by then, at long last, we had torpedoes that were reliable.

Second, it was delightful to see that Grace had picked up on the effective employment of radar by Lieutenant Commander Joseph C. Wylie. "Bill" Wylie (not Joe, as Grace calls him) was executive officer of the *Fletcher*, which was in the thick of the action yet remained unscathed. After the *Fletcher* had similar success in the battle of Tassafaronga, Wylie was summoned to Pearl Harbor by the commander of the Pacific Fleet destroyer force to go to the Bureau of Ships and design the destroyer combat information center (CIC) and write its procedural doctrine. The CIC was one of those vital improvements—invisible in photos and scarcely noticed by historians—that enhanced combat performance through improved command and control as much as, say, doubling the number of weapons carried would have. A year later Wylie was the commissioning commanding officer of *Ault* (DD 698). He returned to the Pacific in time for the Iwo Jima and Okinawa operations.

Third, two survivors of *San Francisco*'s long, painful night were on duty at the U.S. Naval Academy when I returned there in 1957 to teach naval history. One was Captain Bruce McCandless, who when I knew him lived up to his reputation for professional competence and personal modesty. Lieutenant Commander McCandless's efforts, in the shambles that remained of the *San Francisco*'s bridge, to straighten out the command situation in the American formation had won him the Medal of Honor. The other and less known survivor, Captain John Bennett, had been a mere lieutenant junior grade at the time of the engagement; he received the Navy Cross for his heroism under fire.

Bennett has done good service on Callaghan's behalf. In two recent columns of the Surface Navy Association's newsletter, *Surface SitRep*

(August/September 1996 and February/March 1997), he recalled Admiral Callaghan's unflappable determination before and during the battle. Bennett is an admirer (as am I) of Richard B. Frank's book, *Guadalcanal*, but he says Frank misses the mark when he narrates the events of that famous Friday the thirteenth in 1942.

The whole three-day naval battle of Guadalcanal (especially the first bloody night) is well worth close study by anyone who wishes to see the nature of what we now call joint littoral warfare, and how land, sea, and air forces each make indispensable contributions. James Grace has contributed new insights to such a study. Maybe a side benefit will be the restoration of Dan Callaghan's reputation as a combat leader, for he commenced the final defeat of the Japanese at Guadalcanal, under the most trying of circumstances.

Ψ

Don't Techno for an Answer

The False Promise of Information Warfare

Brent Stuart Goodwin

Adams, James. *The Next World War: Computers Are the Weapon and the Frontline Is Everywhere*. New York: Simon and Schuster, 1998. 288pp. $25

Arquilla, John, and David Ronfeldt, eds. *In Athena's Camp: Preparing for Conflict in the Information Age*. Santa Monica, Calif.: RAND, 1997. 501pp. $20

Schwartau, Winn. *Information Warfare: Chaos on the Information Superhighway*. New York: Thunder's Mouth Press, 1994. 432pp. $22.95

Shukman, David. *Tomorrow's War: The Threat of High Technology Weapons*. New York: Harcourt Brace, 1996. 272pp. $26

THE U.S. VICTORY IN THE 1991 Persian Gulf War prompted widespread speculation about the future of warfare and the role of technology and information in the conduct of war. This has produced an ever-growing body of literature concerning the future of war and the implications toward U.S. policy. Unfortunately, that literature has gone from explanation to prediction with very little analysis in between.[1] The predictions that have been made need to be studied in light of some of the major works in strategic studies. On the whole, one finds ruminations about information warfare lacking in useful hypotheses toward generating theoretical frameworks for strategic thinking about future events.

By any measure the performance of U.S. weaponry in the Gulf War was impressive, even taking into account some overstatements made at the time. However, there is a profound difference between

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winning the war, on the one hand, and sound strategy and policy being aided by superior technology, on the other. At this point in history, it is important to keep in mind that technology and information are not the automatic solutions to every problem. From a strategic standpoint, we may have reached the point where technology and data complicate more than they clarify. Technology does not fix systemic organizational problems, but it does increase implementation costs in time and money, and thus it should not be seen as a cure-all. Most importantly, technology is a poor offset for unsound strategy and policy.[2]

The volumes reviewed here typify the tone of the literature regarding war in the information age. Taken together, they exhibit a preoccupation with technology and nonstate actors. Those two factors are not without consequence for strategic thinking, but these authors make little attempt to situate their claims in broader strategic thought, which would prove useful in sparking debates that would lead to theory building about information warfare (IW). In none of the works are theoretical frameworks presented for evaluating events, and thus the reader cannot find a basis for the development of sound strategy and policy regarding IW.

This is not to say that authors in this genre are incorrect in suggesting that technological advantages should be exploited or that they present dangers, but rather that their predictions of technological prowess translating into battlefield dominance have not been systematically established. Generally, the literature proceeds from observations to conclusions with insufficient attention to the component parts of society and war, and how they relate to one another.

To varying degrees these four books share two assumptions regarding information warfare.[3] The first is that IW implies the rise of a new political-economic order that privileges nonstate actors because IW allows nonstate actors to threaten the security of Westphalian

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Mr. Goodwin is a doctoral candidate in the Department of Political Science at Brown University. He teaches courses on international relations and American foreign policy after the Cold War. His research interests are in U.S. national security policy decision making, Pacific Rim security, and the impact of technology on decision making and strategy. In 1996 he worked in the State Department's Office of International Security and Peacekeeping.

states. Second, technological dominance is the key to winning future wars.

Information Warfare (Schwartau) and *Tomorrow's War* (Shukman) present views based largely upon the first assumption. *The Next World War* (Adams) and *In Athena's Camp* (Arquilla and Ronfeldt) accept the first assumption but emphasize the second.

Barbarians at the Gate: Schwartau and Shukman. Winn Schwartau sounds an alarmist note in *Information Warfare,* highlighting the potential "computer Pearl Harbor waiting to happen."[4] His concern is that IW will be part of the formation of a new political and economic order that will have dire consequences for individual, as well as American national, security. In a global information war, technology will combat technology, with widespread chaos the result.[5] According to this view, the vulnerability of individuals and the state lies in the accessibility of computerized data to ill-intentioned, nonstate, information warriors.

Nonstate actors receive further treatment in David Shukman's *Tomorrow's War*. Computer hacking on a grand scale will be a facet of future conflict, he believes, along with the use (or at least threats of the use) of weapons in the arsenals of nonstate actors.[6] Shukman adds the threat of nuclear, biological, and chemical (NBC) warfare to the arsenal of nonstate actors. A good part of this book portrays the dangers posed by high-technology weapons, including space-based weaponry. Shukman argues that new weapons systems, from improved missile targeting to complex unmanned vehicles and ant-sized robots, will shape a new geopolitical order. Shukman cites the Aum Shinri Kyo subway attack in Tokyo as a case study to illustrate what nonstate actors can do in "tomorrow's war."[7] One might reply, however, that the subway attack is an example of threats that have been with us for many decades, not those typically associated with information warfare, and that little geopolitical impact has yet been seen from nihilistic or messianic nonstate terrorism.

The concern of Schwartau and Shukman over an implicitly hostile new political and economic order and the rise of nonstate actors as a result of technology arises from a Clausewitzian assumption of trinitarian war. In this formulation, the "Clausewitzian trinity" of the people, army, and government of one state utilizes war as a political instrument against another state's people, army, and government.

Generations of strategic thought have been based upon this assumption, and thus events that appear to be abnormal cause alarm. Strategy, for our purposes here, is regarded as the creation of force and the application of it at a decisive time and place.[8] The specific weapons used are less important than the application of sufficient force at the proper time and place; there is strong historical evidence to suggest that states will remain better at this than nonstate actors.

After the fall of Rome, war was waged by "armies" of Vandals, Huns, and other social entities who have no counterpart in today's world.[9] The early 1500s saw warfare between knights, cities, leagues, popes, and religions, without the presence of anything that could be labeled a well defined state.[10] Niccolò Machiavelli saw war as a tool of the prince, and there was little notion of "the people" or "the state" in his conception of war.[11] It was only after the Treaty of Westphalia that states gained a monopoly on the legitimate waging of war.[12] To this effect, international law since 1648 has excluded nontrinitarian, nonmilitary warfare.[13] The result is that three and a half centuries of the Westphalian state system have left us little experience of nonstate actors waging nontrinitarian war. In a sense, we are now looking forward into the past, and a framework for evaluation is needed.

The threats and problems posed by nonstate actors may be new, then, but nonstate actors are not. The end of the Cold War allowed them to take advantage of new opportunities, some provided by technology. While Aum Shinri Kyo's subway attack could have happened in any decade since 1960, in 1998 computer hackers invaded the websites of China's human rights agency and India's nuclear research center, and posted messages on forty Indonesian servers. Other targets have included Mexican president Ernesto Zedillo and the U.S. Department of Defense. In October 1998 a Serbian group calling itself "Black Hand" crashed the website of a Kosovo Albanian group.[14] Later the same week Black Hand attacked the website of the state-owned Croatian newspaper *Vjesnik*. In retaliation, the next day Croatian hackers attacked the website of the Serbian National Library; Serbian hackers then temporarily disabled the Nato website.[15] Such activities in February 2000 expanded to threaten the computer-based civilian activities of daily life. The vast majority of the literature on IW consists of reviews of these threats and their consequences, but it overstates their strategic significance.

At any rate the future prospects for these nonstate, nontrinitarian, cyber-warriors are not bright. It should be kept in mind why nontrinitarian war went out of fashion in the first place; as Charles Tilly observed, "War made the state and the state made war."[16] Put another way, the state can create and apply decisive force *better* than nonstate actors, and *better* than nontrinitarian methods, such as terrorism and information warfare. Strategic success depends on the control of land, people, and resources (all forms), which means that a technological/information-based approach alone will not prove decisive.[17] Because *resistance* involves resources and will, there is strong reason to believe that the Westphalian state can endure nontrinitarian warfare and outlast nonstate actors—most states being better than the typical nihilist or messianic nonstate group at resisting various forms of IW and at applying decisive force if it becomes necessary.[18]

Fight Fire with Fire: Adams, Arquilla, and Ronfeldt. In *The Next World War*, James Adams posits a future in which the places we live and work are the battlegrounds for global information war. (This is a common assertion of all four books discussed.) Technology will allow the targeting of communication networks and air traffic control, and support of misinformation campaigns. (The latter is possible due to Adams's definition of information warfare as including perception management.)[19] This in turn leads to the possibility of war by other means, which would seem to imply what are normally referred to as psychological operations.[20] Adams supplies case studies to illustrate what this "war by other means" will look like, before concluding that IW "is no silver bullet."[21] Adams implies that the United States is a Goliath surrounded by nonstate Davids, that unless fire is met with fire, U.S. security will be threatened. By way of example, Adams reports that China once released computer viruses to silence electronically an opposition group.[22] Now this, of course, is an example of a Westphalian state taking action, albeit of an information-warfare nature, and prevailing against a nonstate actor—the reverse of what we are supposed to fear. Yet if China, technologically backward, can wage information warfare against nonstate actors, surely the United States could do so as well.

But for the presence of new technologies in many of Adams's examples, it is unclear how his case studies are different from standard

psychological operations, on the one hand, and terrorism and sabotage on the other. The use of radio stations in Rwanda and Serbia to broadcast hate-filled political messages is just plain propaganda, not information warfare.[23] However, to make his point, Adams categorizes events by the technology used rather than the actors' intentions. Technological capabilities are important, and they are easier to measure than intentions, but the fact that actors possess sophisticated technology need prompt no special distinction. It is their intentions that make them dangerous.

Of the four books discussed, *In Athena's Camp* offers by far the most systematic and sober analysis of IW. Many of its insights regarding network forms of organization come directly from operations research. Editors Arquilla and Ronfeldt describe a "third wave" that empowers nonstate actors; they assert that conflicts will depend on and revolve around information and communication.[24] They suggest that as a result of technology, conflict will become more diffuse and less linear, as well as multidimensional.[25] This notwithstanding, the more parsimonious term "nontrinitarian" is still the operational word here. Arquilla and Ronfeldt go farther, distinguishing between "cyberwar," which they define as an "information-oriented approach to battle," and "netwar," which they call an "information-oriented approach to social conflict."[26] *In Athena's Camp* has chapters titled "Cyberwar Is Coming"; "Preparing for the Next War"; and "Warfare in the Information Age"—subjects that are by now familiar territory.[27] The book as a whole banks heavily on the assumption that information can be translated into power. However, in a world where technology increases information to the point that we may speak of "analysis paralysis" (indecision resulting from forever waiting for the next piece of information to come in), information without any theoretical framework by which to evaluate it may cause as many problems as it solves. A notable exception in this book, and the literature as a whole, is John Rothrock's article, "Information Warfare: Time for Some Constructive Skepticism?" which adds a healthy note of circumspection to *In Athena's Camp*.

The "fire with fire" positions—whether the "fire" is technology, as in *The Next World War,* or information transmitted by technology, as argued in *In Athena's Camp*—places too high a value on technological superiority. The nineteenth-century theorist Antoine Henri de Jomini observed that "the superiority of armament may increase the

chances of success in war: it does not, of itself, gain battles."[28] A more recent observer argues that the Gulf War demonstrated what technology was capable of but did not establish that technology wins wars.[29] Its contribution to winning ground battles is the most important variable for the purposes of strategy; Vietnam, Lebanon, Afghanistan, and Somalia illustrate that the relevance of force is in many ways the inverse of technological modernity.[30]

The example of Somalia shows that no amount of technology could have mitigated the fundamental weaknesses in policy. Means were not provided to achieve the chosen ends, and the ends outstripped political will. While making the debatable claim that Mohammed Farah Aideed was better at perception management than U.S. forces—perception management was not the issue in Somalia—*The Next World War* still asserts that the CIA's high-technology surveillance was evaded by simple walkie-talkies and talking drums.[31] Technological advantages should be explored and exploited at every turn, but without falling down the slippery slope of technological determinism.

The prophets of technological determinism have been with us for some time. Several significant studies have concluded that though technology is important, it may have only marginal impact upon battlefield outcomes.[32] A closer look at these works reveals that more often than not, victory comes to the side with an advantage in morale, leadership, skill, and discipline—not necessarily the side with a technological advantage.[33] In Europe, the spread of technological advances brought multinational similarity, which led to a stalemate.[34] Even where one side had clear advantages in technology (such as when European powers faced indigenous forces in the New World, Africa, and Asia), that side also often had military strengths beyond technology. For instance, the institutional superiority that allowed the maximization of firepower goes a long way toward explaining outcomes in the colonial era.[35] Similarly, in comparison to the indigenous forces they faced, European militaries were more professional, standardized, and concentrated, which allowed greater projection of force irrespective of technology.

The "center of gravity"—the "hub of all power and movement," the "decisive strategic point," the point "exercising a marked influence on the result of the campaign"—is unlikely to be destroyed by information warfare in and of itself. [36] It may be hindered and

inconvenienced, but it seems inconceivable that the United States, or any state, would surrender in war because cell phones, satellites, or computers were no longer functional. To the authors, it is as if states never went to war before the microchip.

The "techno-centric" view also downplays the centrality of vital interests in a state's grand strategy. Technology is a dependent variable, not an intervening or independent one, which means that states can get by with a little or a lot of technology but that the technology needs a strong state in which to develop. This type of state is not likely to become wholly vulnerable to information warfare.

Taken as a whole, these four books place too high an emphasis on the role of technology and its impact on the international system. It has always been the case that "readiness to suffer, die, and kill are the most important factor in war."[37] Technological prowess does not obviate this fact.

Much of the aura surrounding the concept of information warfare is a direct descendant of the "arsenal of democracy" thinking of World War II. According to this view, American industry and technology would be used to limit the loss of American lives in global conflicts. This approach has practical and political utility, and it remains a worthwhile goal. However, the desire for low-risk, low-commitment responses to foreign threats lures policy makers into the false promise of IW. As recent events have shown, there are no easy ways out of post–Cold War conflicts. Technological changes will come and go, and it is in our interest to master them; but technological changes should not obscure stark realities—bloodless victories are seldom of strategic utility.

In the nearly ten years since the end of the Gulf War, a relatively large body of literature has been produced on information warfare. All of it suffers from lack of a strategic theory for evaluating events and technological developments. Absent such a political framework, amateur speculations and armchair quarterbacking about present and future events and technological developments replace sound strategic thinking.

Ideally, books of the kind discussed here (studies of possible futures) can clarify, define, name, expound upon, and argue the major issues of future scenarios.[38] The goal, of course, is to identify possible futures and how to work toward what is desirable and to prevent or minimize the impact of what is undesirable. Another worthwhile

goal is to understand better whether the trends observed are smooth, cyclical, dialectic, or alternating. This leads to insight regarding mechanisms of change and assumptions regarding the operating environment.[39] The result would be an increase in understanding our environment and, one hopes, an increase in our control of it.

This essay is not an attempt to sketch a strategic theoretical framework or to survey what is desirable or possible in the future of information warfare. Rather, it suggests that technology—a means of waging war—cannot supersede the classical theorists' examinations of the ends or purposes of war. The nature of society remains more central to understanding war than the technology employed in its conduct.

Notes

1. A good start for analysis of the Persian Gulf War from an information-warfare perspective is Alan D. Campen, ed., *The First Information War: The Story of Communications, Computers, and Intelligence Systems in the Persian Gulf War* (Washington, D.C.: AFCEA International, 1992).

2. These points are discussed further in David Shenk, *Data Smog: Surviving the Information Glut* (San Francisco: HarperEdge, 1997).

3. This term is used to describe what has also been referred to as "techno-war." Information warfare is at present an ill-defined concept, but it may be thought of as assets and processes that are information based. These include command and control, psychological operations, and other information sources. As these assets and processes become automated they become susceptible to viruses and hackers.

4. Winn Schwartau, *Information Warfare: Chaos on the Information Superhighway* (New York: Thunder's Mouth Press, 1994), p. 13.

5. Ibid., p. 291.

6. David Shukman, *Tomorrow's War: The Threat of High Technology Weapons* (New York: Harcourt and Brace, 1996), p. 205. See also Schwartau, p. 215.

7. Shukman, p. 243.

8. Martin van Creveld, *On the Future of War* (London: Brassey's, 1991), p. 48.

9. Ibid., p. 52.

10. Ibid., p. 126.

11. See Niccolò Machiavelli, *The Art of War*, ed. Neal Wood (Indianapolis: Bobbs-Merrill, 1965).

12. Van Creveld, p. 57.

13. Ibid., p. 193.

14. "Serb Hackers Declare Computer War," *Los Angeles Times*, 22 October 1998.

15. Amy Harmon, "'Hacktivists' of All Persuasions Take Their Struggle to the Web," *New York Times*, 31 October 1998. Also see Amy Harmon, "Serbs' Revenge: NATO Web Site Zapped," *New York Times*, 1 April 1999.

16. Charles Tilly, ed., *The Formation of National States in Western Europe* (Princeton, N.J.: Princeton Univ. Press, 1975), p. 42.

17. Paul Van Riper and Robert H. Scales, Jr., "Preparing for War in the 21st Century," *Parameters*, Autumn 1997, p. 8. I shall address this point later in this essay.

18. Michael Handel, *Masters of War: Classical Strategic Thought* (London: Frank Cass, 1996), p. 14.

19. James Adams, *The Next World War: Computers Are the Weapon and the Frontline Is Everywhere* (New York: Simon and Schuster, 1998), p.17.

20. Ibid., p. 39.

21. Ibid., p. 313.

22. Ibid., p. 250.

23. Ibid., pp. 90, 273. At a basic level, these are examples of controlling perception and information. This type of activity is not representative of a new phenomenon, however. Julius Caesar wrote his works from the battlefield in part to serve the same function, spreading political messages.

24. John Arquilla and David Ronfeldt, eds., *In Athena's Camp: Preparing for Conflict in the Information Age* (Santa Monica, Calif.: RAND, 1997), p. 4.

25. Ibid.

26. Ibid., p. 6.

27. John Arquilla and David Ronfeldt, "Cyberwar Is Coming!"; Stephen J. Blank, "Preparing for the Next War"; and Bruce Berkowitz, "Warfare in the Information Age," can be found in *In Athena's Camp*, edited by Arquilla and Ronfeldt.

28. Antoine Henri de Jomini, *The Art of War* (Novato, Calif.: Presidio Press, 1992), p. 47.

29. Handel, p. 8.

30. Van Creveld, p. 32.

31. Adams, p. 67.

32. See William H. McNeill, *The Pursuit of Power: Technology, Armed Force and Society since A.D. 1000* (Chicago: Univ. of Chicago Press, 1984); Timothy Travers, *The Killing Ground: The British Army, the Western Front, and the Emergence of Modern Warfare, 1900–1918* (London: Allen and Unwin, 1987); George Raudzens, "Blitzkrieg Ambiguities: Doubtful Usage of a Famous Word," *War and Society*, September 1989, pp. 77–94; and George Raudzens, "War-Winning Weapons: The Measurement of Technological Determinism in Military History," *Journal of Military History*, October 1990, pp. 403–33.

33. Raudzens, "War-Winning Weapons," p. 404.

34. Paul M. Kennedy, *The Rise and Fall of Great Powers: Economic Change and Military Conflict from 1500 to 2000* (New York: Vintage Books, 1989), pp. 23–72.

35. McNeill, pp. 128–35. The author notes that the development of close-order drill was a significant force enhancer.

36. Carl von Clausewitz, *On War*, ed. Michael Howard and Peter Paret (Princeton, N.J.: Princeton Univ. Press, 1976), pp. 595–6. See also Jomini, pp. 85–92. An excellent treatment of the concepts of "center of gravity" and "decisive strategic point," respectively, is given by Handel, p. 40.

37. Van Creveld, p. 160.

38. Herman Kahn and Anthony J. Wiener, *The Year 2000: A Framework for Speculation on the Next Thirty-three Years* (London: Macmillan, 1967). See also Brita Schwartz, Uno Svedin, and Björn Wittrock, *Methods in Future Studies: Problems and Applications* (Boulder, Colo.: Westview Press, 1982).

39. Schwartz et al., p. 20.

Ψ

BOOK REVIEWS

A Subject Worth Studying

Gray, Colin S. *Modern Strategy*. New York: Oxford Univ. Press, 1999. 400pp. $29.95

Does strategy, or the study of strategy, still matter? Colin Gray, professor of strategic studies at the University of Hull in the United Kingdom, shows that it does. Neither the end of the Cold War nor the promise of new weapons alters the need for understanding strategy. Gray has been writing about, professing, or "practicing" strategy for thirty years, and whether or not you agree with him, he is among the few scholars of strategy who should never be ignored.

Gray proposes that all strategic experience is universal. He develops this idea through the flak of competing theories and criticisms, proposing "to advance the understanding of strategy by exploring the relationship between the growing complexity of modern war and a general theory of war and strategy that, when properly formulated, is indifferent to the specifics of history." In thirteen chapters, he develops his thesis through the widening gyre of strategy, which now includes land, sea, air, space, cyberspace, and such problems as nuclear weapons, the changing "grammar" of war, and "low-intensity conflict." His database is twentieth-century warfare.

According to Gray, "nothing essential changes in the nature and function (or purpose)—in sharp contrast to the character—of strategy and war." He writes this to counter the common error he sees in strategic studies of confusing "tactics with strategy and, as a consequence, changes in the character of events with changes in their

nature." He declares that a person who understands today's strategy will also understand the strategy of the twelfth century.

He digs deeply into the famous work by Karl von Clausewitz, *On War*, for ways to approach the subject of war and strategy today. He avoids treating it as canonical, however, showing how restrictive some of Clausewitz's ideas were, while he expands on others to accommodate the increasing complexity of our modern world. For example, Gray updates Clausewitz's definition of strategy from "strategy [as] the use of engagements for the object in war," to "the use that is made of force and the threat of force for the ends of policy." He devotes a whole chapter to discussing the dimensions of strategy, an accommodation to complexity barely envisioned in *On War*. Where Clausewitz admitted five dimensions to strategy (moral, physical, mathematical, geographical, and statistical), Gray groups seventeen dimensions into three clusters (people and politics, preparation for war, and war proper). Like Clausewitz, however, Gray finds that there is no single "master" dimension of strategy, that most failed strategic works tend to emphasize dominance in a single dimension of strategy.

He also faults critics who argue that Clausewitz is no longer relevant to modern strategy. Two prominent critics, military historians John Keegan and Martin van Creveld, argue that Clausewitz's ideas apply only to the nineteenth century, that somehow warfare at the end of the Cold War has been "transformed." Gray illustrates that these authors have fallen prey to the fallacy that a change in means is a change in purpose. Yet he struggles with the writings of others who fault Clausewitz, especially when they analyze chapter 10 of *On War*, "Small Wars and Other Savage Violence." Gray admits that the prolific writings of Ralph Peters give him the most trouble, and he agrees that some substate actors may be motivated by nonpolitical goals.

Because the subject of strategy is extremely complicated, this book is dense and does not make good bedtime reading. No good work on strategy, however, could be otherwise. A contributing factor is Gray's use of inductive theory, generating principles from numerous particular cases, often toward the end of a chapter. Also, his writing is complex. All too frequently he employs negatives, nominalizations, or redundant modifiers that obscure his points or hide their force. But his thesis is worth understanding; modern (indeed all) strategy is

still a subject worth studying. Anyone interested in learning more about it will benefit from this work.

Mark T. Clark
Director, National Security Studies
California State University

Ψ

Pearlman, Michael D. *Warmaking and American Democracy: The Struggle over Military Strategy, 1700 to the Present*. Lawrence: Univ. of Kansas, 1999. 393pp. $45

Warmaking—the pursuit of political objectives by military means—ineluctably involves trade-offs not only in determining appropriate goals but also in determining the means by which they may be best pursued. While recent military action in Kosovo highlights the truth of this statement, the struggle to achieve a coherent military policy is not simply a contemporary problem for this nation. In this work, Michael D. Pearlman, a historian and associate professor at the U.S. Army's Command and General Staff College, traces this problem from the pre-Revolutionary colonial wars through to the present, providing a comprehensive survey not only of America's wars but of the continual push and pull between the practitioners of military art and the politicians who direct them. In doing so, Pearlman demonstrates the difficulties faced by a pluralistic democracy in obtaining a consensus on either the most effective means for fighting a war or on justifiable ends of the wars being fought. While pursuing an explanation of the sources of these difficulties, he also illuminates a warmaking goal that is perhaps peculiar to America—that of fighting in order to banish doubts that a democracy can win its wars.

War, it should be remembered, has as its essential end the achievement of foreign-policy objectives; it is not simply about the practice of the military art. The connection between the ends and means is what we usually call strategy. Pearlman makes the case that American warfighting strategy is not and has never been determined in practice the way one might hope that it is in theory—through the seamless coordination of economic, political, moral, and military assets for the most efficient and effective accomplishment of the desired end. Rather, national strategy is the resultant of a competition between many actors in

both the government and the military.

Although his book is not, according to the author, a political, diplomatic, or military history per se, Pearlman casts a wide scholarly net and draws on resources from all three areas to demonstrate that the differing perspectives within and between these actors—political parties, congresses and presidents, legislators and bureaucrats, military people and civilians, and the various branches of the armed services—make the formation of a coherent national strategy enormously complex.

Although each of these three areas has been individually, in other works, thoroughly dissected and analyzed, individually they can shed only so much light on the whole of the problem. Pearlman recasts the historical inquiry by examining the interactions between these factors as the main determinants of the outcomes. Herein lies the work's primary contribution to the understanding of warmaking. Woven into the historical narrative, Pearlman's thesis is especially appropriate in explaining the American involvement in Korea and the progress of U.S. policy in Vietnam. The chapter on World War II is particularly effective. Even in a case where U.S. goals and strategies were seemingly clear and broadly supported by all the elements of the government and the American public, Pearlman demonstrates how intraservice and intergovernmental conflicts shaped not only the strategies applied to achieve victory but the very definition of victory itself.

The book does have two aspects that could be seen as shortcomings by some (others may in fact view them as assets). First, Pearlman assumes that his readers have a basic knowledge of American political, diplomatic, and military history; therefore, he wastes little ink providing that background. Those unsure of their history would be well advised to keep a general history text handy. Those whose grasp of the background is firmer will, however, appreciate Pearlman's focus on the subject at hand. Second, the author eschews the traditional academic footnote, an approach that preserves the flow of the narrative but may be an obstacle to those interested in doing further research. He more than compensates for this "shortcoming," however, by providing comprehensive bibliographic notes, as well as a detailed bibliographic essay. Additionally, the author offers to provide exact citations to those who request them.

The timeliness of this work can not be overlooked. It sheds light on the recent debates on the use of force in Kosovo, as well as on the general discussion about the effectiveness of the application of

military power in the pursuit of limited political goals, by opening up new avenues of understanding into the formation and execution of military policy. Written in a highly readable style that eschews both political science jargon and "military-speak," this work is a valuable addition to the bookshelf of anyone interested in seeing how strategy has been determined in the actual rather than the abstract/theoretical world. It is essential reading for those who would understand the *why* of military strategy as well as the what.

THOMAS R. BENDEL
Lieutenant Commander, U.S. Navy

Alberts, David S., John J. Garstka, and Frederick P. Stein. *Network Centric Warfare: Developing and Leveraging Information Superiority*. Washington, D.C.: C4ISR Cooperative Research Program, 1999. 256pp. (no price given)

This work is the latest attempt to illustrate the concept of network-centric warfare (NCW). According to the book's preface, its purpose is to "help prepare for the journey that will take us from an emerging concept to the fielding of real operational capability." Within that framework, two subsequent goals are defined: to articulate the nature of the characteristics of NCW, and to suggest a process for developing operational capabilities. Yet with these defined goals, it is less than clear what role this book is supposed to fill. It seems, ostensibly, to be a guidebook or textbook for further exploration into and definition of the NCW concept, but it may also have been meant as a reference book on the current state of thought and writing on this subject.

The essential message is that information technology allows for a better flow of information, which in turn enhances organizational and combat effectiveness. The book begins with a treatment of how information technology has enhanced business practices. Although imperfect in some areas, this is the best part of the work. However, in the sections that follow, which discuss military implications of information technology and network-centric warfare itself, the book begins to exhibit difficulties. This is both unfortunate and unexpected, given the collective experience of the authors. David S. Alberts is a Ph.D. with twenty-five years of defense experience; Frederick P. Stein is a retired Army colonel, with service in the Signal Corps; and John J. Garstka is a former Air Force officer and coauthor of the NCW concept with Vice Admiral Arthur Cebrowski, President of the Naval War College.

As it is, there are production flaws that stand in the way of

deriving useful information from the text, and conceptual flaws, aspects of NCW that might have been developed further.

The book suffers from a layout that does not facilitate a sound understanding of the information. A good table of contents gives a listing of the main topics and subtopics to be covered; not so with this book, and the result is an inadequate portrayal of its contents. What is listed are figures, which in many cases are intricate and come with insufficient explanations. There is no index, forcing the reader to spend more time than should be necessary searching for information.

It also becomes apparent that this is not a book for laymen or anyone not initiated to network-centric warfare. Obscure terms and references are either poorly explained or not explained at all. An explanation of NCW should have been given in the introduction, but the first appears one-third of the way through the book. In addition, there is no explanation of the basic operating principles behind networks in general. This information would have been a good basis upon which to start this book.

The conceptual flaws can be accounted for somewhat by the novelty of NCW. As such, there will be criticism here only about the lack of development of various questions surrounding NCW, rather than the fact that the book does not offer solutions to those questions. First of all, this book is centered around the Navy, and ideas are couched in naval terms. This is not a grave flaw, since the Navy invented NCW. However, it would have been interesting to have more input from the other services and civilian agencies, particularly in light of the need for joint operations. Little consideration is given to land operations using NCW, even though this is a question that will have to be addressed, probably sooner rather than later.

No political or strategic context is explored. It would have been interesting to read the thoughts of the authors on what NCW might mean to strategy and politics. Instead, the book is centered around operations. In addition, there is no exploration of how NCW might change or facilitate decision making for the National Command Authorities, or in general. Better examples of how an NCW force would fight, in addition to how it processes information, would also have been interesting. Also, more comparisons between current force structures and potential NCW forces would have been edifying.

A further conspicuous absence is any discussion of the limitations NCW may encounter, particularly regarding its use in joint operations or with allied forces. Indeed, there is very little exploration of

joint or allied operations, an interesting omission considering how important both are to fulfilling American political and strategic goals.

In addition, a number of assumptions are alluded to (perhaps unintentionally), without explanation, that tend to weaken the NCW concept as it is described in this book. For instance, strategic context and action are assumed away in favor of a focus on gathering, processing, and disseminating information. Another assumption is that there will be less need to move forces into position to take action, which implies that the necessary forces for a given operation will always be in position. This seems unrealistic. Finally, the authors mention the idea that levels of war that have been used in defense concepts for years will collapse or be compressed under NCW. They do not say what this means, or if it will be true for all services.

This book falls short of its goal. It is not a good text or reference book. Such a book would facilitate access to knowledge, clearly explain key points, and provide references for future explorations. It is not hard to understand why NCW has had difficulty finding wider acceptance. This is the kind of work one expects to find in a magazine article, not in a book of more than 250 pages. The ultimate value of this book will depend on the needs of the reader. If one is already grounded in NCW concepts, it will provide a useful review of the current state of the literature. However, all others must look to future publications.

MICHAEL C. FOWLER
Newport, Rhode Island

Leonhard, Robert R. *The Principles of War for the Information Age.* Novato, Calif.: Presidio Press, 1998. 287pp. $29.95

Robert R. Leonhard is an active-duty Army officer who is clearly well versed in Army doctrine. His previous works include *Fighting by Minutes* and *Art of Maneuver.* His third book, *The Principles of War for the Information Age,* is a thought-piece that is occasionally entertaining and thought provoking but sometimes tedious. Leonhard explains that "the purpose of this book is to examine each of the principles of war and to comment on their validity and utility." He accomplishes his objective, though the reader may find it slow going in some places. Although Leonhard's lively writing style relieves some of the tedium, at the same time it can be distracting.

Leonhard uses historical vignettes to illustrate the nine principles of war. They are well written and generally quite interesting. Although no glaring errors present

themselves, one cannot really be sure, because there are no footnotes or other pointers for the reader to follow up in order to check for accuracy.

Leonhard states that the nine principles of war (mass, objective, unity of command, simplicity, offensive, maneuver, surprise, economy of force, and security) have been misused and that this misuse has warped them. He takes each apart in turn and comments on them, accepting some, rejecting some, and modifying others. He then presents a list of seven principles that he has developed (knowledge and ignorance, dislocation and confrontation, distribution and concentration, opportunity and reaction, activity and security, option acceleration and objective, and command and anarchy). High marks must be given for originality, but the book simply gets bogged down with the details of nine principles versus seven principles.

However, it brings to light many important points. For example, Leonhard frankly describes the technological "generation gap" in the armed forces. But rather than expand his thought, he simply concludes, "In a sense, we have to keep things simple so we leaders can participate"—perhaps leaving the reader to wonder, "So what?"

Harsh words must be said about the bibliography. Twenty references are listed, but only some have complete bibliographic information. Other entries consist only of the title and author, with no publisher. Leonhard provides a short description for most of the works cited; they include such unsubstantiated comments as, "Although the student of war must admire Foch's circumspection and intellectual bent, his book on the principles of war borders on the incoherent." About another work he writes, "After two complete readings, I can understand about two-thirds of the book." Since Leonhard cites only twenty references, one would think he would have selected those that were useful. I found his comments about my friend and mentor, the late Colonel Trevor Dupuy, completely uncalled for. If in fact Colonel Dupuy's theoretical work was "useless" and a "superb instruction in how not to interpret historical data," why cite it?

Leonhard does have important things to say. He is on target when he questions the impact of technology on future warfare, and he brings a valuable operational Army perspective to the contemplation of future warfare. However, poor organization makes this work unnecessarily hard to read and masks some of its excellent points. Unfortunately, the great deal of original thinking in this book is devalued by its faults. This book is simply too ambitious. There is too much

ground to cover in under three hundred pages. It would have been better if the author had completed his thoughts at each point before moving on.

DREW HAMILTON
Lieutenant Colonel
U.S. Army

Russett, Bruce, ed. *The Once and Future Security Council.* New York: St. Martin's, 1997. 179pp. $ 39.95

Bruce Russett of Yale University is best known for his signal work on the democratic-peace theory. He is the editor of this concise book on the nuts and bolts of United Nations Security Council composition and voting patterns. *The Once and Future Security Council* is a collection of eight essays that analyze the Security Council in light of its newly central role after the Cold War.

James Sutterlin gives a historical context to the discussion, describing the framing of the UN Charter and the debates that helped to create the Security Council. Far from being newly divisive, the issues of membership on the council, the length of terms, voting rules, and especially veto powers were bones of contention from the very beginning.

The next essay, by Bruce Russett himself, is a particularly helpful "big picture" approach to the current debates. In it he presents ten "balances," or ideals in tension, that allow the student of the Security Council to evaluate all dimensions of a proposal for change. This chapter should be required reading in any course focusing on the organization or operations of the UN. Soo Yeon Kim and Russett coauthored the next piece, which is a technical analysis of voting blocs within the General Assembly, to provide a touchstone for examining Security Council actions in light of the larger body's tendencies and preferences. The editor having created the historical and theoretical frameworks in the previous two essays, the data in this and subsequent essays may be more effectively absorbed and understood.

Focusing specifically on voting patterns within the council itself, Barry O'Neill's essay contains a fascinating statistical analysis that yields the greatest surprise of the entire book—that changing the nonveto membership of the Security Council makes almost no difference in the relative powers of the veto-carrying and nonveto members. The disproportionate nature of the veto, necessary for great-power participation and perhaps desirable as a balance to the developing nature of the larger General Assembly membership, is the central fact of all Security Council decisions. Flowing from

this insight is the inescapable conclusion that any substantive change in Security Council operations would require an antecedent change in the allocation of the veto power.

Perhaps the least interesting essays in the book are the next two, not because of their academic value but due to their narrow focus and the limited usefulness of their topics. Nigel Thalakada's chapter on Chinese voting patterns and Masayuki Tadokoru's essay on the Japanese desire for membership on the council are somewhat out of place in what is otherwise the definitive overview of the Security Council's structure and function.

Ian Hurd brings the focus back to the Security Council as a whole with his piece on proposals for reform. His principal contribution is in pointing out that problems that appear serious in a high school civics text are often less so in the real world, given the informal workarounds that have grown up over the years. Specifically, European powers with strong economies and roles to play in world affairs often find their voices through informal, diplomatic means. These and other nations may affect the outcome of Security Council votes through the full spectrum of diplomatic tools, and they are not as limited as the member-nonmember or even veto-nonveto dichotomies would suggest. The Security Council, like so many other structures in international law, has more moving parts than are apparent to the naked eye.

Russett, O'Neill, and Sutterlin conclude with a joint essay on the prospects for change. They acknowledge the large realities addressed earlier in the book: namely, that adding nonveto members would not appreciably change the character of the council, and that the permanent members are not inclined to expand or contract veto-carrying membership. Still, they propose a series of smaller changes that would strengthen the council's legitimacy without impairing its effectiveness. These include "expanding the number of nonpermanent members, permitting a nonpermanent member to be reelected immediately without missing a term, and slightly raising the proportion of affirmative votes required to pass a resolution, thus somewhat strengthening the hands of nonpermanent members, who can band together in a bloc. Other pieces of the package may include some narrowing of the scope of issues to which a veto may apply, deleting the anachronistic Charter references to 'enemy states,' and broadening the Council's procedures for consultation and transparency in decision making."

As this impressive list suggests, the editor has produced a very well

thought out analysis of what matters and what does not in the United Nations Security Council. The authors provide academics and diplomats with an excellent arsenal of options for fine-tuning the operation of the council. Any serious student of the Security Council should consider Russett's fine book a must read.

THOMAS C. WINGFIELD
Lieutenant Commander, U.S. Naval Reserve

Arbatov, Alexei, et al., eds. *Managing Conflict in the Former Soviet Union: Russian and American Perspectives.* Cambridge, Mass.: MIT Press, 1997. 556pp. $25

This edited collection of essays is part of the International Security Studies series from the Center for Science and International Affairs. The subject is quite timely: we have the 1999 confrontation in Dagestan, continued controversy within the Russian government on how to handle the crisis, and the sacking of yet another Russian prime minister. The former prime minister (now acting president), Vladimir Putin, took a direct interest in resolving this latest challenge to Russian power in the Caucasus. The Dagestan crisis is in fact yet another lesson in the center's (Moscow's) management of the disintegration of the periphery—an enduring theme in Russian federalism.

This work illustrates how the post-Soviet Russian government has dealt with would-be separatist governments within the Russian Federation and how other post-Soviet republics have, in their own way, handled separatism. In each instance, a narrative case study and an analytical commentary examine the development and the resolution of the conflict, or conflict avoidance. The pairs of essays are presented within a framework laid out by the leading editor, Alexei Arbatov, the arms control department head of the Institute of World Economy and International Relations, and current deputy chairman of the Duma's Defense Committee.

Perhaps the most interesting feature of the case studies is that they are presented from a Russian perspective. None of the authors is a member of the present administration or of any nationalist movement. They are researchers affiliated with the Analytic Center of the Council of the Russian Federation (the upper house of the Russian parliament) and so are well placed to tell the story of the continuing breakup of the former Soviet empire. To provide perspective, a written analysis is offered by a Western scholar. There is also a comparison piece on the Yugoslav conflict by Nadia Arbatova; her

article, in her own words, places history in the "subjunctive mood," asking whether the painful process of either Russian or Yugoslav disintegration could have been more gradual and civilized.

The work lacks adequate maps (a common complaint). A few are provided in the front matter; they are, however, generic political or topographic maps drawn from standard U.S. sources. Proper maps would have been useful as an aid to understanding the cases. One other drawback, albeit one admitted by the editors, is that this work grew out of a series of workshops that took place between 1994 and 1995. Therefore, the cases examined are somewhat dated.

Although there is no direct analysis of more recent events, the book offers general lessons for the way the Russian government has handled nationalist separatism. Russian policy toward nationalism was in fact rooted in Yeltsin's use of nationalism during his struggle with Mikhail Gorbachev's central government for supremacy in the Soviet Union. Yeltsin's encouragement of the centrifugal forces of nationalism evidently made the job of governing the post-Soviet successor states, including the sometimes bewildering multiethnic patchwork of the Russian Federation, much more difficult. Finding a secure situation for the ethnic Russian population in the newly independent states, as well as in the ethnic areas of Russia, and formulating reasonable laws governing citizenship and language relations, are the keys to resolving ethnic conflict in the long run. Indeed, where this has not been achieved, chronic conflict has almost always resulted. Finally, the stresses placed on the Russian military deployed in the conflict-prone regions have also contributed to the deterioration of the former superpower's military instrument.

This work will be of lasting value to those who are not specialists in nationalism or regional concerns within the former Soviet Union. I found the book useful while observing the Dagestan crisis, and expect it to be just as useful in the next crisis, and the next.

BARRY ZALAUF
Vienna, Virginia

Rendall, Ivan. *Rolling Thunder*. New York: Free Press, 1997. 336pp. $26

Many books have been published describing air combat from a variety of different angles, and it is rare for one to add much to the genre. *Rolling Thunder*, by former Royal Air Force pilot Ivan Rendall, does so, by providing a useful and well organized overview of combat in the jet age. Despite a number of distracting errors, the book should be interesting reading for air-combat

junkies and a good history review for young fighter pilots.

Rendall traces the history of jet combat over its first fifty years, emphasizing a theme consistent with any view of warfare, namely that "air combat is about having the best people and machines, then using them ruthlessly to win." To the extent that a book on modern air combat can cover political-military events without diluting the main subject, Rendall succeeds in tracing how ideological and cultural differences between the East and West affected the development of aircraft and how they fought from World War II through Operation DENY FLIGHT over the former Yugoslavia. His technique—setting the stage for each conflict and then offering interesting (if often rushed) descriptions of aerial combat in each conflict—works well. Rendall also brings other themes into his narrative, such as the extent to which the tactical principles of World War I German pilot Oswald Boelke, known as "Dicta Boelke," have survived.

Rolling Thunder suffers from a number of flaws, including poor editing and numbers that do not add up. It would have benefited from more scholarly research. Indeed, the author demonstrates a lack of familiarity with the details of weapons technology, which will weaken his credibility with professional readers. In one of many examples, the author states that unlike rear-quarter infrared missiles, which track a target's hot tailpipe, all-aspect missiles like the AIM-9L track friction heat from a target's fuselage. In reality, these missiles tend to track the cooler gases in the target's engine exhaust plume, which are visible in the forward quarter.

Rendall also offers a far-fetched anecdote or two, such as the story of an F-86 Sabre pilot who supposedly nudged his nosecone up against his wingman's tailpipe to push him out of hostile territory. Unfortunately, the wingman perished after ejecting over the water, and cannot verify this "extraordinary feat of flying."

Rendall misses the opportunity to describe how Western fighter tactics were forced to evolve when the Eastern bloc achieved a true radar look-down capability some years after the Vietnam War. Another missing theme is the gradual divergence between U.S. Air Force and U.S. Navy doctrine, the tactics arising from each service's Cold War operating environment, and how they were forced back together during the Gulf War. Curiously, the author does not discuss how sixty coalition aircraft were lost in DESERT STORM to ground fire, which would have complemented his discussion of such losses in other conflicts. Finally—oddly in a book that describes nearly every event in which jet aircraft have

flown in combat—Rendall does not address the Iran-Iraq War, the U.S. Navy's experience in Lebanon (a watershed event for the service), or the U.S. Air Force and Navy joint strikes into Libya.

Rendall does touch on several important issues and trends in modern air combat, including the critical importance of weapons schools; comparisons of gun and missile kills in various conflicts; how older aircraft, such as the F-4 and F-14, often migrate to air-to-ground roles; the importance of rules of engagement, stealth, and electronic warfare; and how aviators have been required to cope with increasingly complex aircraft systems.

Despite *Rolling Thunder*'s shortcomings, its overall message is sound. Rendall concludes with a brief soliloquy on where the jet age is headed, with reference to the debate over whether manned aircraft are destined for extinction in favor of unmanned aerial vehicles. He leaves the reader with the thought that though the "edge of the envelope" is now set by cost and human limitations, humans will remain a key ingredient in air combat success for the foreseeable future. Although it is a bit airpower-centric, *Rolling Thunder* is an outstanding primer for those who want a solid overview of how modern air combat evolved, and a good springboard for examining the subject in greater detail.

J. A. WINNEFELD, JR.
Captain, U.S. Navy

Nelson, Curtis L. *Hunters in the Shallows: A History of the PT Boat.* Washington, D.C.: Brassey's, 1998. 242pp. $28.95

Polmar, Norman, and Samuel Loring Morison. *PT Boats at War: World War II to Vietnam.* Osceola, Wis.: MBI Publishing, 1999. 160pp. $19.95

Hoagland, Edgar D. *The Sea Hawks with the PT Boats at War: A Memoir.* Novato, Calif.: Presidio Press, 1999. 234pp. $24.95

For many readers, PT boats stir up images that are based on a pair of black-and-white movies and a corny television series, in which the PT crews are portrayed as nonconformist, courageous, and usually successful in near-suicidal torpedo attacks on swift and deadly enemy cruisers and destroyers. While these stories are entertaining, the reality of PT operations and the true effectiveness of the dreaded "mosquito boats" can be found in the three books discussed in this review.

The two books by Curtis Nelson, Norman Polmar, and Samuel Morison are excellent overviews. They give detailed descriptions of the programmatic background and

design of the classic World War II Higgins and Elco boats. Both books begin with the U.S. Civil War, when Lieutenant William Cushing, USN, attacked the Confederate ironclad CSS *Albemarle* with a spar-torpedo rigged on a small picket boat on the night of 27 October 1864. Nelson points out that Cushing's attack was prototypical of the standard World War II PT attack, in that it occurred at night against an assumed superior, but unalerted, opponent, prompting vigorous counterfire.

Cushing's success notwithstanding, the use of smaller craft against larger craft was not seen as feasible, as survivable by the attacking crew, until the invention and marketing of the autonomous torpedo by Robert Whitehead. Whitehead's early torpedoes were lacking in range and reliability, but he and his team had shown the world's navies a revolutionary weapons system. Still, while some European navies adopted and refined the torpedo and created launching craft, the U.S. Navy was focusing on building the Mahanian blue-water fleet. Coastal warfare seemed to be irrelevant to this massive and costly effort.

Nelson does a creditable job in his description of the employment of motor torpedo boats, MTBs, in World War I. There were some spectacular successes. For example, many readers may be unaware that one of the standard "stock footage" films of the demise of a dreadnought battleship (along with that of the catastrophic explosion of HMS *Barham* in World War II) shows the Austro-Hungarian battleship *Szent Istvan* rolling over in the Adriatic after suffering torpedo damage inflicted by Italian MTBs in 1918.

The postwar period is well described, but the real story begins during the U.S. naval buildup in the late 1930s. The pivotal role played by Secretary of the Navy Charles Edison (son of the inventor) in carrying out President Franklin Roosevelt's explicit orders to build warships of all types as quickly as possible is described in detail. While Nelson does a particularly good job of relating the "scandal" of Edison's purchase of a proven and excellent British MTB design while competition between U.S. builders was still going on, Polmar and Morison are more technically oriented and show in detail the design elements of the U.S. prototypes and the British import.

In the first months of the Pacific War, the only U.S. assets acting offensively were the six PTs of MTB Squadron 3 in the Philippines, under Lieutenant Commander John Bulkeley. While the actual tactical impact of these craft was slight, the crews demonstrated the hallmark attributes of all PT sailors—

courage, innovation, and persistence. They also found that the boats' gunnery was at least as important a tactical asset as their unreliable torpedoes. This was a fact borne out later in the Solomons and the Mediterranean, where U.S. PT boats acted more like small, fast gunboats and interdicted coastwise enemy barge traffic.

It is in this area that Nelson's work is slowed by a protracted analysis of the rationale of Douglas MacArthur's decision to use Bulkeley's PT boat instead of an already scheduled submarine for his escape from Corregidor. An earlier discussion of MacArthur's attempt to build a PT-focused Philippine navy in the late 1930s is germane, but his possible claustrophobia is not.

While the two works described above are overviews of PT design and tactics, Edgar Hoagland's book offers a rare, personal memoir of PT combat from the perspective of a young officer who transferred to the boats from engineering duty aboard an Atlantic Fleet destroyer. He provides the human side of PT-boat warfare. Nonetheless, it is really just a transcribed oral history, and as such it has much emotional immediacy but more than a few minor technical errors. His memory seems fresh after fifty plus years, however, and he does not shy away from describing his adventures both afloat and ashore. Perhaps the best part is Hoagland's retelling of the PT operations in the Philippines in 1945, when the boats acted as light littoral warships, scouting pockets of Japanese resistance and engaging shore batteries with their ever-increasing gun armament. This book does an excellent job of describing what life was really like on PT boats in the Pacific. It was indeed a very different navy.

The post–World War II use of PT boats was brief, since the Navy discarded virtually all of them by 1946. However, several prototypes were built, and they are well described by Polmar and Morison. The use of South Vietnamese PTFs in 1964 is also recounted, with note of their missions in the Gulf of Tonkin on the nights before the USS *Maddox* was attacked. The weaknesses of Nelson's and Hoagland's books have been cited above; the Polmar and Morison work has several editing gaffes, in both text and photo captions, that are truly surprising given these authors' previous work. However, all three books are enjoyable. Nelson and Hoagland should probably be read together, to appreciate what PTs did and did not accomplish in World War II.

WILLIAM COOPER
San Diego, California

Jones, Wilbur D., Jr. *Gyrene: The World War II United States Marine.* Shippensburg, Penna.: White Mane, 1998. 322pp. $29.95

Anyone who expects to lead Marines in combat will find reading *Gyrene*, despite its faults, a useful exercise. This is a history of the men who enlisted in the U.S. Marine Corps during World War II, how they fought, lived, and survived. It is a family history, without pretense or prudery.

The professional reader will learn nothing here of strategy or tactics but may gain some understanding of the young men who are asked to carry out those abstractions and win the battle on the ground.

The author, Wilbur D. Jones, Jr., is a retired captain in the Naval Reserve who was too young to serve in World War II. He idolized the Marines while growing up in North Carolina near Camp Lejeune.

Jones scoured a hundred collections of personal papers in the Marine Corps Historical Center archives, conducted 250 face-to-face interviews, and received two hundred returns from a survey. He even attended ten reunions of World War II Marine veterans organizations. His sample is hardly scientific, but he concludes that these Marines were "a self-made generation that built America, the likes of which will not pass this way again."

His writing is often awkward and repetitious: no one would seek credit for the editing. The photographs too often look like fuzzy snapshots taken by someone's mother or girlfriend, and in fact they frequently were.

The brief introduction by General Raymond G. Davis, USMC (Retired), World War II combat veteran and Medal of Honor recipient in the Korean War, puts a Marine stamp of approval on *Gyrene*. Davis says, "This book is about my friends, my comrades, 'my men.'"

Who was the World War II Marine? Why did he enlist in the Corps? It was out of patriotism, because his friends did, because he was in trouble with the police or school authorities, or because he liked the dress blue uniforms. A good number sound like losers before they joined up. For example, after Pearl Harbor one arrived in New York City, without a dime, to enlist in the Army. He got in the shortest line and found he was a Marine.

A Marine veteran told Jones, "They had come out of the Depression years and they knew what it was to get something to eat. We did what we were told when we were told to do it. We had some slackers—not all of us wore halos."

Jones sums it up, "As a citizen-soldier he was human and therefore imperfect. Thus the prototype Marine was afraid under

fire, no braver than the next man . . . . Under fire, the majority of men did only what they had to do."

Whatever the Marine was when he joined, the Corps molded him and taught him to go forward in the face of enemy fire. He did a lot of that. A Marine sergeant wounded by a sniper on Peleliu remembered, "A million thoughts raced through my mind. Did my archangel save me again in battle? Why was I spared? This was the third time I had been wounded in this war."

The book bristles with no-holds-barred discussions of the poor conditions on troopships and in the field. As Jones says, official histories duck such crucial matters as field sanitation, but *Gyrene* even explains how a Marine moves his bowels while in combat and how they got drunk or laid in San Diego, Honolulu, or Auckland. Always, in the shadows, there waited the next battle.

What kept them going? Said a company commander who won the Medal of Honor on Peleliu, "There was a certain confidence we were the best."

By 1944 and the battle for Saipan, a former squad leader said, most of the men thought their chances of making it through the war were next to nothing. Many fighting there had been on the 'Canal or Tarawa, and for some it was their third campaign. The call to expose themselves to enemy fire never seemed to end.

Marines prayed, whether they had been devoted to religion all their lives, or, as one said, "I just prayed for my butt."

Long after the war, Jones asked author Leon Uris what kind of Marine he had been. Uris replied, "I was a good Marine, an ordinary Marine." That is what this singular book is about.

J. ROBERT MOSKIN
author of *The U.S. Marine Corps Story*, and *Mr. Truman's War*

Kohnen, David. *Commanders Winn and Knowles: Winning the U-boat War with Intelligence, 1939–1943*. Krakow, Poland: Enigma Press, 1999 (available in the United States from Classical Crypto Books, Londonderry, N.H.) 168pp. $20

Since its public revelation twenty-five years ago, the Allied breaking of the German U-boat cipher during World War II has become a historical staple. The British and American navies, armed with the uniquely valuable intelligence dubbed ULTRA, thwarted the German effort to cut the Atlantic supply lines. Specialized histories on the subject have generally focused on the technical ingenuity behind the code breaking. While often fascinating, these works give the impression that once the German codes were

broken, the resulting messages immediately produced usable intelligence. The truth is that any information, whether from communications intelligence or other sources, required analysis and interpretation before it yielded the secrets of the German fleet.

In *Commanders Winn and Knowles*, David Kohnen, naval reservist and curator of the Mariners' Museum, Newport News, Virginia, tells the story of the British and American naval intelligence organizations that turned ULTRA into operational intelligence. The book takes its title from the two extraordinary naval officers who served as officers in charge of the British and American submarine intelligence organizations, respectively. Commanders Winn and Knowles were both reservists, medically disqualified from combat service and hand picked for their unusual task. Their close professional association ultimately produced cooperation that one contemporary described as "closer than between any other British and American organization."

In both nations, the prewar naval intelligence groups had concerned themselves with background information (capabilities, port facilities, orders of battle) and were unsuited to providing a "near real time" intelligence picture. The Battle of the Atlantic required an intelligence center that would, in Commander Knowles's words, use all "available intelligence to reproduce as nearly as possible the operations room of the enemy." In response, both nations developed small organizations, located near the most senior naval decision makers. Despite their influence, their highly classified functions ensured that they remained little known.

The two submarine intelligence centers did not merely repackage ULTRA intelligence. A critical truth Kohnen presents is that intelligence success during the Battle of the Atlantic was not a simple matter of breaking German codes. German U-boat message traffic was unreadable for lengthy periods of time and most notably during the critical spring and summer of 1942. When decoded, a message often could be understood only with the aid of other intelligence sources. As a result, each center became a clearinghouse where all intelligence sources could be fused into a coherent picture. Aerial reconnaissance provided information on U-boat departures and arrivals. High-frequency-direction-finding and radar sites provided some (limited) U-boat locating data. Human intelligence and prisoner of war interrogations provided material on tactics and procedures. Taken together with enemy communications, the fusion of these sources provided the best possible picture of enemy operations and, in time, a

basis for predicting future U-boat movements.

Kohnen also examines the historical controversy surrounding Admiral Ernest J. King's handling of Operation DRUMBEAT, the 1942 German U-boat offensive along the U.S. East Coast. Here Kohnen takes issue with the prevalent view that King's legendary antipathy for the British led him to disregard warnings of the offensive. Kohnen finds that while intelligence estimates provided by the Admiralty to the U.S. Navy offered some indication of the coming German offensive, the warnings were by no means explicit. Even when German intentions became clear, Kohnen argues, King's lack of immediate action was a considered judgment, based on limited resources. It is a convincing argument.

Kohnen also explores the differences that arose between the British and American organizations. Despite close cooperation, the two organizations disagreed on the best means of exploiting ULTRA information. The British were cautious, mindful that prosecuting a German U-boat on the basis of its communications alone might compromise the intelligence source. Despite these concerns, in 1943 the Americans began using ULTRA to guide escort-carrier groups to concentrations of German submarines. The tactical exploitation of this intelligence brought these antisubmarine warfare groups great success but produced tension between the two intelligence centers, an insight into the disagreements that can arise when sharing intelligence.

Even readers well versed in the period will find substantial new information in this work. Many American archival sources were declassified through the author's efforts. These include an oral history by Commander Knowles and also the first known photos, reproduced in the book, of the American submarine intelligence center. Kohnen also used archival sources from Britain and Germany, along with a wide range of secondary sources. This is an impressively documented work.

While it is appropriate that this work be published in Poland (site of the first efforts to break the German codes), it deserves a wider audience than such a specialized press usually enjoys. Naval professionals of any era will recognize in its pages the origins of operational intelligence, as well as a strong example of one of the critical truths of naval intelligence—the best new intelligence sources are of no use if the information is not analyzed and sent to the fleet.

DALE C. RIELAGE
Lieutenant, U.S. Navy

Lee, David LaMont. *Merchant Marine Days: My Life in World War II.* Charleston, S.C.: Narwhal Press, 1998. 178pp. $19.98

David Lee's autobiography of his service in the American merchant marine is a gem.

Lee is gifted with near-perfect recall of events that took place over a half-century ago. This small book is not only the story of a teenager who matured into a capable officer during two and a half years at sea in World War II but a time capsule of what it was like to be a child of the Depression and grow up to young manhood in the California of the early 1940s. It is a story of family values, Ford 1936 V-8 coupes, the big bands, a Los Angeles composed of many small towns linked by Red Cars, the Hollywood Palladium, and America at war.

David Lee introduces us to a West Coast wearing the blinders of isolationism, suddenly struck by the thunderbolt of 7 December 1941. Two young men who had been out on the town for a Saturday night meet the next morning for breakfast. They are greeted by the waitress with "What'll you boys have this morning?" and "When'ya gonna join up?"

Joining up was not a simple matter for two nineteen-year-olds in early 1942, who needed parental permission (denied) and who had been rejected by the Army Air Corps for poor eyesight. Desperate to overcome their 4-F status, the young patriots sought the expensive services of a local eye doctor who claimed he could improve vision through a combination of exercise and diet. The diet consisted of raw carrots and canned carrot juice. The exercises consisted of rolling their eyes and staring into the sun while lying on their backs, in order to toughen their eyes.

Having survived the regimen with their vision intact, the two friends attempted to enlist in the Marine Corps and the Navy. Again they were rejected for 20/30 vision.

A banner flying from an office building soliciting young men to join the U.S. Maritime Service lured the two buddies into a recruiting office. A Coast Guard petty officer informed the pair that the Maritime Service was really the merchant marine, which was about to be taken over by the Navy or the Coast Guard. Signing up immediately would ensure their entry into one or the other. Imperfect vision was no bar to passing the physical.

A short while later, with parental permission, the chums were en route to the U.S. Maritime Service (USMS) boot camp at Port Hueneme, California.

Established in 1938 by President Franklin D. Roosevelt under the authority of the Merchant Marine

Act of 1936, as amended, to provide crews for the merchant ships then being ordered into mass production, the Maritime Service was a voluntary training organization. Ranks, grades, and ratings were to be the same as those of the Coast Guard. Over 250,000 recruits were trained in the USMS during World War II, under the supervision of the Coast Guard, and later the Navy. The USMS was to be disbanded in 1954.

David Lee received four months of rudimentary training and left boot camp ready to join his first ship in June 1942. Along the way, he had to join an unlicensed seaman's union and seek a ship through the union hiring hall. The merchant marine of World War II maintained its civilian structure, under the operational control of the War Shipping Administration. Private shipping firms continued to manage the ships, and union agreements remained in force.

This autobiography is a valuable addition to the history of World War II at sea. Lee details the shipboard routines and the organization of the naval Armed Guards and the crews. He faithfully reproduces the friction and the tensions—first, between the politicized, professional union crews (who had improved their living standards in a series of sometimes lethal strikes in the 1930s) and the militarized and mainly inept juveniles supplied by the USMS; and secondly, between the Armed Guards (who regarded themselves as patriots) and the crew, whom the Navy men thought to be moneygrubbing draft dodgers. *Merchant Marine Days,* however, is also a story of bonding. Eventually the young men of the USMS no longer wore their uniforms ashore, so as to share the taunts of being draft dodgers directed at their veteran shipmates who had no uniforms.

This is also the story of ammunition ships and tankers in convoy or sailing independently; the tranquility and typhoons of the Pacific; the hazards of the Caribbean; the threat from the enemy, which was sometimes realized; the eternal threat of the sea to ships both overage and ill maintained, overloaded and tender due to the exigencies of war.

However, the book remains a story of people who manned the ships—the 4-F volunteers, the misfits, the certifiable; the men like the seventy-year-old second mate and former captain who returned from retirement to answer the call for seamen; and of the young David Lee, who rose to third officer. He served his country well, even if he could not see an entire convoy on the horizon.

ROBERT REILLY
Naval War College

Odom, William O. *After the Trenches: The Transformation of U.S. Army Doctrine, 1918–1939*. College Station: Texas A&M Press, 1999. 296pp. $44.95

How well an army prepares for war largely determines the military effectiveness of that force in future conflict. In *After the Trenches*, military historian William Odom examines the transformation of U.S. Army doctrine during the interwar period. He concludes that the Army's primary combat doctrine, the *Field Service Regulations* (or *FSR*) did not adequately adapt to the changing technological and tactical dynamics of the modern battlefield. The result was that American soldiers paid with their blood for the U.S. Army's failure to develop an integrated modernization process to address weapons, organizations, and doctrine following World War I.

In his quest to enhance understanding of the Army's mission, organization, and operational concepts, Odom, an active-duty Army officer, admirably succeeds. His book is divided into two components, based on the 1923 and 1939 publications of the *FSR*. Prior to World War II, the Army published field regulations in lieu of a separate manual for "doctrine," which Odom defines as the "fundamental principles by which military forces guide their actions in support of national objectives." The average life span for Army doctrinal manuals is less than five years, but Odom notes that the frequency of changes underlines both the transient nature of doctrine and the Army's belief that doctrinal evolution is of paramount importance.

According to Odom, the Army performed well in efforts to modernize doctrine when aided by the experience of recent war. The 1923 *FSR* sought to apply the lessons of World War I to the postwar army's mission and capabilities.

Successfully integrating the lessons from "the war to end all wars," the manual correctly assessed current technological capabilities, and it suited the Army mission defined in the National Defense Act of 1920. So effective were the 1923 regulations that they remained in force for sixteen years, a period that roughly paralleled the longest period of peace in the twentieth century.

Lacking adequate financial resources, however, the Army had a difficult time fulfilling its routine missions, let alone modernizing doctrine. As a result, the 1939 *FSR* failed to recapitulate the recent technological changes and did not develop a viable doctrine following the preceding period of extended peace. What money the service did acquire was used to fund manpower. Moreover, the nation itself turned from preparedness to isolationism. Finally, the U.S. Army

developed neither an effective mechanism for material procurement nor a tightly run, well coordinated doctrine-development process.

Had the Army fought World War II based on *FSR* 1939, it surely would have squandered American lives. To the credit of officers like Army Chief of Staff George C. Marshall, Army Ground Forces commander Lesley McNair, and a small group of innovative thinkers, the War Department took immense strides toward the development of a viable fighting force based on their observation of German military successes in Poland and France. The resulting *FSR*, published in 1941, took into consideration operational accounts of European battles and American large-scale maneuvers. Though not perfect, *FSR* 1941 significantly increased the emphasis on air and armored operations.

Odom's analysis mirrors the history of the U.S. Army during the interwar period and offers a chilling reminder that today's Army must overcome challenges similar to those it faced in the decades of the 1920s and 1930s. To remain a viable force for the twenty-first century, Odom advises, the Army must avoid the mistakes of the past and procure enough equipment for experimentation, as well as develop a system that collects, analyzes, and disseminates foreign intelligence. Most importantly, however, the Army must establish an organization dedicated to monitoring and accommodating change.

In the final analysis, Odom has produced a superb analysis for current planners. Using military history as a forum to promote modernization, Odom offers the Army two choices: pay in cash today to remain on the cutting edge of military development, or pay in blood later, on a yet-unknown field of battle.

COLE C. KINGSEED
Colonel, U.S. Army

Keegan, John. *The First World War.* New York: Knopf, 1999. 475pp. $35

"The First World War was a tragic and unnecessary conflict." With those sad words, John Keegan opens his history of that war to end all wars, from which came such grief. Much has been written on the origins, conduct, and consequences of the First World War, some of it quite splendid. Keegan's *The First World War* is a distinguished addition to the genre.

John Keegan was for many years a senior lecturer in military history at the Royal Military Academy at Sandhurst, and later a visiting fellow at Princeton University. Starting with his now classic *The Face of Battle* (1977), Keegan has

written seventeen well received books on the history of warfare in Europe, North America, and at sea. He is among the most prominent and widely read military historians of the late twentieth century.

This book begins in 1914 with a prosperous Europe, in which contemporary scholars had asserted that a major war would be irrational and thus quite impossible. In July, a Serbian gunman in Sarajevo (then under the rule of Austria) blew that comforting notion into the dustbin of history. Keegan gives vivid descriptions of the entangling military alliances, inflexible deployment plans, and surging nationalism that swept Europe into what was expected to be a short but glorious war of maneuver.

Yet by the end of the year, the Schlieffen Plan had stalled in France, and the Germans had been stopped at the battles of First Ypres and the Marne. The western front had stagnated in trenches from Switzerland to the English Channel, and the Russians had been mauled and defeated at Tannenberg. The western front sank into the mud, blood, and static trench warfare that took the young lives of a whole generation of men from several countries,

Keegan opens new insights for the modern reader with his analysis of the firepower and command limitations of trench warfare, along with his inclusion of the little-remembered campaigns beyond the western and eastern fronts.

1915 was the year of maneuver and action in distant theaters, campaigns whose objectives, albeit not achieved, were to end-run the impasses of late 1914. Aiming to control access to India and to oil, British, Turkish, and German forces maneuvered in Palestine, the Tigris Valley, and as far as Baku on the Caspian. Italians and Austrians struggled over the mountains separating them. At Gallipoli, British, Australian, and New Zealand forces landed to seize the Turkish forts that controlled the Dardanelles, to ease the pressure on the Russians. After eight months of fighting on the beaches, the allies withdrew.

Great battles defined 1916. In an effort to break the stalemates, huge frontal assaults were fought at Verdun and the Somme. They failed. Keegan's analysis of their failure is perceptive. The military technology of the day gave armies massive killing capacity but no capability for mass coordination. Tactical communications were slow and routinely failed in battle. Thus artillery fire and infantry advance could not be synchronized, and the synergy of combined arms was lost. The battles were doomed when they started; men were lost by the hundreds of thousands.

Keegan also discusses the eastern front of 1916, with its great battles and massive casualties. In places still obscure to today's reader, hundreds of thousands were lost for modest gains: a million dead for the gain of sixty miles at most in the Russian offensives between the Pripet Marshes and the Carpathian Mountains during the summer of 1916.

In Keegan's words, 1917 became the year of "the breaking of armies." Troops on all fronts were strained to their limits, and inevitably some broke. After the battle of Arras in April, the French army faced widespread "indiscipline"; the men simply refused to go on the offensive. The Germans, who were also at the limits of their manpower, seemed to accept this, and both sides settled down to a relatively low level of violence. That autumn, however, the Italians collapsed at Caporetto and were driven back nearly to Venice by the Austrians.

On the eastern front, the Russian Revolution spread to its frontline troops, who lost heart for offensives against the Germans. The new Russian offensive of the spring of 1917 failed, and the Bolsheviks opened discussions with the Central Powers at Brest-Litovsk. The Russian army disappeared; in Lenin's memorable words, its soldiers "voted for peace with their feet."

Fifty German infantry divisions were released and came to the western front in 1918. With new tactics for maneuver and deep penetration by fast, light forces, the Germans made worrisome initial advances but soon ran out of steam. By the summer of 1918, the weight of fresh, aggressive American forces was felt, and by November it was all over save for the making of a peace—a peacemaking that might be said to have been as ruinous as the war.

It would be misleading to treat the First World War as a purely military event. Keegan's final chapter links the extensive disruptions of the war to the central themes of conflict in the later twentieth century. In the East, the Russians turned to civil war and the Bolshevik regime. The Hohenzollern dynasty vanished with the kaiser's abdication, and turmoil ruled Germany. The groundwork for fascism was laid. The fragile Austro-Hungarian Empire disintegrated into minor and unstable states, some of which are again making mischief in the twenty-first century.

Keegan's lesson, and he makes it well, is that wars do not go according to plan. Those planning short, decisive wars would do well to remember that when Kaiser Wilhelm II declared war on France and Russia he did not anticipate the ten million deaths that would follow.

The First World War was a huge and complex event. Keegan's talent lies in setting it in order, laying out the great themes, tucking in the outlying events, and serving a rich menu of detail at the right points—the life of soldiers in the trenches, the nobility of King Albert, the numbers of generals killed in battle, and the air and naval wars, to mention a few.

This is a very good book about a very bad war.

FRANK C. MAHNCKE
Washington, D.C.

Strobridge, Truman R., and Dennis L. Noble. *Alaska and the U.S. Revenue Cutter Service 1867–1915*. Annapolis, Md.: Naval Institute Press, 1999. 223pp. $34.95

Heretofore, little has been written about the activity of the United States in governing the new Alaska territory soon after its acquisition. Furthermore, there is scant material on the governmental thread that kept this vast territory bound together and intact through the second half of the eighteen hundreds. Archives hold much of this history, and that is where the two authors of this book went to compile their intriguing tale of a little-known service executing an enormous responsibility, most often as the sole representative of any branch of the U.S. government.

The U.S. Revenue Cutter Service (USRCS) arrived in the Bering Sea soon after the purchase of Alaska in 1867. For the next forty-eight years, until the service was incorporated into the U.S. Coast Guard in 1915, this small group of men in wooden ships (sail and steam powered) became the foundation for the Alaskan government. This unique maritime agency established the sovereignty that ultimately produced the state that exists today.

The cuttermen explored vast unknown areas in their multimission role. They provided humanitarian relief following natural disasters, brought medical care to isolated areas, fed starving North American natives, rescued shipwrecked sailors, protected wildlife, charted territories that led to discovering isolated tribes in the wilderness, and brought law to hostile surroundings. By their presence these small crews created a veneer of civilization in the rough frontier and the isolated settlements. So sensible were some of their actions that many of their solutions to problems became the laws of the new state a hundred years later.

Maritime historians Truman Strobridge and Dennis Noble chronicle events from widely scattered records in the service's colorful history. Their story, filled with episodes of high drama as well as events of historical significance,

includes a number of notable figures. One is Captain Michael A. "Hell-Roaring Mike" Healy, a black revenue-cutter captain who became a legend of the Alaskan frontier, memorialized in James Michener's novel *Alaska*. The Coast Guard's most recent icebreaker is named for Healy.

The authors note that "the early cuttermen have never received the credit due them for their efforts as seagoing policemen who served the indigenous people of an isolated region." Readers will come to understand why the USRCS became so admired throughout the new territory, and they will appreciate the effect the service had on the political, economic, and social life of the North Pacific region.

Each chapter could be made into a full-length book. Most notable among its biographies are two of the service's officers, the abovementioned Healy and Lieutenant John C. Cantwell. Cantwell, in addition to his shipboard duties, explored, mapped, and recorded unknown native settlements. He traveled via small boats where rivers allowed and trudged overland as the first explorer of the remote interior of northwest Alaska.

This book is a must read for students of Alaska history. It is also a uniquely valuable volume for maritime historians, with its coverage of a phase of the history of the mostly unrecorded U.S. Revenue Cutter Service.

The book contains endnotes referencing rare and widely scattered original sources. The bibliography is extensive, and the book is indexed. *Alaska and the U.S. Revenue Cutter Service* is an excellent first choice for researchers and historians on Alaska and U.S. maritime history.

Truman R. Strobridge was an archivist and historian for the federal government for more than thirty years, including work as the Coast Guard's historian and a college teacher in Alaska. He is also the author of two books and nearly a hundred articles.

Dennis L. Noble retired from the Coast Guard as a senior chief marine science technician. He had made six Arctic voyages and two to the Antarctic. Following his retirement, he earned a Ph.D. in U.S. history. Noble is the author of nine books, seven of which are about U.S. Coast Guard history.

TOM BEARD
Commander, U.S. Navy

Symonds, Craig L. *Confederate Admiral: The Life and Wars of Franklin Buchanan.* Annapolis, Md.: Naval Institute Press, 1999. 274pp. $32.95

This stirring biography of a crusty old Navy commander and southern hero is the first in seventy years, and it fills a large gap in Civil

War scholarship. A biographer of lives of Patrick Cleburne, General Joseph E. Johnston, and others, Craig Symonds is well qualified. His writing is brisk, and his chapters are brief. He has excellent pacing, a flair for the dramatic, and a sense of humor. Fans of Patrick O'Brian will recognize a number of themes in Franklin Buchanan's early career, while Civil War and naval history specialists will applaud the author's technical expertise and broad nautical knowledge.

Sixty percent of the text covers Buchanan's antebellum life. Son of a prominent Baltimore doctor and grandson of a signer of the Declaration of Independence, Buchanan (pronounced "BUCK-annon") climbed the promotion ladder quickly. He was aided by merit and ambition, as well as social status and family connections, despite violating several of the "Laws of the Navy." He had some unattractive traits, described here in detail, along with merits that counterbalanced them. Adept in Navy politics, almost always short of money to support his expensive tastes and growing family, Buchanan saw his peers (Alexander Slidell Mackenzie, David Glasgow Farragut, Raphael Semmes, and Samuel F. Du Pont), superiors (Oliver Hazard Perry, Matthew C. Perry, and David Portter), and subordinates as either all good or all bad. One subordinate called him as "courageous as Nelson, and as arbitrary." He could be his own worst enemy, and he was a rigid disciplinarian. Still, he took care of his men. He was energetic, aggressive, and tireless, both in carrying out his assigned duties and in seeking larger responsibilities, whether chasing pirates in the Mediterranean and Caribbean, fighting in Mexico, waging diplomacy in Japan and China, serving on the controversial 1855 retirement board, or becoming the first superintendent of the U.S. Naval Academy (where Symonds teaches).

Buchanan married into the far wealthier and more prominent Lloyd family of Maryland's Eastern Shore. That alliance made him even more conservative, ultimately as loyal to slavery and states' rights as he was to the Old Line State. Those factors set his course in 1861, though he tried to retract his resignation when Maryland did not secede. Buchanan became the chief Confederate naval officer under Stephen Mallory, but his rashness had cost him his home, many of his friends—and what he had served and loved so well, his connection to the U.S. Navy.

"Old Buck" commanded in two great naval actions. The first was the destruction of larger and more powerful warships in Hampton Roads with CSS *Virginia*, an attack that killed his own brother. In 1864, at age sixty-three, he led a

small force at Mobile Bay with the ironclad *Tennessee*. In both engagements he was seriously wounded. He returned after the war to Maryland, where he remained until his death, except for a brief stint in Mobile as an insurance company figurehead.

Symonds does not trim his sails to the prevailing winds of academia or today's Navy. He pulls no punches on Buchanan's pursuit of homosexuals, whether senior petty officers or a seaman caught in the hammock with a ship's boy, or a prominent fellow officer, Thomas ap Catesby Jones (confused in the index with his nephew, Catesby ap Roger Jones). Buchanan lost his postwar job as a college president when he fired half the faculty without consulting the trustees, including one professor for his sexual orientation.

Symonds's knowledge of American slavery does not match his authoritative naval credentials. To credit Buchanan's father with "antislavery doctrines" as a member of a turn-of-the-century "abolitionist" society implies a stronger position than warranted. He was probably a gradual emancipationist and supporter of African colonization. More serious is Symonds's acceptance at face value of an incident from Frederick Douglass's autobiography, which Douglass later admitted to be a less than truthful rendering of his childhood (as explained in Dickson J. Preston's 1988 biography). Only in this instance does Symonds veer off course. His judgment that Nannie Lloyd became "a Buchanan in name" but her husband a "Lloyd in spirit" is acute. This fascinating and poignant study has its decks cleared for action, like the old salt at its center.

MICHAEL B. CHESSON
University of Massachusetts–Boston

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