

J O I N T F O R C E Q U A R T E R L Y

JFQ

Military Innovation

**The Security
of the
Americas**

Joint Culture

Space Warfare

Maritime Security

Autumn

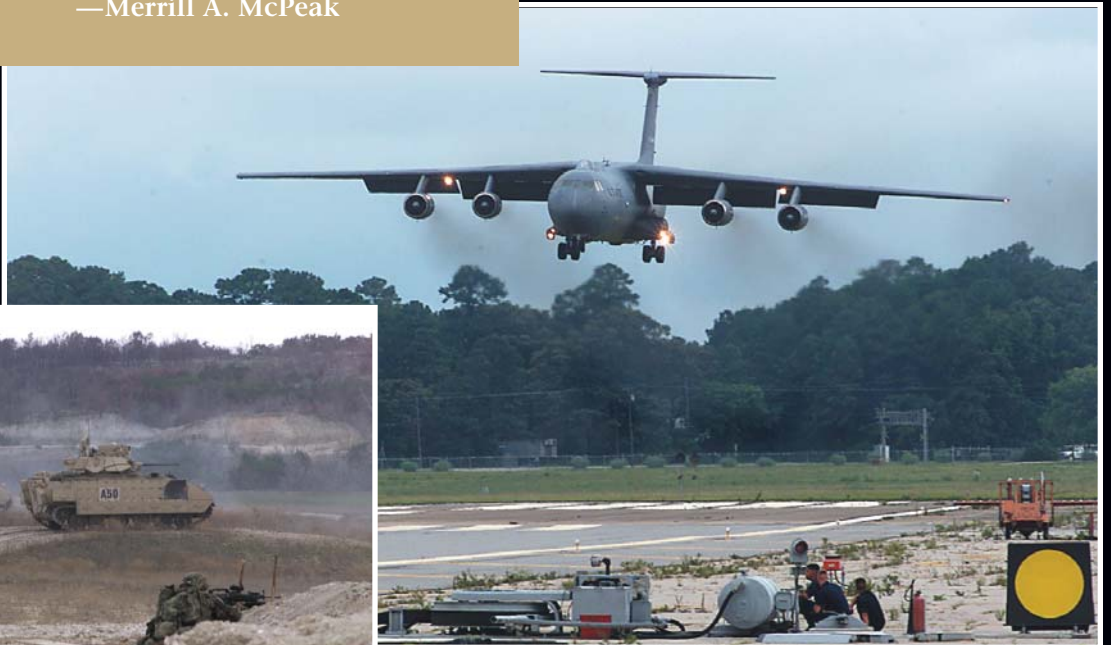
A PROFESSIONAL MILITARY JOURNAL

Report Documentation Page				Form Approved OMB No. 0704-0188	
Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.					
1. REPORT DATE 2000		2. REPORT TYPE		3. DATES COVERED 00-00-2000 to 00-00-2000	
4. TITLE AND SUBTITLE Joint Force Quarterly. Number 26, Autumn 2000				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S)				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) National Defense University, 260 Fifth Avenue (Building 64, Room 2504), Fort Lesley J. McNair, Washington, DC, 20319				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release; distribution unlimited					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT Same as Report (SAR)	18. NUMBER OF PAGES 116	19a. NAME OF RESPONSIBLE PERSON
a. REPORT unclassified	b. ABSTRACT unclassified	c. THIS PAGE unclassified			



... we must find a better balance between independence and jointness. This is bound to be a painful process. Self-sufficiency is a kind of cultural imperative But we simply cannot afford to configure each service's combat forces for sustained, independent operations. The key word these days is jointness. And . . . jointness means depending on one another.

—Merrill A. McPeak



A Word from the



Chairman

MV-22 Osprey on deck
of USS Essex.

U.S. Navy (Jaime D. Hernandez)

Despite the unparalleled strength of the Armed Forces, we should not become complacent. Maintaining the status quo will not serve national interests. The evolving security environment of today, replete with new challenges and new opportunities, demands a capable and flexible military. Our great strength is service core competencies. We must expand on them to provide seamless interoperability in joint operations—our first joint core competency.

Looking Back

In developing a transformation strategy, we can learn from the past, particularly from those

instances when nations failed to understand that successful methods and technologies applied in one conflict may be inadequate in the next. Victorious powers benefitted from dramatic innovations. Such changes, often regarded as a revolution in military affairs (RMA), have occurred throughout history. New technologies and their applications can alter the balance of power as the champion of a new RMA assumes a position of dominance. Successful warfare in the Middle Ages was represented by knights in armor. To overcome them, English yeomen introduced the long-bow—a revolution in its day—to defeat the close-in superiority of French arms in the 12th century.

(continued on page 4)



- 1 A Word from the Chairman**
by Henry H. Shelton
- 8 From the Field and Fleet:
Letters to the Editor**
- 10 1999–2000 JFQ Essay Contest
on Military Innovation**
- 11 Interdependent Maneuver for
the 21st Century**
by Antulio J. Echevarria II
- 20 Nanotechnology in a New Era
of Strategic Competition**
by Shannon L. Callahan
- 27 Transformation Trinity—
Vision, Culture, Assessment**
by Bruce H. McClintock
- 32 Airpower in the Pacific: A
Case Study in Innovation**
by Thomas E. Griffith, Jr.
- 38 Rethinking Army-Marine
Corps Roles in Power
Projection**
by Brian J. Dunn

FORUM

- 43 The Security of the Americas**
- 46 Effective Engagement: The
Case of Ecuador**
by John R. Groves, Jr.
- 51 Human Rights and Military
Conduct: A Progress Report**
by George R. Vickers
- 58 The Legislative Role in
Argentine Defense Reform**
by Pablo Carlos Martinez
- 64 U.S. Strategic Interests in
Caribbean Security**
by Ivelaw L. Griffith



PHOTO CREDITS



The cover of this issue features two light armored reconnaissance vehicles during combined armed exercise (U.S. Marine Corps). The front inside cover captures [from top] SH-60F taking off from *USS Dwight D. Eisenhower* for search and rescue mission (U.S. Navy/Josh Treadwell); Marine small craft during Unitas 40 (2^d Marine Division/Tyler J. Mielke); C-141 approaching Cherry Point (1st Combat Camera Squadron/Jerry Morrison); and training for Desert Spring, Kuwait. The table of contents shows *USS Robert G. Bradley* leaving Guantanamo Bay (U.S. Navy/Danny Hernandez) and Royal Marine in Sierra Leone (CinC Fleet). The back inside cover depicts KC-10A heading into sunset (305th Communications Squadron/John Sidoriak).

The back cover presents a panorama from the Persian Gulf War [clockwise from top]: F-16 with AIM-9 missiles (U.S. Air Force/Perry Heimer), Marines firing M-198 at start of ground offensive (DOD/J.R. Ruark), Tomahawk being launched from *USS Missouri* (U.S. Navy/Brad Dillon), and M1A1 tanks (U.S. Navy/D.W. Holmes).

- 70 Mexico's Search for a New
Military Identity**
by Craig A. Deare
- 75 Battling Storms: Interagency
Response to Hurricane Mitch**
by Melinda Hofstetter

■ OUT OF JOINT

81 The Paradox of Joint Culture

by David T. Fautua

87 Organizing British Joint Rapid Reaction Forces

by Richard M. Connaughton



95 The Coast Guard and Maritime Security

by Bruce B. Stubbs

100 Space Warfare Meets Information Warfare

by Gordon D. Issler

■ OF CHIEFS AND CHAIRMEN

105 Joseph Lawton Collins

■ THE JOINT WORLD

106 Doctrine, Lessons Learned, and History

■ OFF THE SHELF

107 Invitation to the Revolution: A Book Review

by François L. J. Heisbourg

108 Winning the Good War: A Book Review

by Cole C. Kingseed

109 Changing the Guard in Latin America: A Review Essay

by Frederick M. Nunn

Joint Force Quarterly

Stephen J. Flanagan

Director
Institute for National Strategic Studies
Editor-in-Chief

Martin J. Peters, Jr.

Production Coordinator

Robert A. Silano

Director of Publications
Institute for National Strategic Studies
Editor

Calvin B. Kelley

Copy Editor

LTC James Jay Carafano, USA

Executive Editor

William A. Rawley

U.S. Government Printing Office
Art Director

JFQ is published for the Chairman of the Joint Chiefs of Staff by the Institute for National Strategic Studies, National Defense University, to promote understanding of the integrated employment of land, sea, air, space, and special operations forces. The journal focuses on joint doctrine, coalition warfare, contingency planning, combat operations conducted by the unified commands, and joint force development.

The opinions, conclusions, and recommendations expressed or implied within are those of the contributors and do not necessarily reflect the views of the Department of Defense or any other agency of the Federal Government. Copyrighted

ISSN 1070-0692

portions of this journal may not be reproduced or extracted without permission of copyright proprietors. An acknowledgment to *Joint Force Quarterly* should be made whenever material is quoted from or based on its contents.

This publication has been approved by the Secretary of Defense. All previous issues have been published electronically and are available over the Internet at the address indicated below. Paid subscriptions to *JFQ* are offered through the U.S. Government Printing Office.

The editors invite articles and other contributions on joint warfighting, interservice issues that support jointness, and

topics of common interest to the Armed Forces (see page 112 for details). Please direct all editorial communications to:

Editor, *Joint Force Quarterly*
ATTN: NDU-NSS-JFQ
300 Fifth Avenue (Bldg. 62)
Fort Lesley J. McNair
Washington, D.C. 20319-5066

Telephone: (202) 685-4220 / DSN 325-4220
Fax: (202) 685-4219 / DSN 325-4219
e-mail: JFQ1@ndu.edu
Internet: <http://www.dtic.mil/doctrine>

January 2001

Joint Force Quarterly

GEN Henry H. Shelton, USA
Publisher

ADVISORY COMMITTEE

VADM Paul G. Gaffney II, USN ■ *National Defense University*
Chairman

BG David A. Armstrong, USA (Ret.) ■ *Office of the Chairman*

Col Darrell A. Browning, USMC ■ *Marine Corps Command and Staff College*

Brig Gen Richard B. Bundy, USAF ■ *The Joint Staff*

VADM Arthur K. Cebrowski, USN ■ *Naval War College*

MG Reginal G. Clemmons, USA ■ *National War College*

A. Denis Clift ■ *Joint Military Intelligence College*

VADM Scott A. Fry, USN ■ *The Joint Staff*

BG David H. Huntoon, USA ■ *U.S. Army Command and General Staff College*

MG Robert R. Ivany, USA ■ *U.S. Army War College*

Brig Gen Edward L. LaFountaine, USAF ■ *Joint Forces Staff College*

Maj Gen David F. MacGehee, Jr., USAF ■ *Air War College*

MajGen Harold Mashburn, Jr., USMC ■ *Industrial College of the Armed Forces*

Col John T. Sheridan, USAF ■ *Air Command and Staff College*

Col John H. Turner, USMC ■ *Marine Corps War College*

EDITORIAL BOARD

Stephen J. Flanagan ■ *National Defense University*
Chairman

Richard K. Betts ■ *Columbia University*

Col John M. Calvert, USAF ■ *Joint Forces Staff College*

Col Stephen D. Chiabotti, USAF ■ *Air Command and Staff College*

Eliot A. Cohen ■ *The Johns Hopkins University*

COL David M. Cole, USA ■ *U.S. Army War College*

COL Robert A. Doughty, USA ■ *U.S. Military Academy*

Aaron L. Friedberg ■ *Princeton University*

Alan L. Gropman ■ *Industrial College of the Armed Forces*

COL Timothy S. Heinemann, USA ■ *U.S. Army Command and General Staff College*

CAPT Chester E. Helms, USN ■ *Naval War College*

COL Paul Herbert, USA ■ *National War College*

Mark H. Jacobsen ■ *Marine Corps Command and Staff College*

Thomas L. McNaughton ■ *The RAND Corporation*

William H. J. Manthorpe, Jr. ■ *Joint Military Intelligence College*

John J. Mearsheimer ■ *The University of Chicago*

LTG William E. Odom, USA (Ret.) ■ *Hudson Institute*

James H. Toner ■ *Air War College*

LtGen Bernard E. Trainor, USMC (Ret.) ■ *Harvard University*

LtCol James I. Van Zumwerden, USMC ■ *Marine Corps War College*

A PROFESSIONAL MILITARY JOURNAL

A WORD FROM THE CHAIRMAN

(continued from page 1)

In general, RMAs reach fruition over a period of years as new technologies or approaches evolve into final form. One revolution replaces another. In a fast-paced world filled with many innovations, we must anticipate and take advantage of unfolding advances more quickly.

An example from the early 20th century illustrates this point. French doctrine, manpower, and matériel appeared to be the best on the continent after World War I. To guard against another invasion, France constructed a series of defensive fortifications along the German frontier known as the Maginot Line. Unfortunately, this static defense was better suited to the threat in 1914 than the assault of 1940. The German concept of combined arms warfare known as *Blitzkrieg* made such efforts irrelevant. The lesson is that combining revolutionary technology and its application can defeat the established tools of war. The key to success is understanding core competencies and building a coherent approach to change and extending skills to a new force. We must be vigilant to ensure that America leads future RMAs—in terms of doctrine, organization, and technology—and does not instead fall victim to one.

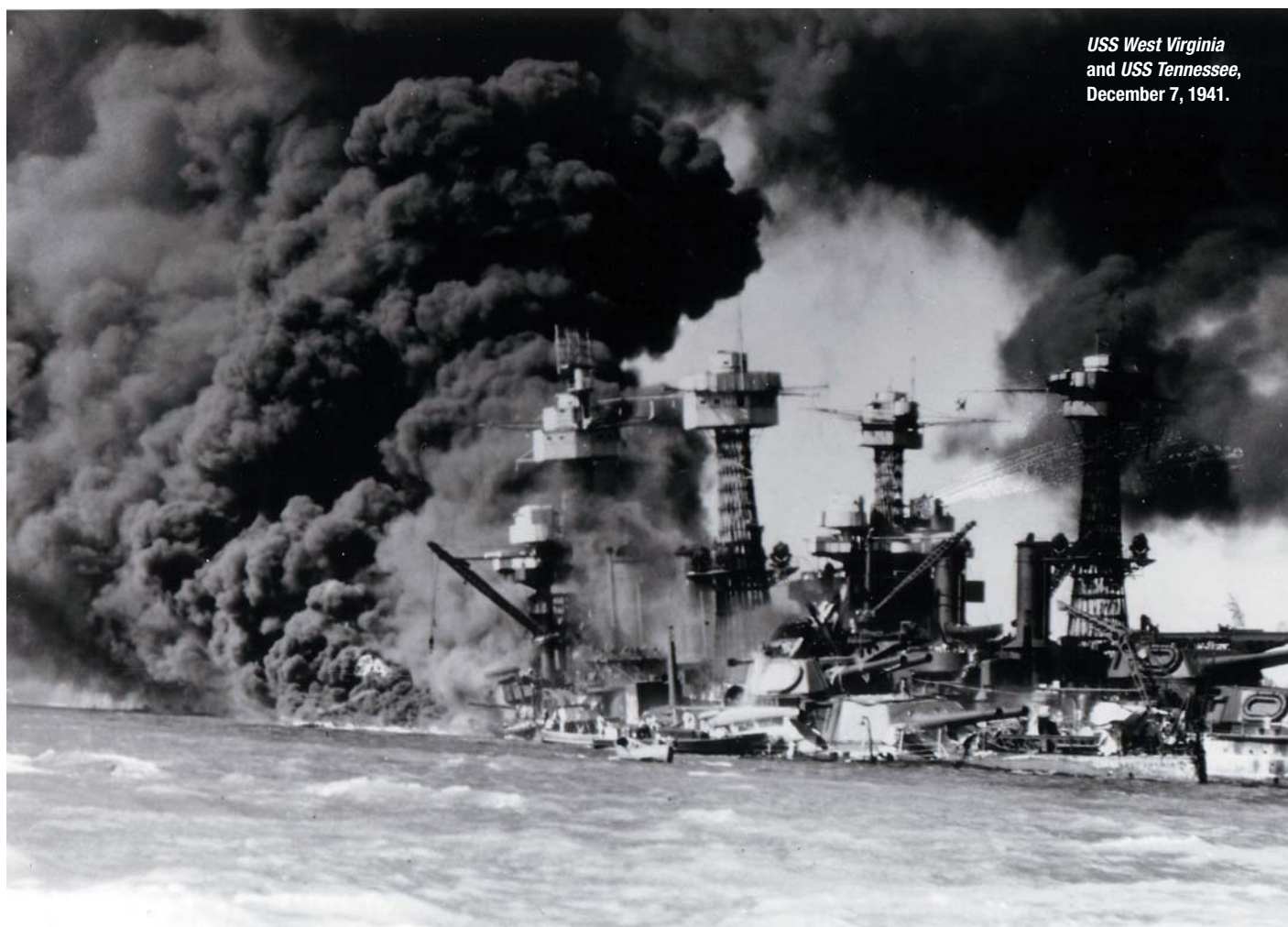
Looking through the eyes of military leaders of a century ago, would we have anticipated the advent of the tank, plane, submarine, and radio—systems that transformed the nature of war? Would we have embraced new technologies to

America has done better than most other nations in exploiting technological breakthroughs

meet emerging threats? Or would we have used the technology of the age to breed stronger horses, build better observation balloons, or forge a more deadly bayonet? It is natural for a dominant nation to perfect weapons that proved successful in the last conflict. Less powerful nations, eager to assert themselves, are often more open to new ideas to shift the balance of power in their favor. Thus we ignore change at our peril.

If we lack the courage to change and allow success to blind us to new possibilities, we can become like Ferdinand Foch who halted the Germans on the Marne in 1914. As commandant of the French war college in 1911, this future marshal revealed an astonishing view of the potentiality of aviation by stating, "Airplanes are interesting toys but of no military value."

America has done better than most other nations in exploiting technological breakthroughs. Its record over the past century is filled with



*USS West Virginia
and USS Tennessee,
December 7, 1941.*

DDO

many successes in making heroic sacrifices to further the causes of freedom, democracy, and rule of law. It played the decisive part in two world wars and led the United Nations in preventing a communist takeover of South Korea. And its sustained role in Vietnam permitted the growth of democracy across Southeast Asia. America kept faith with its principles during a long Cold War and averted a nuclear holocaust. Moreover, the United States led coalitions to thwart the forces of Saddam Hussein and Slobodan Milosevic. Although blessed with economic abundance and geographical isolation from foreign threats, the Nation has accepted global responsibilities to build a more secure world. But our triumphs have come at a high price and sometimes after an initial disaster.

This was the case when the Navy suffered an ignominious defeat at Pearl Harbor and Japan

overran an American-led force in the Philippines. With an extraordinary demonstration of national will and industrial power, the United States built mighty land, sea, and air forces to secure victory in Europe and the Pacific. In 1945, however, we dismantled our military machine just as we did following World War I.

But only five years after Japan surrendered, the Nation found itself in a desperate situation. Post-war demobilization and defense cuts stretched the Armed Forces. U.S. troops in Korea were ill trained and unprepared for an invasion from the North. Ultimately recovering from near disaster and at a cost of over 36,000 lives, America and its allies preserved South Korean independence.

We must defend national interests whenever and wherever challenges arise. Given success in the Persian Gulf and Kosovo, some may believe that America can remain secure by making only minor improvements in warfighting. The world will not stand still. Unpreparedness exposes us to many threats—some of a new and asymmetric nature.



55th Signal Company (Christina Ann Home)

M270 at forward operating base in Kcirre, Albania.

Unmasking the Future

Just as the situation changed for France in the interwar period, the security environment is in a state of flux at present. Indeed it has dramatically changed since the fall of the Berlin Wall. The Soviet Union is gone and the threat of a nuclear war has been reduced. The comparatively stable bipolarity of mutual deterrence has given way to a less certain world.

Today many states as well as nonstate groups seek asymmetric ways to use technology to negate our strengths and exploit our weaknesses.

We must be concerned about threats such as the Osama bin Laden organization that combine great wealth, anti-Americanism, and religious fervor. Terrorists are not bound by con-

ventional norms of behavior and international treaties and are often difficult to deter. America must be prepared to defeat this growing threat.

Moreover, we must be concerned over the proliferation of weapons of mass destruction. They are being sought by the weak, who cannot pose a direct threat and thus opt for asymmetric methods. Some nuclear, chemical, and biological weapons can actually be built in basements yet produce devastating effects.

In addition to conventional threats, current dangers include cyber attacks against information systems. Such strikes can visit disproportionate

effects on civil infrastructure as well as military capabilities. It is crucial to protect the security of vital information networks.

To confront emerging threats, we are not looking for a fair fight or to be just good enough. Minimum force is not sufficient. We must do better because maintaining the status quo inevitably risks higher casualties or calls into question our willingness to assist an ally in trouble.

The United States has the technological edge, economic power, political system, and creativity to move beyond mere sufficiency. We have an obligation to build and maintain forces to provide overwhelming advantages across the range of military operations to counter any enemy. Possessing overwhelming superiority means that most threats will not materialize because would-be aggressors are deterred. Those who do confront us must be defeated quickly because rapid termination of a conflict saves lives on both sides.

To gain the benefit of full spectrum dominance, we must modernize, experiment, improve, innovate, and reshape the Armed Forces to retain clear superiority—regardless of the means any potential enemy may choose. Harnessing our technological edge and organizational expertise can keep the U.S. military far ahead of competitors. The result will be a capabilities-based force that synchronizes our strengths to create power that will not only deter but also defeat any assault.

Technology alone cannot provide a capabilities-based force to meet security requirements. We must be innovative in organization and training as well as in developing new weapon systems. Transformation will involve combining unrivaled service core competencies with joint warfighting lessons learned in the recent past. Every triumph and setback has indicated that the keys to success are not only technological but functional. For the 21st century, we must consider a new joint core competency that transcends service boundaries to ensure effective joint warfighting.

The services have adapted to new threats while undergoing significant reductions in force. For example, budget constraints since 1989 have cut active Army divisions from 18 to 10, Navy ships from 566 to 315, and Air Force fighter wings from 36 to 20. Although the Armed Forces remain the strongest and most capable in the world, they rank well behind Russia, China, and even North Korea in numbers of personnel. To counter its reduced force size, America needs to ensure that its men and women in uniform are better trained and equipped than ever before.

Despite the steady pace of military commitments and reductions in defense budgets since

the services have adapted to new threats while undergoing significant reductions in force

the Cold War we are making great strides. Transforming an organization as large and successful as the U.S. military is a major undertaking. Machiavelli, who witnessed changes brought about by the Renaissance, said, "There is nothing more difficult to undertake, or more perilous to conduct, than to introduce a new order of things." But the transformation is an important challenge that has to be vigorously addressed by the entire defense establishment.

In the Vanguard

To lead a transformation, a military needs a clear vision of future warfighting, the courage to implement that vision, and the will to impose it on the military landscape. The vision for the joint force was laid out in 1996 with the publication of *Joint Vision 2010*. It established a common language for the services to develop and integrate their unique competencies into a synergistic whole. It also established targets for experimentation by the combatant commands and services. Thinking and acting as a joint force will become even more important in the years ahead as we respond to the broad new set of security challenges.

Joint Vision 2020 builds upon the conceptual template contained in *Joint Vision 2010*. It is a guide for experimentation that will help planners identify and understand the right answers. It describes in broad terms those capabilities that will be needed to succeed across the full range of operations.

Simultaneously applied, dominant maneuver, precision engagement, focused logistics, and full dimensional protection lead to full spectrum dominance. This transformation will be affected by the impact of the information revolution on the conduct of military operations and by continued reliance on our proven capacity for conceptual and technological innovation. New concepts lead to change in doctrine, organization, and education that is perhaps more important than technological change, which has been relied upon in the past to stay ahead of potential enemies. Without change in operational and organizational concepts, we simply apply new technologies to old methods.

America is moving along the path toward a transformed military and a dramatically different way of warfighting. We don't expect overnight changes. There are pitfalls in attempting to transform a large organization too quickly or without adequate planning. Thus *Joint Vision 2020* seeks to implement new concepts in an orderly and controlled way.

To ensure that transformation does not become only a catch phrase, we are taking steps to implement new ideas to propel the military toward success. U.S. Joint Forces Command has

been chartered to conduct joint experimentation and develop joint capabilities by identifying technological innovations, creating doctrine to incorporate advances, and implementing leading-edge concepts to employ that technology.

At a time when everyone has access to commercial technology, the military advantage often goes to nations that can capture the available technology, incorporate it in weapon systems, and get it fielded first. We cannot afford to fail in that competition.

Finally, the Armed Forces must be transformed with all deliberate speed. Now is the time to prepare—not only for the dangers of the past—but for new threats that lurk ahead. America can no longer depend on the protection of distance; global travel and new technologies make it easier to target our homeland. And information technology has created new vulnerabilities while at the same time increasing the productivity and capabilities of the Nation.

We are entering the 21st century from a position of strength and prosperity. *JV 2020* has pointed us in a new and exciting direction. We have instituted measures to ensure the appropriate mix of forces and capabilities for the future. By combining what has been learned about seamless joint interoperability with the imperative to maintain service competencies, we will be able to lead the next revolution in military affairs. I am confident that by working together we will successfully transform America's military.

HENRY H. SHELTON
Chairman
of the Joint Chiefs of Staff

Letters . . .

To the Editor—In his article, “Nuclear Proliferation on the Indian Subcontinent,” Kenneth Totty (*JFQ*, Spring 00) offers some insightful comments. But sadly he perpetuates a myth promulgated by supporters of Pakistan in claiming that: “Islamabad favors conducting a plebiscite administered by the United Nations that was originally provided for in a resolution passed during the late 1940s, and that New Delhi agreed to but never honored.” However this is far from the truth. The ruler of Kashmir, Maharajah Hari Singh, on learning that Pakistani-backed forces were invading his state, made an appeal to India for help. But New Delhi indicated that it would only intervene if Kashmir was considered part of its national territory.

When Pakistanis got within shooting range of the capital, Srinagar, the Maharajah agreed to Indian conditions for assistance. Indian troops intervened and drove the invaders back, though not entirely out of the state. Later the congress of Kashmir approved the accession to India. To avoid further bloodshed, India agreed with Pakistan to send the dispute to the United Nations.

The U.N. response declared that to reach any decision on Kashmir, the state must return to normalcy, which required that Pakistani troops would withdraw, Pakistani nationals and tribal groups not resident in Kashmir would leave, Indian troops would depart only after a complete withdrawal of nonresidents although some would stay to maintain law and order, and a plebiscite would only be raised once the above requirements were met.

I would expect this to set the record straight.

—Rahul T. Pandit
University of Iowa

To the Editor—In “The People’s Liberation Army Looks to the Future,” which appeared in your recent forum on transformation (*JFQ*, Summer 00), Charles Hawkins provides an interesting view of Chinese military modernization and its relationship to the revolution in military affairs (RMA). However, he makes one claim that is open to challenge: “With the exception of the United States, China has analyzed the implications of RMA more than any other nation.” Hawkins continues by noting the Soviet origins of the term RMA and its application in the 1980s to the transformation of conventional warfare as associated with precision fires and strikes, the advent of automated control systems, and the transformation of radio-electronic combat. The reader is left with an impression that once the Soviet empire collapsed, interest in RMA waned in Russia. This is incorrect. Interest increased while the country fell into a deep and protracted crisis. Those connected to the General Staff urged an

“unblinking eye on the future” to exercise foresight as political leaders discounted military modernization absent any apparent strategic threat.

The last decade has been difficult for the Russian military as Chechnya demonstrated. Still, RMA has remained a major theme of military theory and thought. It has competed for attention in the radical transformation of domestic politics, national economy, and a new security environment. Economic decline has made military procurement troublesome, but interest in RMA has not lagged. As in China, the Persian Gulf War served as a catalyst for an intensive debate about technological change by transforming the military art and recasting organization and force structure. There is no shortage of capable thinkers to examine RMA and adapt the force to its requirements.

Finding industrial warfare and nuclear conflict unlikely, Russian theorists began to look at the problem of local armed conflicts and regional wars. Like their Chinese counterparts, they saw Desert Storm as a manifestation of RMA in practice but warned that the genuine implications of this transformation were incomplete. General Makhmut Gareev addressed the technological, political, and economic trends that would shape conflict over the next 15 years in *If War Comes Tomorrow: The Contours of Future Armed Conflicts*. He refused to identify any particular weapon as defining the current RMA and stressed the strategic environment, which will promote an “indirect approach” to warfare. Other works have addressed specific aspects of RMA. V.D. Ryabchuk led specialists from the Frunze Military Academy in a systems approach to the evolution of military art under the impact of the current revolution. They presented military systemology as a new and distinct way of applying a theory of complex systems to tactics and operational art. Vladimir Slipchenko wrote of sixth generation warfare where precision, automated control systems, radio-electronic combat, and information operations replaced deterrence with a paradigm of “no-contact warfare.” Russian theorists have developed a distinct approach to information conflict and operations.

Up to the end of the Yeltsin administration, one key obstacle stood in the way of a coherent response to RMA: identification of the probable main opponent. After the NATO campaign against Serbia, pronouncements by the Ministry of Defense left no doubt that the United States and NATO had assumed that capital role. Couched in terms of a

struggle against monopolism, draft doctrine also identified the United States and NATO as the opponent. There is continuing tension between that larger but remote threat and imminent dangers that the Ministry of Defense and General Staff face within and beyond Russian borders. But progress in adapting to RMA is apparent. Moscow radically transformed force structure, eliminating branches and consolidating forces. It reduced the number of military districts. Moreover, there is a debate on the role of the General Staff in defense decisionmaking. A new military-industrial complex is emerging, and foreign military sales sustain research and development, delaying procurement but ensuring modernization. Russia also moved from a model of mass industrial warfare and the premise of conventional superiority to the realm of limited conventional capabilities and a declaratory policy of first use. The military mounted its first large-scale exercise in a decade in 1999, which featured the first use of nuclear weapons in a local war that assumed external (Western) intervention, weak advanced conventional weapons systems, and the requirement to prevent or counter [de-escalate] such a threat. There is a current debate in the military on nonstrategic nuclear weapons in response to deep-strike precision attack. Analysts study foreign military combat developments, especially those involving NATO and U.S. forces.

The revolution in military affairs knows no nationality and doesn’t favor any particular power. Its definition depends on individual state perceptions of the international security system, the degree and imminence of threats, and interests that it promotes and defends. It exists because of accelerating scientific-technical change, which the military has dealt with ever since the industrial revolution. Hawkins should be commended for his research on the direction of RMA in China, particularly his assessment of its long-term implications for regional security. Getting it right may depend very much on internal and external factors that condition national responses to a revolution. The theater and threat may prove more important in defining RMA in any state than technological determinism. It may prove useful to promote comparative studies of national responses to RMA.

—Jacob W. Kipp
Foreign Military Studies Office
Fort Leavenworth

JFQ
WELCOMES
your letters and comments.

FAX your correspondence to (202) 685-4219/DSN 325-4219 or
send it on the Internet to JFQ1@ndu.edu

Attention

Air Force Personnel!

Joint Force Quarterly is no longer distributed directly by the Air Force to its units and activities. Subscriptions must be ordered on-line by contacting Air Force Publishing at <http://afpubs.hq.af.mil> and enter **JFQ** in > **Short Title Search** under > **Keyword Search** and then click > **GO!** Follow instructions on submitting AF Form 1846.



Have you missed an issue?

The following back issues of the journal can be ordered on-line.

- Issue 20 (Autumn/Winter 98–99):** Articles on joint experimentation, future campaigning, interagency operations, close air support at Kasserine Pass, airpower and the Army-Navy maneuvers of 1925.
- Issue 21 (Spring 99):** JFQ Forum on NATO at fifty (Washington summit), plus joint fires and service competencies, William Owens on jointness, special operations, non-lethal weapons.
- Issue 22 (Summer 99):** Essays on military innovation and contributions by Colin Gray on strategy, airpower in the interwar years, joint doctrine and the Kosovo campaign, air support and counterinsurgency in Malaya.
- Issue 23 (Autumn/Winter 99–00):** Focus on space, joint theater air and missile defense, technology and transformation, Vietnam, unified commands.
- Issue 24 (Spring 00):** JFQ Forum on the Greater Middle East, plus interagency operations, theater engagement, rethinking two war strategies, joint education, military advisors.
- Issue 25 (Summer 00):** JFQ Forum on transformation—an international perspective, and joint experimentation, Williamson Murray on innovation during the interwar years, morality and the air war in Kosovo, complete text of *Joint Vision 2020*.

Customer service is available from the Air Force Distribution Center at (410) 687–3330/DSN 584–4529/4729/4829 [OCONUS: 312–4529/4729/4829], by Fax at DSN 584–4629 [OCONUS: 312–4629], or via e-mail at afpdc-service@pentagon.af.mil. Overseas, contact PACAF order desk (Hickam AFB): call (808) 449–5509/DSN 449–5509 [OCONUS: 315–5509], Fax at (808) 449–8207/DSN 315–8207 [OCONUS: 315–8207], or via e-mail at 15cs.scspd@hickam.af.mil; USAFE service/order desk (Ramstein AB): call (011–49) 6371–47–2184/DSN 480–2184, Fax at (011 49) 6371–47–7481/DSN or via e-mail css.scbpe@ramstein.af.mil.

Note: Every general officer in the active and Reserve components of the Air Force and every student at the Air War College and Air Command and Staff College receive distribution of the journal directly from the printer (see page 112).



JFQ

1999–2000 *JFQ* Essay Contest on Military Innovation

Military innovation is the razor's edge of strategic competition. In times of danger, states will turn to the innovators, seeking new ways to extend the reach of national power. The acme of inventive skill is laying the groundwork for strategic advantage before it

becomes a matter of national priority. For the United States, contemporary challenges to this task are well known—unclear threats, absence of a peer competitor, constrained budgets, an established infrastructure governed by time-honored traditions and operational practices, a full agenda of global issues and responsibilities competing for resources and attention—and the most significant obstacle of all, knowing how to innovate. At its root, the current debate over military innovation grapples with the fundamentals of building sound public policies—setting priorities, selecting the right leaders, crafting a vision, and establishing a framework for implementing change. To add to this debate, *Joint Force Quarterly* has sponsored essay contests on the revolution in military affairs and military innovation since 1994. This issue includes the work of the winners of the 1999–2000 *JFQ* Essay Contest on Military Innovation and three essays by other entrants selected by the editors.



In different ways, each essay addresses the requirements for turning innovation into the kind of transformation that cuts a new strategic edge. The articles address new concepts, radical technologies, rethinking institutional practices, the place of transformational leadership, and restructuring roles and missions. Together, they suggest that true military innovation requires a complex response that touches every aspect of an organization and all the capabilities of the United States to project power by land, sea, and air. These contributions offer new voices to the debate on how to best master the daunting task of providing the best force for the future.

JFQ

Contest Judges

Brigadier General David A. Armstrong, USA (Ret.), is the director for joint history in the Office of the Chairman of the Joint Chiefs of Staff and member of the *JFQ* Advisory Committee.

Alvin H. Bernstein is a research professor at the National Defense University, the founding editor-in-chief of *JFQ*, and coeditor of *The Making of Strategy: Rulers, States, and War*.

James R. Blaker is an analyst at Science Applications International Corporation and former visiting fellow in the Institute for National Strategic Studies at the National Defense University.

Colonel David M. Cole, USA, is the Chairman of the Joint Chiefs of Staff Chair at the U.S. Army War College and member of the *JFQ* Editorial Board.

Colonel Robert A. Doughty, USA, is the head of the Department of History at the U.S. Military Academy and author of *World War II: Total Warfare Around the Globe*.

Captain D. Scott Ensminger, USN, is the Chairman of the Joint Chiefs of Staff Chair at the Industrial College of the Armed Forces and formerly taught at the Naval War College.

Captain Chester E. Helms, USN, is head of the Operational Concepts Division in the Joint Military Operations Department at the Naval War College and member of the *JFQ* Editorial Board.

Mark Jacobson is a professor in the School for Advanced Warfighting at the Marine Corps Command and Staff College and member of the *JFQ* Editorial Board.

Martin C. Libicki is an analyst at RAND and coauthor of *Mind the Gap: Promoting a Revolution in Military Affairs*.

Thomas L. McNaugher is the deputy director of the Arroyo Center at RAND and member of the *JFQ* Editorial Board.

Lieutenant Colonel David E. Snodgrass, USAF, is a speechwriter for the Chairman of the Joint Chiefs of Staff and frequent contributor to military periodicals.

Colonel Jerre W. Wilson, USA, is the Chairman of the Joint Chiefs of Staff Chair at the Marine Corps War College and formerly held a fellowship at the Brookings Institution.

JFQ

C-17 taking off during
Large Package.



Interdependent Maneuver

for the 21st Century

By AUTULIO J. ECHEVARRIA II

Virtually all intelligence and operational estimates suggest that war in the 21st century will require interdependence among land, sea, and aerospace systems. The services report that precision weapons will so expand the range and capabilities of systems that the tactical deadly zone, once a few hundred meters, could extend beyond 200 kilometers by 2020. Operational exclusion zones, designed to deny access to land, sea, and aerospace forces, might reach 2,000 kilometers. Each is

likely to be flooded with an admixture of technologically sophisticated and relatively crude precision and area-fire weapons (including weapons of mass destruction) linked by communication systems from state-of-the-art to the relatively primitive. At the same time, a dynamic strategic environment will add missions and responsibilities. Thus service interdependence will be necessary at the low and high ends of the conflict spectrum.

Although *Joint Vision 2020* calls for the Armed Forces to become fully joint, it provides no operational concept for moving in that direction. The desired endstate, full spectrum dominance, requires becoming better than everyone else at doing everything. A worthwhile aim, it does not offer the common ground for developing a shared

Lieutenant Colonel Autulio J. Echevarria II, USA, is director of national security affairs at the Strategic Studies Institute at the U.S. Army War College and is the author of *After Clausewitz: German Military Thinkers Before the Great War*.

305th Air Mobility Wing (Kenn Mann)

conceptual model of future operations. Even more disconcerting, two concepts that allegedly support full spectrum dominance—dominant maneuver and precision engagement—stem from competitive rather than complimentary traditions. Unless reconciled, no move toward interdependence will occur. This article examines the definitional and historical tensions underlying dominant maneuver and precision engagement and suggests a way of harmonizing them under a new operational concept, interdependent maneuver.

Conflicting Definitions

Documentation such as *JV 2020* and Joint Pub 3.0, *Doctrine for Joint Operations*, does not provide a unifying concept. As presented in *JV 2020*, its four concepts—dominant maneuver, precision engagement, focused logistics, and full dimensional protection, and their endstate, full spectrum dominance—are little more than tautologies. Dominant maneuver amounts to the capacity to conduct maneuver that dominates, precision engagement equates to the ability to engage with precision, and so forth. Presumably these tautologies are marks on the wall toward which each service (as well as the many partners involved in defense research and development) should focus. However, since they are self-referential, tautological concepts tend to become ends in themselves. In other words, efforts to improve precision engagement tend to take place in isolation from similar endeavors in developing

range of military operations through the application of information, deception, engagement, mobility, and countermobility capabilities.

On the other hand, precision engagement is the ability to locate, surveil, discern, and track objectives or targets; select, organize, and use the correct systems; generate desired effects; assess results; and reengage with decisive speed and overwhelming operational tempo throughout the full range of military operations.

Each concept, according to *JV 2020*, uses “decisive speed and overwhelming operational tempo” and is to be applied across the “full range of military operations.” But to gain dominant maneuver one must also carry out all the activities—“scaling and massing force or forces and the effects of fires”—contained in the definition of precision engagement. In fact, on closer inspection, engagement seems to be integral to maneuver rather than a separate concept. Indeed, in most cases precision engagement will not occur without some movement of joint forces or assets, whether it be repositioning intelligence gathering satellites or launching F-16s. Similarly, dominant maneuver will likely require some form of engagement, whether surveillance and tracking hostile

the lack of a unifying concept is a result of the failure of *JV 2020* to reconcile dominant maneuver and precision engagement

other concepts and could proceed beyond the point at which they contribute most meaningfully to full spectrum dominance. In a world of limited resources, efforts to perfect one capability could undermine the individual and collective effectiveness of others. Thus working toward ideal capabilities introduces pitfalls that might run counter to the development of a unifying operational concept. A vision document must at some point present desired capabilities that might come together to achieve battlefield success.

Moreover, the lack of a unifying operational concept is a result of the failure of *JV 2020* to reconcile tensions between dominant maneuver and precision engagement. For example, dominant maneuver means having positional advantage with decisive speed and overwhelming operational tempo. Widely dispersed joint land, sea, air, special operations, and space forces—capable of scaling and massing force or forces and the effects of fire—will secure advantage across the



Minuteman III,
Force Development
Evaluation Program.

U.S. Air Force (Amanda M. Edwards)

USS Tarawa operating off Aden.



U.S. Navy (David Miller)

aircraft or neutralizing cruise missile sites, to permit enough movement for positional advantage. Differently put, it is as if *JV 2020* defined the terms separately to mollify service interests rather than to isolate their virtues as concepts. Dominant maneuver and precision engagement are interdependent—parts of the same activity.

Dominant maneuver and precision engagement are defined independently because they have evolved from two conflicting traditions. The origins of dominant maneuver are rooted in theories identified with the military canon of the 20th century, so-called *Blitzkrieg* doctrine. In contrast, concepts underpinning precision engagement emerged from ideas which influenced strategic bombing theory as developed following World War I.

Loosely associated with the work of Basil Liddell Hart, J.F.C. Fuller, and Heinz Guderian, *Blitzkrieg* (lightning-war) centered on using air bombardments, artillery fires, and armored attacks to penetrate defensive zones, disrupt command and control, and sever lines of communication and supply. At best the psychological shock would cause a defender's resistance to collapse suddenly. At worst it would force an enemy to fight in encircled pockets, against overwhelming odds, and with rapidly diminishing supplies.

With emphasis on both physical and psychological dislocation, *Blitzkrieg* represented the epitome of 20th century maneuver theory.

A significant contribution to that theory came in the 1980s and 1990s as American military writers engaged in a debate over the merits of firepower versus maneuver. This exchange resulted in a redefinition of the concept of maneuver as the "use of fire and movement to gain a positional advantage." Maneuver was thus divided into two mutually supporting elements—fire and movement, which could be employed sequentially or simultaneously. Fire is subsumed under maneuver. Yet for all its innovation, this new definition was applied better on the tactical than on the operational or strategic levels because coordinating fire and movement over great distances remained difficult, chiefly because of the limitations of communication technology.

The applicability of *Blitzkrieg* was not limited to land operations. Both land- and seapower evolved in similar ways and shared enduring principles. Alfred Thayer Mahan and Julian Corbett, prominent naval thinkers, relied upon landpower concepts such as central position, strategic lines of communications, and concentration of force to gain command of the sea. Early Japanese victories in the Pacific—the fall of Malaya and Singapore in two and a half months, Burma and the Philippines in three and a half

C-17 landing at North Field, South Carolina.



1st Combat Camera Squadron (Jeffrey Allen)

months, and the Dutch East Indies in two and a half months—validated the ideas espoused by Mahan and Corbett while confirming that *Blitzkrieg* would work in theaters in which naval (including amphibious) operations replaced armored pincer movements. The essential ingredient in rapid maneuver was not the armored vehicles but pinpoint application and timing of all-arms attack, followed by rapid exploitation before an enemy could recover. Accordingly, recent studies have concluded that the principles of maneuver warfare on land apply equally at sea.

Ideas associated with strategic bombing theory emerged concurrent with, but independent of, *Blitzkrieg* doctrine. They were inspired by events during World War I such as the bombing of London. Six months of air raids in 1915 caused 1,750 casualties and created a panic among the British population. Although the air arms of the day could not create or sustain the tempo to induce the enemy to surrender, Giulio Douhet in Italy, Hugh Trenchard in Britain, and Billy Mitchell in the United States believed that airpower, which was evolving rapidly, had revolutionized warfare. Accordingly, they argued that it was the best way to strike an enemy psychological center of gravity. By means of strategic bombing, air forces could circumvent the tactical and operational carnage of

surface attacks to strike directly and perhaps incessantly until an enemy capitulated or its capability to resist was destroyed.

With the appearance of larger aircraft and precision munitions at the end of the 20th century, a new generation of airpower theorists—notably John Warden—argued that the technology for achieving strategic collapse of an enemy was just over the horizon. Rather than using massively devastating bombardment, planners could employ long-range precision munitions for surgical strikes, greatly limiting collateral damage. As the range and variety of precision munitions grew, theorists began to embrace the possibility of executing parallel attacks—numerous simultaneous strikes against critical infrastructure nodes. These attacks would inflict damage on strategic assets that would render an enemy incapable of either reacting or recovering, thereby forcing strategic paralysis and psychological collapse.

The principles underlying dominant maneuver and precision engagement share a common theme—attacking an enemy psychological center of gravity. However, the fundamental difference is that the former finds movement as essential to effect an attack while the latter considers physical destruction as key. Both employ tempo, although for dominant maneuver tempo pertains to the pace of physical movement in relationship to that of an enemy. Precision engagement, on the other hand, uses tempo in terms of the rate at

M-1 on range in Korea,
Fool Eagle '00.



1st Combat Camera Squadron (Wayne Clark)

which destruction is inflicted on critical strategic assets. Both concepts also make use of lethality. But dominant maneuver uses lethality as a means to facilitate movement while precision engagement employs movement to inflict lethality.

Another difference is the level on which the concepts apply. Dominant maneuver is found to

Blitzkrieg Revisited

Practical applications of the conceptual forerunners of dominant maneuver and precision engagement have a mixed record. *Blitzkrieg* doctrine was validated by German attacks on Poland, which fell in one month, Denmark and Norway, which succumbed in two months, and France and the Low Countries, which were overrun in one and a half months. But for various reasons, not the least of which was better training and equipment, Germany's enemies grew less susceptible to the psychological shock of *Blitzkrieg* as the war progressed. Campaigns between 1941–45, such as those conducted in Russia, North Africa, and Italy, became protracted as armies, navies, and air forces adjusted to a new style of war. Victory had to be won, more often than not, through costly and deliberate annihilation. On the Russo-German front, for example, where fighting was particularly bitter, encircled forces held out for extended periods, depriving *Blitzkrieg* of its chief advantage, lightning-like decisions. While the conflict remained one of movement on all fronts, logistical requirements and adaptive opponents limited the exploiting of tactical victories for operational effect.

From 1945 to 1995 the concept of *Blitzkrieg* changed more in form than substance. The object remained integrating ground, naval, and airpower into decisive strikes to break enemy will to fight

practical applications of the conceptual forerunners of dominant maneuver and precision engagement have a mixed record

be the most applicable on the tactical and operational levels because of logistic and deployability limitations. Precision engagement is often considered in terms of strategic applicability because of the great distances that munitions and delivery systems can cover and because their expense makes them undesirable when used against tactical targets.

The intellectual tradition behind each concept has led to institutional conflict, not only with regard to budgets but to the roles of air assets in campaigns and whether they should be controlled by a single service. This conflict cannot be wholly solved with a unifying operational concept, but that is a place to start.



2nd Communications Squadron (Sarah E. Shaw)

B-52 being refueled,
Desert Fox.

or destroy its military. The Arab-Israeli, Falklands, Panama, and Persian Gulf conflicts proved that the *Blitzkrieg* concept was valid even if defensive technology was becoming deadlier and enemies did not always collapse instantly. Still the problem of moving beyond operational to strategic exploitation remained. Except in a few cases, maneuver forces could not maintain an operational tempo that was sufficient to turn tactical success into strategic victory.

Legacy of Strategic Bombing

Unlike *Blitzkrieg*, history shows that the concept of strategic bombing outpaced technology. Although most evidence before World War II suggested that new air arms had enormous potential,

results fell short of expectations. Strikes against cities and industrial sites did not ensure victory. Rather than surrendering en masse, civilians became inured to massive devastation. Their will to resist was arguably strengthened rather than diminished. The bombing of Hamburg in 1943, for example, caused 90,000 casualties in a four-month period, the bombing of Dresden in 1945 killed 80,000 in three months, and the most devastating of the Tokyo raids led to 125,000 victims during May 1945. Even with tremendous destruction, long-range bombing technologies did not generate sufficient tempo or lethality to compel surrender.

For a time it appeared that Douhet and his disciples had mistakenly convinced themselves that air arms alone could achieve decisive effects. Then the United States dropped atomic bombs on Hiroshima and Nagasaki, causing some 220,000 casualties in three days. Technology seemed to finally catch up with theory. From the standpoint of more conventional munitions, however, the events of World War II had neither proved nor disproved the case for strategic bombing.

From 1945 to 1980 intercontinental ballistic missiles not only expanded traditional strategic distances to global proportions but gave Douhet a renewed relevance. For a while, the capability to deliver long-range weapons of mass destruction against cities and industrial centers, whether dropped from B-52s or launched from submarines or missile silos, appeared to render conventional forces obsolete. Strategic attack became synonymous with nuclear attack, and strategic theory was focused on concepts such as nuclear deterrence, flexible response, and mutual assured destruction. Fortunately, the practical application of strategic nuclear attack is untested. Meanwhile, the advent of precision-guided munitions meant launching a strategic strike without mass casualties associated with weapons of mass destruction. Long-range precision strikes were viewed as the new warfare, and campaigns in the Persian Gulf, Bosnia, and Kosovo have been touted as airpower victories. Although under the right conditions such weapons can indeed modify enemy behavior, the extreme of strategic psychological collapse prophesied by Douhet and Warden has proven elusive.

The Human Factor—People's War

Conflicts in Vietnam, Cambodia, Afghanistan, and Somalia warned that insurgencies, civil wars, and terrorism remained the Achilles heel of dominant maneuver and precision engagement. Neither concept has been particularly successful in resolving protracted, internecine, or civil wars.

Marine vehicles in
UAE, Iron Magic.



13th Marine Expeditionary Unit, Combat Camera (Branden P. O'Brien)

Such conflicts generally do not involve limited aims such as breaking the enemy will to resist, but nonnegotiable objectives such as political annihilation or genocide. The centers of conflict tend to remain dispersed. Time benefits the side that wages a protracted war by offering an opportunity to learn and adapt. The side that seeks a short, decisive war, on the other hand, suffers a decline in morale as its expectations are frustrated and its emotional endurance wanes.

The basic element in waging protracted war, as Mao Tse Tung noted, is not overwhelming force, but patience. Indeed, a decisive battle in the traditional sense was to be avoided. Instead of a classic confrontation of force on the battlefield, Mao called for first creating and consolidating a political base of support among the populace, then expanding that base by bold attacks that forced an enemy on the defensive and then a full-scale counteroffensive. This theory proved successful in China and was adopted in other agrarian societies, especially in Vietnam and Cuba. Because such conflicts are decentralized, with the front nowhere and everywhere, they pose unique challenges to doctrines that attack the enemy psychological center of gravity by more conventional means. While U.S. forces consistently achieved tactical victories in Vietnam, political constraints kept them from achieving operational and strategic success.

Reconciling New Ways of War

To merge the concepts found in *JV 2020*, a unifying operational concept is required to combine the advantages of rapid movement with the benefits of precision strike. It also must unite the tactical and operational applicability of dominant maneuver with the strategic reach of precision engagement. It must make movement and fire interdependent—hence *interdependent maneuver*.

This means applying principles of fire and movement on all levels of war simultaneously, elevating a tactical concept to an operational and strategic one. This leap in conceptual warfare is made possible by expected advances of information, maneuver, and firepower technologies over the next 20 years (the focus of *JV 2020*). Interdependent maneuver assumes that such advances will blend the tactical, operational, and strategic levels of war into a single continuum of military activity. In any case, these levels have historically been little more than arbitrary categories used to enable planners to assign objectives, resources, and responsibilities. Therefore, rather than accept such distinctions, one may find it more useful to see warfare as consisting merely of military actions—whether hand-to-hand combat or strategic bombing—linked in time and space by

USS Pennsylvania.



U.S. Navy (Larry Smith)

myriad information systems. It may also be helpful to divide such actions into *fire*—the ability to inflict lethality whether by the tip of a bayonet or the virulence of a biological agent—and *movement*—the physical relocation necessary to deliver lethality.

Interdependent maneuver thus is built upon the definition of tactical maneuver developed by military theorists in the 1980s and 1990s. In terms of application, however, it brings the synergy of fire and movement to the realms of operations and strategy, levels on which these components have never been applied in tandem. For example, once a decision is made to use force in a crisis, interdependent maneuver means that integrated ground, naval, and aerospace assets would begin to move into theater while at the same time laying down suppressive fires throughout. Such fires would engage what have traditionally been considered enemy tactical forces as well as operational and strategic reserves and other critical strategic assets. The fires would combine ground, naval, and aerospace systems employing lethal and nonlethal weapons to facilitate the insertion of ground elements. These units would initially consist primarily of special operations forces equipped with reach-back support and

non-line-of-sight weapons. They would be deployed in and around key terrain to provide human intelligence, report battle damage assessment, augment other special operations forces already in theater, and interdict enemy movements with reach-back fires.

The suppressive effects of fires executed throughout theater would in turn enable additional aerospace, naval, and perhaps heavier ground forces to be deployed into combat. Such forces would exploit strategic vulnerabilities—extant or created by interdiction fires—in enemy defensive zones and maneuver to obtain a position of advantage. In the meantime suppressive attacks would continue throughout, developing synergy that comes from fire and movement. An enemy is thus presented with a constant rain of destruction across its entire defensive zone as well as the threat of inevitable capture or destruction by ground maneuver forces via the close fight.

One further benefit is that interdependent maneuver applies more to situations that resemble people's wars than to traditional maneuver conflicts. If such a war is in the first phase—building a political base—operations would likely entail less suppressive fires and a greater number of ground elements to isolate an enemy from indigenous peoples, destroy supply caches, and interdict efforts to reestablish a logistic flow. If people's war is in the second phase—expansion—interdependent

maneuver would be used to preempt its expansion. Suppressive fires and ground elements would operate in tandem to reduce known enemy concentrations, effect isolation, and erode indigenous support. The third phase—full scale counteroffensive—resembles a conventional conflict.

Interdependent maneuver is more than linking ground maneuver with the halt-phase concept, which claims that airpower alone can decisively defeat a large-scale armored attack. First, it

interdependent maneuver calls for a fully joint approach, generating synergy between fire and movement

calls for a fully joint approach from the outset, generating synergy with the interaction between fire and movement rather than placing the burden of success on one dimension, with others absent or

only in support. Second, halt phase applies to a limited segment of the threat spectrum; it can't effectively address people's war, for example. The type of conflict to which the halt-phase concept applies, armored engagements in relatively open terrain like the Middle East or Korean peninsula, is becoming rarer. By contrast, interdependent maneuver is based on the principle of presenting an enemy with a dual threat—destruction by fire or the close fight. Aerospace power alone is too easy to counter. The Armed Forces need a truly integrative operational concept to give them every possible advantage.

Technological Prerequisites

Ground forces will surely need to enhance strategic deployability to execute interdependent maneuver. The Army and Marine Corps have recognized this fact and established vehicle/system requirements to accommodate easier air and sealift with regard to military and commercial transport capabilities. Vehicles/systems projected for the 2020 timeframe will likely feature modular designs to permit mixing and matching components to a single chassis. One example of such a maneuver technology, a hybrid, air-cushioned vehicle, is currently under investigation and could hover over level terrain or water, enabling it to reach speeds well beyond conventional track or wheeled systems. At the same time, advances in active protection systems, lightweight ceramics, titanium, and other metals might afford ground vehicles nearly as much protection as heavy armor. Ground forces are also exploring vertical-take-off-and-landing and short-take-off-and-landing technologies to develop viable self-deployment options. Other initiatives include developing fuel-efficient and hybrid-power technologies to reduce logistic requirements,

making ground units more strategically agile. Most of these technologies are already under development in DOD or industrial laboratories. *JV 2020* should promote such technologies through a coherent, unifying operational concept that illustrates how such capabilities will contribute to military success.

The technological revolution of the 21st century which is currently underway might finally combine fire and movement in a genuinely effective manner. If so, well-timed, precisely-directed surface, subsurface, and supersurface attacks over extended areas will provide a better means for achieving political and military objectives even in situations like Vietnam, Bosnia, and Kosovo, where force requirements may be subtle and dispersed. To realize this potential, we must complete this revolution with comparable conceptual and doctrinal transformation. At a minimum, a means must be found to move the Armed Forces from a joint to interdependent approach. As *JV 2020* asserts, "Without intellectual change, there is no real change in doctrine, organizations, or leaders." Indeed, recent debates over which service is the arm of decision prove that there is still some way to go. Thus we must reconcile tensions between dominant maneuver and precision engagement. Merging these competing traditions into a single unifying operational imperative will not only reconcile them but permit a coherent articulation of how a particular list of desired capabilities would contribute to the execution of military actions and provide a blueprint to focus the efforts of the research and development community.

Adopting independent maneuver is not equivalent to emulating the technological optimism that captured airpower theorists before World War II. The evolution of technology will bring both opportunities and challenges to future ways of war. Indeed, whatever new technologies may bring, the key to applying military force will remain the ability to discriminate between the will of an enemy to fight and its means to do so.

JFQ

Nanotechnology in a New Era of Strategic Competition

By SHANNON L. CALLAHAN



Preparing GBU-16
aboard USS Enterprise.

U.S. Navy (Jacob L. Hollingsworth)

New technologies on the battlefield can alter the course of history and precipitate the rise or fall of nations. The advent of microelectromechanical systems (MEMS) coincides with what some regard as a revolution in military affairs (RMA), an onset of technological innovation that changes the nature of warfare. These tiny devices could be the revolution's enabling technology.

Lieutenant (Junior Grade) Shannon L. Callahan, USN, is undergoing training as an electronics countermeasures officer with EA-6B Fleet Replacement Squadron.

In the mid-1990s, Admiral William Owens articulated the initial RMA concept as a *system of systems* that yields total *situational awareness*. An overarching systems architecture integrates an array of capabilities such as command and control, surveillance, reconnaissance, intelligence, and targeting. Under this integrated system, advantages of individual platforms and capabilities are fused into a powerful joint warfighting entity. As Andrew Marshall has predicted "The change will be profound . . . the new methods of warfare will be far more powerful than the old."¹

MEMS is a far-reaching technology with possible application to two broad military arenas: precision guided munitions (PGMs) and individual soldiers. The former represents the stand-off warfare likely to characterize future major regional conflicts while the latter represent a counter-trend to manpower-intensive, close-in fighting likely to characterize military operations other than war. MEMS answer some criticisms of the revolution in military affairs—such as prohibitive cost—and expand the impact of the revolution by bringing its fruits to the level of the warfighter.

The developments examined below represent areas of great potential. They are in various stages of development, but their eventual realization is probable and cannot be ignored. Without serious consideration of MEMS, the Nation could lose its unchallenged military prominence like other states on the brink of RMAs who rested on past accomplishments or early leads.

Vision of New Technology

Richard Feynman delivered a speech in 1960, "There's Plenty of Room at the Bottom," which envisioned a technological world of the very small, where the units of construction were not blocks or circuits but atoms.² Nanotechnology, a term coined by Nobuhiko Taniguchi in 1974, is the technology of the ultrasmall: roughly the 1–100 nanometer or billionth of a meter (10^{-9} meters) range. Minia-

turization will extend to mechanics and electronics. The field that combines the two

the field that combines the two microelectromechanical systems is known as MEMS in the United States

microelectromechanical systems is known as MEMS in the United States. The vision statement of the Defense Advanced Research Projects Agency, which is spearheading research and development on MEMS, reads:

The field of microelectromechanical systems is a revolutionary, enabling technology. It will merge the functions of compute, communicate, and power together with sense, actuate, and control to change completely the way people and machines interact with the physical world. Using an ever-expanding set of fabrications processes and materials, MEMS will provide the advantages of low power, low mass, low cost, and high functionality to integrated electromechanical systems both on the micro as well as the macroscale.

It must be stressed that MEMS are a multidisciplinary *approach* to design and fabrication, not simply a class of products. Its devices fall into three general categories: sensors, actuators, and mechanical components such as gears, cogs, and switches. These three categories demonstrate the ubiquity of this emerging potential. Virtually any

mechanical or electronic device can be shrunk by replacing macroscale parts with MEMS.

But this technology is more than just miniaturization of existing systems. It allows for new functionality since the decrease in size facilitates the creation of new architectures. Through them an entire subsystem could be integrated on one chip. For example, one firm replaced an avionics component of 1,044 parts for F-22s with an equivalent MEMS component that had only 36 parts. This characteristic of multiple and mixed technology integration in MEMS devices and fabrication technologies may be especially relevant

Getting situation report, Culminating Phase Experiment.



2nd Marine Division (D.R. Storms)

to the Armed Forces, which relies on a core competency of integrated global and local surveillance, communications, and data fusion.

New High Ground

MEMS offer several dramatic advantages. The first is what makes the technology possible to begin with: universally accessible fabrication. These tiny parts are manufactured using the same processes as the integrated circuits of microchips

and can be made of silicon wafers. Because of the manufacturing technology, 10,000 MEMS can be built as easily as one. Correspondingly, ease of fabrication allows engineers to change the way they design systems. Economies of scale make production inexpensive. In fact, this massive reduction in cost is the main driver for research. For example, Raytheon Corporation wants to build a system of circuits for radios at 3 percent of the cost of macroscale systems. This product will shrink a bulky \$200,000 system into a radio the size of a credit card for only \$2,500. Multiplicity permits augmenting low-end systems with high-end technologies for greater performance and extended life. Many products can be upgraded, or many redundant systems can be included in the larger architecture for improved reliability and lowered maintenance demands. MEMS make advanced technology affordable in quantity.

Secondary effects will also reduce cost. Microscale systems require less energy to operate moving parts. Systems that run on lower power produce less heat, leading to fewer maintenance problems and a longer service life. Moreover, smaller systems that weigh less require less energy to propel. Other advantages stem from the physical properties of very small devices. Many use electrostatic energy for power, drastically reducing energy requirements.

In some cases extreme sensitivity to the environment acts as a disadvantage, particularly in high temperatures. This special packaging challenge can account for more than 80 percent of the costs. Despite this problem, the demand for and development of this technology is continuing at an amazing pace. The Committee on Advanced Materials and Fabrication Methods for MEMS of the National Research Council contends that the technology makes possible the "implementation of fault-tolerant architectures that are modular, rugged, programmable, conventionally interfaced, and relatively insensitive to shock, vibration, and temperature variations."³ Even though more research is needed in the field of MEMS packaging, solutions will be discovered.

MEMS is achieving a technological critical mass as more and more possible applications emerge, including:

- inertial measurement units
- signal processing
- distributed control of aerodynamic and hydrodynamic systems
- distributed sensors for condition-based maintenance and structural monitoring

- unattended sensors for tracking and surveillance
- mass data storage
- analytical instruments
- biomedical sensors
- optical fiber components and networks
- wireless communications
- active conformable surfaces for aircraft.

The range of uses suggests that MEMS is applicable to every aspect of military technology.

MEMS and PGMs

Among the many applications of this new technology is PGM enhancement. In the Persian Gulf War these munitions made such an impact that they became almost synonymous with the revolution in military affairs. Used against what war planners considered *strategic core* targets (C³ assets, leadership facilities, and military support facilities), they were the weapons of choice.

Since then reliance on PGMs has only increased. Their accuracy makes them especially attractive. Collateral damage can be avoided. They permit selection of specific aimpoints for a given target to achieve desired objectives, perhaps merely disabling enemy assets rather than razing an entire site. Accuracy also increases the probability of a kill, meaning fewer munitions. Stand-off capability, which keeps friendly forces away from well-defended targets, is another advantage.

Unfortunately the advantages of PGMs have not been fully realized in combat. The Persian Gulf War illustrated their limitations as well as their capabilities. They were not always as accurate as desired, and their sheer expense restricted their numbers. The conflict also revealed that simple countermeasures decrease effectiveness. The evidence suggests that Iraq housed some of its most valuable nuclear assets deep underground. It also frustrated the allies by placing military assets near populous areas or sites of religious or cultural significance or dispersing them in the desert every few days. Nevertheless, the low cost, small size, and light weight characteristics of microtechnology make it the ideal enabler for PGM systems, and integrating sensors, computers, accelerators, and actuators allows the systems to be custom designed for specific munitions. MEMS can make the components both smaller and cheaper. A typical missile accelerometer and gyroscope cost \$1,000, but an equivalent microdevice costs \$20.

With micronavigation components, many dumb munitions—howitzer, mortar, and rocket-fired—could be retrofitted and transformed into PGM-like weapons. Unguided rounds with a circular error probable of 250 meters could instantly improve to 64 meters. Smart rounds reduce the number required to destroy a target by a factor of ten.

with micronavigation components, many dumb munitions could be transformed into PGM-like weapons

Launching Tomahawk during Desert Fox.



U.S. Navy (Todd Cichonowicz)

Conducting surveillance operations with hunter sensor suite.



U.S. Army (Marshall Woods)

In addition to minimizing cost MEMS present several cost-imposing strategies to an enemy. High volumes of PGMs incentivize costly countermeasures. An enemy may invest heavily in anti-air warfare batteries, jamming capabilities, or underground facilities—essentially trading offensive for defensive investments. Moreover, dispersing and hiding targets requires sizable manpower, reduces efficiency in operations, and lowers

morale. Cost-imposing strategies fostered by MEMS force an enemy to expend time, effort, and resources on defensive measures instead of offensive advancements that would in turn force the United States to develop countermeasures.

Sensor and fusing devices are an area in which MEMS could improve PGMs, for instance by eliminating unexploded ordnance that often causes friendly casualties and wastes resources. When a munition fails to detonate, a microaccelerometer could sense its impact with the earth and trigger a self-destruct mechanism. MEMS fusing/detonation devices offer greater reliability, which results in fewer duds.

Taking the Revolution to the Trenches

Planners emphasize PGMs, stealth aircraft, and other highly touted RMA platforms for use in

Marines during
Urban Warrior '99.



Fleet Image Command, Pacific (Eric Logsdon)

conventional war. But many RMA supporters neglect individual soldiers as beneficiaries of the revolution through information, communication, situational awareness, survivability, and lethality.

New technologies are especially critical to lesser contingencies which are more manpower-intensive and where the value of firepower is diminished. Soldiers in this environment need better communications and intelligence—or situational awareness. Effective command and control is also vital, especially because complex operations typically involve small detached units. Overwhelming force, which can compensate for command and control weakness, will be unavailable. Moreover, such operations are increasingly joint and multilateral, placing greater strains and greater import on command and control.

But these technical needs clash with competing requirements for speed, agility, stealth, and mobility. Individual soldiers carry everything themselves, constraining weight and size. Taking technology to the individual level also demands more devices, limiting spending per unit. In light of such requirements, MEMS are the natural enabling technology for equipping soldiers.

Outfitting soldiers in mechanized suits was once the stuff of science fiction; but in the early 1990s the Army embarked on the Land Warrior project, with a vision of transforming each soldier into a Terminator III. The product director for the modular weapons system (MWS) in the Office of the U.S. Army Product Manager for Small Arms depicted the link between project and lethality:

With the advent of Land Warrior, you are integrating the infantryman's capabilities into the digitized battlefield without adversely affecting his performance,

thereby multiplying his lethality through an ability to communicate what he sees and knows up to higher headquarters.⁴

The Land Warrior program realizes the idea of systems architecture, a system of systems. For instance the MWS component alone comprises subsystems such as close-combat optics, night-fighting sights, thermal weapon sights, laser rangefinder/compass/clinometer, camera modules, and combat identification equipment. The overall picture is an armored suit, special rifle, computerized helmet with a monocle display, and computers and electronic components wired throughout every part of the suit, with the ability to communicate remotely with other soldiers and headquarters.

But the program hit a snag. The suit weighs 80 pounds and proved too heavy for soldiers to maintain speed and agility in field tests. There were also problems with bulkiness and balance. Congress lost faith in the program and canceled funding.

The Land Warrior concept remains valid, but technical problems thwart its realization. In several areas MEMS research and development has already yielded results that could be speedily integrated into the Land Warrior or similar battle suit.

Communications. Using MEMS over the next few years, Raytheon is expected to produce a military radio receiver that weighs four ounces. It will work ten times longer than current models and require less maintenance. The receiver is part of a larger effort to shrink a four-channel radio, now weighing 10 pounds, to the size of a credit card.

Navigation. The MEMS inertial navigation system/global positioning system (INS/GPS) device that guides PGMs could also guide warriors. It could run on microwatts at a cost of \$50 per unit. It could aid in locating friendly assets, interrogate from afar, and transmit its coordinates in response, greatly enhancing command and control.

Information display. The monocle visual display in the Land Warrior helmet shows maps, data, position, manuals, and orders from headquarters. Microtechnology makes possible a high-resolution, low-power display screen (0.5 to 5 inches), meeting mobility requirements and fitting into the larger computer network.

Chemical/biological warfare defense. The miniaturization of analytical instruments is a core MEMS technology. Although the United States has some chemical agent alarms, they are too bulky for individual use in the field. Microanalytical instruments could be made small enough for each soldier to carry several or integrated in a protective mask or mounted on equipment. Such a sensor might cost \$25 and allow a five order of magnitude reduction in operating power.

Unmanned Aerial Vehicle (UAV). Lockheed Martin recently used MEMS to create a UAV that is only 6 inches long and weighs 3 ounces. Because of its light weight, soldiers could carry several disposable UAVs. One version of the MEMS

model could provide reconnaissance, using radio signals to transmit real-time information from its camera to a display. Another version might couple

CBW sensors to provide a stand-off chemical/biological warning system. Other versions of UAVs could jam enemy communications or designate targets for PGMs.

Identification Friend or Foe (IFF). Military aircraft are equipped with a transmitter that when interrogated emits an identifying code to differentiate between threats and friendly forces. In the

Persian Gulf no aircraft were downed by friendly fire. On the ground, however, 35 Americans died mainly because vehicles lacked IFF technology. Fortunately, small, low-power, lightweight IFFs are possible using MEMS technology. A passive, secure microdevice could be integrated into the uniform of each soldier and/or his equipment.

Implications for Competitive Strategy

The U.S. military can be uniquely enhanced by MEMS because of its lead in the revolution in military affairs. Over the next decade or so, only America will be able to realize the revolution in its entirety. Successful innovation, combining new technology with operational advances, is key to retaining this lead and resulting political influence.

Other nations may acquire pieces of the revolution. Australia, Austria, Belgium, Britain, People's Republic of China, Denmark, Finland, France, Germany, Italy, Japan, The Netherlands, Poland, Russia, Sweden, and Switzerland are also researching nanotechnology. There is reason to believe that other countries may harness technological advantages to close the military gap between themselves and the United States. Because nanotechnology is dual use, regulating its export may be impossible. The same advantages that attract America and its allies to MEMS attract potential enemies. Though this pattern has been true for any nation experiencing revolutionary or even evolutionary advances in technology, MEMS is unique. The combination of low costs with high numbers of advanced weapons lures potential enemies perhaps more than the Pentagon. Rogue states, insurgents, and terrorists face greater resource constraints. These state and/or nonstate actors may perceive microtechnologies as their only way to compete with wealthier actors.

MEMS transcend traditional limits to technological proliferation. The cost of sophisticated weapons has traditionally been a great deterrent to their procurement. But microdevices cost less to acquire and operate through secondary effects such as reduced energy consumption and greater survivability. Their small size also makes them easier to smuggle or buy under the table. They are almost impossible to track, especially because they are dual use by nature and rudimentary to many systems. Both characteristics make global nonproliferation measures unlikely. How can a regime regulate simple valves or cogs—or commercial systems such as miniature cell phones or INS/GPS devices? Moreover, verification would be unworkable.

Even if a supply-side regime were attempted, the range of suppliers minimizes chances for success. Anyone who can manufacture a microchip

small, low-power, lightweight IFFs are possible using MEMS technology



Analyzing readings from chemical/biological aerosol warning system.

U.S. Air Force (Wayne Clark)



55th Signal Company (Russell J. Good)

Entering coordinates,
Rapid Force Projection
Initiative.

can create MEMS. The knowledge required is in the public domain. Thus MEMS obviate the traditional barrier of locating cooperative suppliers.

Since nuclear warheads, ballistic missiles, and chemical weapons are relatively unattainable MEMS will become more desirable. They can enhance existing unsophisticated weapons and also make sophisticated weapons easier to acquire. They can be perceived as a great equalizer.

The security ramifications of this new wave of technology are seldom addressed. Although some prophets warn of the apocalyptic dangers of self-replicating tiny machines, no one comments on the more immediate and pressing threats of proliferation or how enemies may take advantage of microtechnologies to use the revolution in military affairs against us.

MEMS offer opportunities to capitalize on new technology. PGMs exemplify the benefit of

applying MEMS to existing RMA developments and how that application could lead to the full realization of their potential. The case of soldier-level warfare indicates how MEMS can extend advantages to areas of warfighting heretofore largely excepted from the revolution in military affairs.

It is unlikely that proliferation will completely disturb the balance in global military power. However, potential enemies could bypass our strengths and exploit weaknesses as well as raise the cost of intervention in regional conflicts. Technological advances, survivability, and redundancy by an enemy could deny a quick and painless victory, possibly deterring intervention in regional crises and thus eroding national leverage. The Nation would see its options limited as both human and economic costs of intervention increased.

The push for commercial applications as a way to reduce the research burden for military applications overlooks larger security ramifications and favors would-be enemies. Officials should review counterproliferation methods to reduce threats. Perhaps denying some key subtechnology could create a hurdle for MEMS proliferators. Packaging techniques, though not widely publicized yet and still in development, might offer such a solution.

The Armed Forces are poised to take advantage of the revolution in military affairs through microtechnology. Leaders must facilitate this process. The result will be broader capabilities that translate into greater political leverage and national security. But a plan to capitalize on a MEMS revolution must be two-pronged: the United States must utilize the technology and deny its use to any potential enemies.

JFQ

NOTES

¹ Barbara Starr, "Plotting Revolution at the Pentagon," *Jane's Defence Weekly*, vol. 23, no. 23 (June 10, 1995), p. 38.

² Max Nelson and Calvin Shipbaugh, *The Potential of Nanotechnology for Molecular Manufacturing* (Santa Monica: The RAND Corporation, 1995), p. 3.

³ National Research Council, *Microelectromechanical System: Advanced Materials and Fabrication Methods* (Washington: National Academy Press, 1997), p. 13.

⁴ Scott Gourley, "Lethal Combination," *Jane's Defence Weekly*, vol. 30, no. 14 (October 7, 1998), pp. 39–42.

Tactical communications
training in Italy.



31st Communications Squadron (James D. Green)

Transformation Trinity

Vision, Culture, Assessment

By BRUCE H. McCLINTOCK

While there is no single model for transformation, certain trends warrant attention. History offers important lessons on the elements of innovation. Peacetime transformation depends on three factors: a coherent and congruent vision, a culture to convert that vision into competing concepts of operation, and a candid assessment of those concepts.

The term *innovation* describes any change in equipment or application, from field radios to weapon systems to organizational restructuring. Some view it as a codeword for strategic change. Rather than redefining the term, it is useful to consider its origins. Innovation is only one aspect of change, a building block of transformation—a

dramatic change in how resources are employed. Innovation must precede transformation, though the latter occurs only rarely. In short, innovation is a necessary but not sufficient condition for transformation.

Such meanings suggest the scope of the problem. Most innovation is difficult enough but creating a critical mass is even harder. If “innovation is a crapshoot,” as Admiral William Owens has suggested, then there is little reason to prepare for future events. And transformation is worse. A crapshoot is inherently linear; smart players know the odds. On the other hand, transformation is a complex phenomenon involving interactive factors operating simultaneously and resulting in a blend of order and unpredictability.

Meaning and Method

Each organization handles change differently and innovations occur for many reasons even

Major Bruce H. McClintock, USAF, a former instructor pilot and flight examiner, is assigned to the Future Concepts Branch of the Space Warfare Center at Schriever Air Force Base.

within the same organization. Multiple factors act concurrently on institutional theories of change, breaking models of transformation into manageable pieces. For instance, some observers separate American and British innovation into peacetime, wartime, and technological, while others focus on innovation between the wars.¹ Such categories bind the application of models. This article refines paradigms of transformation from numerous sources and develops a new, limited framework. The model offered is restricted to American peace-

study, "Assumption-based planning is not a panacea. . . . [It] will only be as good as the insight and care of the people doing that planning."³

Judgment and Vision

Although insight and intuition are clearly important, there is no simple way to acquire them. Clausewitz refers to this concept as genius. While the terminology has changed there is consensus on how to build intuition to adapt to uncertainty. Strategists from Clausewitz to Fuller agree that to gain intuition, leaders must understand economic, technological, and political factors that influence change. Understanding the international security environment is not a result of cosmic inspiration but of carefully educating leaders about current and potential shifts in the world order. The process of discerning these shifts is not simple, but the added insight is necessary to adapt to uncertainty.

The implementing elements are vision, culture, and assessment. Civilian and military leaders must recognize a changing environment and encourage innovation through coherent visions of the future. The military also must catalyze and nurture the modifications to develop competing theories of victory. And as culture changes, the emerging organization must create assessments to develop the tools to fulfill the original vision. With varying levels of emphasis, this trinity is present in all successful peacetime transformation. Although presented in an order of occurrence, it is important to remember that there is continuous interaction among elements so they defy strictly linear application. The constantly changing facets of transformation repeatedly influence each other. In addition, the elements can act on the strategic, operational, and tactical levels. All levels, however, depend on leaders who are able to accommodate uncertainty.

With strategic intuition leaders can initiate transformation through an innovative vision—the concept of the future identity and mission of organizations. A look at organizations facing change indicates that "the single most determining factor for success in their adaptation is whether or not they have and can exploit an appropriate vision of themselves for decisionmaking."⁴ In the realm of transformation, successful innovation depends on civilian and military leaders alike.

Some suggest that leaders must provide service visions because the military is resistant to change. Historians cite the British interwar decision to favor pursuit aircraft over bombers as an example of civilians opposing military parochialism. Although elegant in its simplicity, this example does not explain long-term innovation. Some claim that civilians play only minor roles

in the realm of transformation, successful innovation depends on civilian and military leaders alike

time transformation. With a focus on transformation, longer periods of peace offer greater opportunities for gradual change. By narrowing the field and blending the elements that surface, a pattern for successful conversion emerges.

Innovation isn't achieved on command. Theoreticians must interpret experience as a guide to future action. Although more than descriptive, such ideas are not prescriptive. At best they are counterpredictive, helping identify situations when transformation is least likely. Any attempt to bolster innovation must acknowledge the impact of uncertainty, the inability to predict outcomes precisely because of the influence of



Conceptual design of amphibious assault ship.

chance or limits on available information. Uncertainty can influence all levels of events from the strategic to the tactical. The chaotic nature of transformation defies reductionist models that offer linear solutions to complex problems.

Attempts have been made to systematize planning to reduce the influence of contingency. After World War I, J.F.C. Fuller sought a scientific framework to understand history and plan for wars.² One study offered a way of accounting for uncertainty by hypothesizing on future strategic environments. The common approach is systematized hedging. Deliberate frameworks are helpful but are not the answer. According to another



Landing craft gliding ashore, Foal Eagle '00.

1st Combat Camera Squadron (Daniel E. Richard)

in advancing innovation and can even do much to stifle it. Legislatures have the power of the purse; thus the military may follow the money rather than the mission at the cost of civilian support. Others cite ineffectual interwar progress on armored warfare by the British and French, who had little need for offensive forces.⁵ In other words, a fine line can be drawn between vision and hallucination—the budget line.

Though it may seem that commanders must devise visions that follow national security policy, sometimes the reality is that the military has supported civilian policy while civilians have sometimes followed an emerging military vision. An example is the shift to strategic bombardment before World War II as a result of evolving operational concepts. While it eventually took civilian leadership to bless the vision, the military actually shaped the civilian vision. In other cases, radical environmental changes outstripped policy. Militaries that lack vision are caught short while revolutionaries accommodate dramatic shifts in policy.

Organizational change reveals that civilian and military leaders must articulate their vision to catalyze transformation. But there are many reasons why a proffered vision may be inadequate. Senior officers often cling to outmoded ideas that have little chance of success because of cultural or technical constraints. Just as often, civilians try to

force dramatic change on large organizations without allowing them to take effect. In general, it is less important to argue over whether policy shapes strategy—or vice versa—than to recognize that miscalculations in either can lead to failure. The one conclusive factor is that civilian and military visions must be harmonious.

This does not mean that visions must immediately be congruent. The views of one group can shape those of another over time, but the dominant vision must be coherent and compelling. The military, equipped with a consistent, clearly articulated vision, can shape civilian views. In particular, the military vision must stand the test of time because the civilian vision is more likely to fluctuate with changing administrations.

The evolution of amphibious assault demonstrates the significance of congruent, coherent visions. In 1920, the Commandant of the Marine Corps recognized the increasing significance of this mission. His vision did not contradict existing policies. It was generally congruent with the views of other services. In addition, civilian awareness of the Pacific as an important part of the security environment stimulated development of war plans that involved ground and naval forces. Just as importantly, the Marine Corps remained committed to the vision for two decades despite shifting support. This example captures the common themes of most successful transformations.

When the civilian and military leadership share congruent, coherent visions, transformation is more likely. A coherent vision is one that is clearly stated and relatively constant over the longer periods needed for transformation. A congruent vision, on the other hand, is generally accepted by the leadership. A truly congruent vision also shares broad acceptance among the services.

Congruence is difficult to achieve, which helps to explain the infrequency of transformation. Leaders can encourage success by acknowledging the uncertainty present in long-term innovation and recognizing the importance of a consistent vision. Accurate political and strategic assessments that stimulate rather than inhibit innovation are prerequisites to success.

Culture Wars

It takes credible military leadership to foster organizational change if a new vision calls for transformation, but organizational change largely depends on changes to the culture of the broader group. Culture is the system of underlying shared beliefs about the critical tasks and relationships within an organization. Even with multiple subcultures in an organization, a group that shares

transformation depends on openness to competing theories rather than a party line

the overall purpose of the organization has what many theorists call a sense of mission.

Culture affects group performance in three ways. Organizations in which cultures struggle for supremacy experience serious conflict. Moreover, organizations resist taking on new tasks that are incompatible with the dominant culture. Finally, changing an organizational culture takes time.

Because the military is comprised of various constituencies, there is an ideological struggle to define theories of victory. Such concepts help determine the hierarchy in organizations. Those who accomplish the tasks most critical to the organization usually lead it. Civilians are less capable of affecting peacetime (versus wartime) transformation because the process often outlasts civilian terms of influence. It takes time for the military to turn an abstract vision based on the emerging environment into concrete tasks and organizations.

Amphibious assault is an example of successful change. It was left to subordinates to fulfill the vision and, because of the size of the Marine Corps, the task fell to one officer who converted the need for a new capability into definable terms. He crafted Operations Plan 712, which served as the basis for amphibious assault planning. This

theory of victory provided a new identity for the search for a strategic mission.

Organizational culture requires a long-term commitment for success. Many cite promotion opportunities as a vehicle because rank equals power. Power is transferred based on career paths such as carrier aviation, amphibious warfare, and tactical aviation. Although dominant cultures resist change, at least some members must accept the need for change establishing new career paths. A dominant culture can change from the top down if the vision is consistently and clearly stated and enough leaders recognize change in the strategic environment.

Exploration and Evaluation

With a vision of military roles based on the future, credible leaders can nurture new groups to develop appropriate theories of victory. Still transformation depends on openness to competing theories rather than a party line. Assessment is necessary for two reasons. First, uncertainty about future threats requires wargames and simulations that explore the shape of possible wars. Second, the costs and benefits of new tools and tactics can only be explored through critical evaluations that draw lessons. Germany applied this approach in developing *Blitzkrieg* as the Navy introduced carrier aviation in the interwar years. Both were peacetime transformations that brought wartime success. Exercises and evaluations compensate for uncertainty and allow incremental improvement. Appraisals validate vision and uncover faults that refine and strengthen the original concept.

Assessment involves exploration and examination. Exploration is unrestricted thinking that encourages new theories of victory and ideas to support them. It harnesses ideas about theories of victory and applies them to postulated environments. Its intent is creating a practical understanding of the role of new theory in military and policy operations. This differs from conceptual thinking done as culture matures. The symbiotic relationship between culture and assessment is essential. Without a culture open to new theories, the original vision may be stifled. This kind of outlook gave rise to the use of terms like *battleship sailor* to describe myopic thinking.

Examination uses various tools to determine which theories work best. It also scrutinizes the potential of new theories prior to implementation. Unlike the exploration phase where ideas are widely accepted, examination allows for failure. It can include campaign analysis, trade studies, systems analysis, prototypes, and exercises.



Air Force News (Lance Cheung)

Flying in glass cockpit on C-141C.

The lessons that emerge must be openly considered and applied to be useful. The decision of Air Corps Tactical School and Royal Air Force theorists to discount apparent shortcomings in their unescorted bombing theory led to severe combat losses, demonstrating the danger of incomplete or ignored examination.

Bomber theory prior to World War II stressed one critical element of assessment—linkage. A connection must exist between the vision of an expected environment and current strategy and operational realities. Strategy can help define the context for evaluating new warfighting concepts. For example, operational realities limit the range of theoretical conflicts. This factor is crucial in honest assessment because exercise environments can be tailored to circumstances independent of reality. Intentionally or not, simulation design that ignores reality can incorrectly prove untested or operationally unrealistic theories. Between 1921 and 1940 the Armed Forces conducted many fleet landing exercises to demonstrate concepts of amphibious landing. The Navy and Marine Corps experimented with every approach their equipment allowed. The open nature of the debate helped refine concepts captured decades earlier. Exercise evaluation reinforced the idea that amphibious assault was possible with certain tactics but would not be easy. Fortright assessment led to a new approach that proved vital in World War II.

Lastly, assessment need not be solely technology based. Transformation modelling can intentionally discount the role of revolutionary systems.

Not every transformation involves new equipment. Amphibious assault did not depend on radically new technology. In addition, technology driven transformation usually involves a combination of technologies unanticipated until highlighted by assessment. Finally, technology changes the techniques of war but not its nature. In the words of one analyst, "It is not merely the tools of warfare but the organizations that wield them that make for revolutionary change in war."⁶ While technological changes have catalyzed some innovations, they are not necessary or sufficient for transformation. Since few major transformations depend solely on it, technology is considered part of the strategic environment or a factor scrutinized by the assessment portion of the model.

The above model highlights characteristics of military transformation. Change is most likely to occur when leaders articulate coherent visions of future warfare and the military culture allows advocates of that vision to develop competing theories of victory—theories that are openly assessed. The strategic environment constantly influences these continuously interacting factors.

The paradigm described here provides a general framework for studying peacetime transformation. By acknowledging the uncertainty inherent in long-range planning, it offers an approach where understanding the emerging strategic environment develops the critical insight (or genius) needed to form visions for change. **JFQ**

NOTES

¹ See Stephen Peter Rosen, *Winning the Next War: Innovation and the Modern Military* (Ithaca, N.Y.: Cornell University Press, 1991) and Williamson Murray and Allan R. Millett, eds., *Military Innovation in the Interwar Period* (Cambridge: Cambridge University Press, 1996), pp. 1–5.

² J.F.C. Fuller, *The Foundations of the Science of War* (London: Hutchinson and Co., 1926), pp. 21–23, 30–46, 324–27.

³ James A. Dewar et al., *Assumption-Based Planning: A Planning Tool for Very Uncertain Times*, RAND Report MR-114-A (Santa Monica: The Rand Corporation, 1993), p. 59.

⁴ John K. Setear et al., *The Army in a Changing World: The Role of Organizational Vision*, RAND Report R-3882-A (Santa Monica: The Rand Corporation, 1990), p. vi.

⁵ Eliot A. Cohen, "A Revolution in Warfare," *Foreign Affairs*, vol. 75, no. 2 (March/April 1996), pp. 51–52.

⁶ *Ibid.*, p. 46.

Zero at Munda airfield
on New Georgia.



Airpower in the Pacific

A Case Study in Innovation

By THOMAS E. GRIFFITH, JR.

Being ready for future wars depends on understanding two aspects of innovation. One is common and often considered: the impact of changes in doctrine, organization, and technology on innovation during peacetime. Equally important, however, is an awareness of the adaptations commanders must make once combat begins and equipment or tactics do not work as planned. As Sir Michael

Howard observed, "I am tempted to say, indeed to declare dogmatically, that whatever doctrine the armed forces are working on now, they have got it wrong." The objective, he added, is not being too badly wrong and having the flexibility to adapt quickly as the shooting starts.¹

Inculcating flexibility is difficult. Contrary to the belief that innovation is easier to advance during actual operations, the inherent uncertainty of war makes it hard to discover what works and why. Moreover, commanders and combatants may not understand affinities among tactics, training, and equipment. Even if commanders identify areas of failure, change may be

Colonel Thomas E. Griffith, Jr., USAF, is commander of the 39th Support Group and author of *MacArthur's Airman: General George C. Kenney and the War in the Southwest Pacific*.

B-17 on sortie over
Solomons.



Naval Historical Center

difficult. Institutional resistance doesn't vanish in war, and with lives at stake it can grow.

Greater technological sophistication makes it more important to grasp the challenges of adaptation and how to meet them. Success begins by knowing that military organizations have many moving parts. As one analyst remarked, "We are dealing with a system when a set of units or elements are interconnected so that changes in some elements or their relations produce changes in other parts. . . . In a system the chains of consequences extend over time and many areas: the effects of actions are always multiple."² Although this is easy to visualize in the case of weapons platforms, even soldiers can be regarded as systems requiring training, equipment, and synchronization with other individuals, units, and systems.

Conceiving of forces as systems underscores subtle connections that account for successful innovation. By and large, the more connections are appreciated, the greater the chance of success. The case of General George Kenney during World War II offers insight into how commanders can deal with innovation and how a system must be changed to accommodate it.

Defining the Problem

As the newly named commander of the Allied Air Forces in the Southwest Pacific, Kenney arrived in Australia in late July 1942, only six months after the Japanese attack on Pearl Harbor. In the interim Japan had conquered large parts of the Western Pacific. Control of this region rested on the ability of the Japanese to employ land, sea, and air forces from relatively small areas to attack Allied positions and lines of communication. Some of these areas were true islands, like Truk. The jungle terrain and inaccessible interiors of

large land masses such as New Guinea fixed forces into relatively isolated garrisons, effectively turning them into islands as well.

Although victory in this theater demanded a mastery of joint operations, airpower was ideal for setting the stage for success because it could gain control of the skies, then cut off supplies and reinforcements to isolated enemy units. Kenney planned to weaken outposts, then attack men and equipment directly, and finally cover and assist Allied naval and ground units. After occupying new territory, the Allies could build airfields to launch the next advance.

All these tasks required changes from established procedures, but sinking enemy shipping proved particularly difficult. Surprisingly, the predicament airmen faced did not result from a lack of peacetime planning. In fact, coastal defense had been the most critical mission for the Army Air Corps before World War II. Airmen concluded that the best way to prevent an invasion was to sink ships using horizontal bombing at high altitude before an enemy could land. They reasoned that the right equipment would afford great accuracy and avoid antiaircraft fire from the sea.

Wartime experience quickly revealed problems in pre-war thinking. One failing involved the number of aircraft needed to sink ships. Planners based peacetime predictions on formations of at least nine bombers, which they thought was the minimum requirement to hit a moving ship. The small number of aircraft sent to the theater, combined with a lack of spare parts and other supplies, meant Kenney could rarely assemble the needed formation.

Even if Kenney had been able to organize such a formation, the prevailing assumption was that aircraft would aim at the target independently but release their bombs nearly simultaneously. These techniques proved impractical given the weather: tropical thunderstorms and heavy clouds at 1,000 to 2,000 feet often made it impossible for nine aircraft to fly in formation, let alone locate and simultaneously bomb a moving target.

More importantly, the established techniques did not take the friction of war into account. Airmen used the accuracy attained against small stationary targets in training to make predictions on hitting evasive moving targets in combat. Because capital ships were five to six times larger than the normal 100-foot bombing circle, it was assumed that hitting large moving targets was not much harder than hitting fixed targets. The realities of combat demolished that premise.

Enemy actions also decreased accuracy. As one bombardier said, "When I'm bending over that bombsight trying to get lined up on one of those Jap ships and the bullets start coming through the windows in front of me, they take my mind off my work."³ Moreover, bombsights did not work, bombs did not release properly, and various human errors occurred. The difficulties did not reduce accuracy in a linear or additive fashion but actually created problems at an exponential rate out of proportion to inputs.

The first change, producing an innovation to stop enemy movement by sea, was the shift to night bombing. Night was less desirable than day because of the difficulty of locating and hitting targets, but such setbacks were balanced by other factors. "At night," according to Kenney, "you don't have Zeros shooting through the bombardier's window and taking his mind off his work; a moving vessel does not see the bombs leave the plane . . . nor have time to dodge."⁴

The inaccuracy of night bombing, however, meant that it wasn't a viable long-run solution, and Kenney turned to low altitude attacks for daytime missions, proposing that such tactics would combine greater surprise with less interference from fighters. Thus he decided on skip bombing, so-called because pilots would fly low and release bombs from 350 to 200 feet from their targets, skipping them over the water like rocks until they hit vessels or exploded beneath them. Although Kenney sometimes took credit for this tactic, low altitude bombing had been tried often. Like other successful innovators, he would champion alternative methods whatever their source.

The Payoff

Success was not long in coming. In March 1943, some 6,000 Japanese soldiers from the 51st Division prepared to land near Lae in New Guinea, a key outpost in the defensive perimeter. Their leaders had high hopes for the convoy, which brought soldiers from Rabaul in New Britain. A defensive stand in New Guinea would not only stall General Douglas MacArthur in making his drive through the Southwest Pacific, but a drawn-out campaign with heavy casualties might lead the United States to consider a negotiated settlement.

Despite the operational and strategic importance of intercepting the convoy, MacArthur had limited options. His troops were few and worn

out from fighting in eastern New Guinea. What is more, he lacked naval forces to intercept the convoy. The only way to prevent the Japanese from consolidating their position in New Guinea was hitting them before they could land.

Allied intelligence and enemy preparations made stopping the convoy immeasurably easier. A month earlier, a Japanese float plane was spotted 25 miles east of New Britain while new aircraft were spotted near Lae. Intelligence officers saw these events as indicators of an imminent attempt to reinforce by sea. Reconnaissance flights over Rabaul confirmed that estimate. Photos taken in late February revealed a record concentration of merchant ships (299,000 tons) in Rabaul Harbor. Intercepted messages provided information on when the convoy would depart, but not its route.

With intelligence on convoy routes gathered during the previous four months, lessons from Allied attacks on shipping, knowledge of enemy options, and weather forecasts, Kenney's deputy, Major General Ennis Whitehead, predicted that the convoy would sail along the northern coast of New Britain, beyond range of attack for as long as possible, and then race to its destination.

Despite the information, finding and destroying the convoy required three days of intense effort. Allied aircraft first spotted the eight destroyers and eight merchant vessels on the afternoon of March 1, but the ships hid under low cloud cover for two days. The Allies, perhaps assisted by intercepted transmissions, tracked the convoy and made small but repeated attacks.

The strikes were only the preliminary bouts before the main event. On March 3 the attack force rendezvoused over Cape Ward Hunt, a reference point on the north shore of New Guinea, and received a radio message with the convoy position from a Royal Australian Air Force (RAAF) reconnaissance plane that had harassed the ships overnight. At about the same time, other aircraft bombed the airfield at Lae, reducing a possibility of fighter interference. The concentrated attacks began shortly before 1000 hours. B-17s were in the lead, bombing from 8,000 feet and escorted by P-38s. This group was followed by B-25s flying at 5,000 feet, and immediately behind them came low altitude attackers—13 RAAF Beaufighters, 12 B-25s, and 12 A-20s.

As the low altitude crews spotted the convoy, they peeled off to attack individually. During the ensuing melee, pilots dodged antiaircraft fire and twisted furiously to avoid hitting one another. Enemy ships violently maneuvered against the aircraft as their crews frantically battled explosions. One participant remembered, "They would come in on you at low altitude, and they'd skip bombs across the water like you'd throw a

the inaccuracy of night bombing meant that it wasn't a viable long-run solution



Seabees constructing
airfield, Bougainville.

New Zealand P-40
taking off from
Toronika.



U.S. Army

stone . . . the transports were enveloped in flames. Their masts tumbled down, their bridges flew to pieces, the ammunition they were carrying was hit, and whole ships blew up."⁵

The contest was over in moments. Kenney's airmen left every transport on fire or sinking and three destroyers sinking or badly damaged. An attack that afternoon disposed of the remaining stranded vessels. In all, every transport went to the bottom along with four destroyers.

While Japanese planners predicted heavy losses, destruction of the convoy staggered them.

The Lae transport operation was their last attempt to send significant reinforcements or supplies to eastern New Guinea, forcing the abandonment of forward outposts and any possibility of defense. The enemy commander of Eighth Fleet at Rabaul believed that the engagement opened the door for an American advance on the Philippines and was the final undoing of South Pacific operations.

Several factors contributed to the victory in the Bismarck Sea. Intelligence officers deserve credit for revealing enemy moves, but this information would have had little value without changes in bombing methods. Success was the product of innovative decisions made many months before and weeks of training, all capped off by thorough planning and brave execution.

Implementing Innovation

Understanding the Battle of the Bismarck Sea is vital to appreciating how commanders adapt in combat and the complexity of changing a system. Kenney made some of the innovations himself, but not all. His role was inspiring people by supporting their ideas. "I encourage personnel who have any ideas to go right ahead with them," he remarked. "It makes no difference what the man's

Kenney and MacArthur in Australia, 1944.



U.S. Air Force History Office

Kenney acknowledged good ideas regardless of their source

rank or his previous experience. If he has an idea that sounds feasible he is told to go ahead and he is given every assistance.”⁶ Kenney acknowledged

good ideas regardless of their source, praising Australia for innovative efforts. He singled out individuals, on one occasion

decorating a sergeant for improvising. Mechanics learned to use anything on hand for repairs, including sixpence coins in engine magnetos and Kotex for air filters. “Any time I can’t think of something screwy enough,” the general observed, “I have a flock of people out here to help me.”⁷ His command was not alone when it came to enterprising individuals adapted to local conditions, but without his support many ideas would never have seen the light of day. In short, he created the organizational environment that not only encouraged but demanded innovation.

Not every innovation worked, forcing Kenney at times to defend his emphasis on change. When larger ammunition boxes were proposed to increase the firing burst of machine guns, they

burned out the gun barrels. Kenney accepted such failures as part of doing business.

Since modifications usually meant removing aircraft from flying status, Kenney’s deputy in charge of flying operations sometimes complained that the changes had not been adequately studied or took too long. At one point he protested, “I am convinced that there is too much experimental work being done and not enough thought given to production.” Later he told his boss, “We do not want . . . an installation which causes us a lot of grief later on.”⁸ Kenney could have agreed, but he knew that innovation would not succeed unless leaders defended the innovation process. “We have given ourselves lots of headaches, but we have also gotten some fine results.”⁹

Kenney furthered the innovative atmosphere by ruthlessly eliminating officers who did not conform to his notion of taking risk. “The cry that the Army is full of red tape is a cry against the people in the Army who just don’t seem to get results, who can’t make decisions,” he commented.

"The mediocre man does not get ships sunk or planes shot down and unfortunately neither does he get air crews and ground crews trained on time nor supplies forwarded to the proper place on time. His depot does not produce results. Even as a staff man he bottlenecks studies and decisions that are vital to the operating forces."¹⁰

It is not possible to simply change one aspect or part of a system; the entire system must be revised. Kenney's work highlighted this dilemma. For example, the vision of straight and level bombing at high altitude prior to World War II introduced a system that had to be modified for new tactics to succeed. Low altitude attacks required forward-firing guns to destroy ground targets and counter gunfire from ground defenses. Because such armament had not been needed for standard bombing it was not installed at the factory. Adding forward firepower required innovation in the field; four fifty-caliber guns placed in B-25s turned them into so-called commerce destroyers.

Low altitude bombing also meant modifying fuzes. Firing pins developed for release from higher altitudes bent when bombs hit water at low altitude, disabling them before they hit the target. Kenney tapped armament experts in the command who reduced the length of the housing so the fuzes would not bend or break.

Aiming bombs with new methods demanded a significant change. Developing an aiming device for level, horizontal bombing resulted in the Norden bombsight, virtually useless for skip bombing. One commander worked out a technique by dropping bombs on a sand bar and a wrecked ship near Port Moresby to determine the optimum altitude and airspeed for skipping bombs.

Though this effort defined basic parameters for bombing runs, pilots had to estimate range from the target without a mechanical aiming reference like the Norden bombsight, rendering their training largely irrelevant. Pilots did not have good results at low altitude until they learned new techniques. In the weeks prior to the Battle of the Bismarck Sea, air crews perfected their skills on a sunken boat. By the time of the battle many pilots had dropped 30 to 40 bombs on the wrecked vessel from low altitude. While the training resulted in the loss of one aircraft and damage to two others, the realistic target gave pilots critical experience in the aiming parameters that, in addition to other changes, paid dividends in the Bismarck Sea.

Like other institutions, the Armed Forces face the enduring challenge of recognizing when established methods need to be modified because of new conditions. Making changes in wartime demands rigorous testing and analysis

of procedures and equipment before combat. But even strenuous efforts in the laboratory or on the training range do not guarantee that forecasts will match conditions. Despite the belief that shortcomings can easily be identified in the midst of operations, the friction and uncertainty of war combine with enemy deception to make innovation difficult to accomplish.

The dominant lesson of Kenney's experience is that innovation rarely succeeds on its own, but rather flourishes when the nature of the system is understood. Being able to grasp the linkages among doctrine, organization, and technology is essential in this process. **JFQ**

NOTES

¹ Michael Howard, "Military Science in the Age of Peace," *Journal of the Royal United Services Institute for Defence Studies*, vol. 119 (March 1974), p. 7.

² Robert Jervis, "Complexity and the Analysis of Political and Social Life," *Political Science Quarterly*, vol. 112, no. 4 (Winter 1997-98), p. 570.

³ George C. Kenney, *General Kenney Reports* (Washington: Office of Air Force History, 1987), p. 66.

⁴ Letter, Kenney to Fairchild, December 8, 1942, George C. Kenney Papers, Center for Air Force History, Bolling Air Force Base, Washington.

⁵ Haruko Taya Cook and Theodore F. Cook, *Japan at War: An Oral History* (New York: The New Press, 1992), p. 301.

⁶ George C. Kenney, "Air Power in the Southwest Pacific," *Air Force*, vol. 27, no. 6 (June 1944), p. 59.

⁷ Letter, Kenney to Fairchild, December 8, 1942, George C. Kenney Papers.

⁸ Letter, Whitehead to Kenney, May 19, 1943, Ennis C. Whitehead Papers, Air Force Historical Research Agency, Maxwell Air Force Base, Ala.

⁹ Kenney, "Air Power," pp. 59-60.

¹⁰ Letter, Kenney to General Henry H. Arnold, May 1, 1943, George C. Kenney Papers.

10th Mountain Division,
Fort Drum.



U.S. Army (Barry Benner)



26th Marine Expeditionary Unit, Croatia.

U.S. Marines (Rick T. O'Conner)

Rethinking Army-Marine Corps Roles

By BRIAN J. DUNN

The capabilities needed for land forces have grown. Only ten Army and three Marine Corps divisions span the globe to deal with various small contingencies while they prepare to fight major theater wars (MTWs). But how should these overstretched forces be organized to meet competing requirements in the future? The Army, with a mandate to win conventional wars, must innovate within a narrow sphere to accomplish its core mission despite the demands of more varied threats and need for incredible speed to reach distant theaters. If it tries to dominate the conflict spectrum by converting heavy mechanized units into light air-transportable mechanized forces, it risks limiting its dominance at the high end of the conflict spectrum. The Marine Corps is already light and has more flexibility to adapt to new strategic realities. It must abandon amphibious warfare as a core capability and embrace an expeditionary role based on urban warfare and air

mobility to complement the role of the Army to fight heavy forces. Acting jointly, an Air Force-enabled Army-Marine team will dominate the conflict spectrum and win both the first battle and the war.

Tradition and the New Environment

A digitized and faster but still war-focused Army and a radically reoriented Marine Corps support the notion that “the Marine Corps wins battles, the Army wins wars,” as characterized by the Commandant of the Marine Corps. This idea is rooted in historic differences between an Army raised from the people in wartime and a standing Marine Corps available for small landings by the Navy in peacetime. The relative size of the services before, during, and after wars demonstrates this distinction. The wartime Army expanded greatly while the Marines remained essentially unchanged except for World War II. Even the surge in the Marine forces in that conflict was dwarfed by expansion of the Army. The Cold War changed the strategic environment and required that the Army be prepared for high intensity conflict on short notice and have light units as deployable as the Marine Corps. Grenada, Panama,

Brian J. Dunn is a research analyst for the legislature of the State of Michigan and has served in the Michigan Army National Guard.



Disembarking from
roll-on/roll-off ship,
Foul Eagle '98.

U.S. Army (SPC Christina Ann Horne)



Unloading vehicle at
Pohang Harbor, Korea.

1st Combat Camera Squadron (Steve Faulisi)

in Power Projection

and other operations found the Army deployed for the first battle. Despite the fact that the Army has been identified with major wars, the Marine Corps also has always fought in American wars. Even with a capable standing Army, the Marines

Army and Marine Corps responsibilities should be divided based on capabilities, traditions, and the new strategic environment

organized in division or greater strength participated. The Army-war link reemerged after the Cold War. As Army divisions were deactivated, Marine forces were not. Still the Army retained its capabilities despite cuts.

Army and Marine Corps responsibilities should be divided based on capabilities, traditions, and the new strategic environment. Air-drops can get many Army paratroopers and Rangers on the ground quickly, but the where-withal to sustain them in heavy combat cannot be delivered as easily. Marine Expeditionary Units

(MEUs) have greater firepower, but only two are routinely forward deployed. The ability to place initial brigades on the ground on short notice is an impressive feat, but it does not guarantee that the troops can win once they arrive. A few light infantry brigades and a handful of armored vehicles can't win much of a battle and would be crushed in a war.

Prepositioning equipment is one way to speed powerful forces to a theater. The Army has brigade sets afloat in the Pacific and Indian Oceans and on land in the Persian Gulf, Europe, and Korean peninsula. The Marines have prepositioning ships anchored at Guam, Saipan, and Diego Garcia. Another squadron patrols the Mediterranean. Each package can support ground and air components for 30 days. Marine squadrons can support battles in the littorals for lower intensity conflicts and should be able to hold a bridgehead in the face of tougher opposition for a short time, assuming that Army heavy troops follow swiftly.

Rapid reinforcement is critical. The Army ambitiously plans to field a brigade anywhere in four days, a division in ten, and five divisions in thirty. This assumes uninterrupted use of ports

Extraction exercise
in Balkans.



U.S. Army (Joanna G. Sanford)

AH-1 during
Slunj '00, Croatia.



U.S. Marines (Brook R. Kelsey)

and airfields, which is questionable given anti-access technologies such as mines and anti-air and anti-ship missiles. If being denied access in areas where MTWs are likely to occur is problematic, not having forcible entry capabilities for unanticipated wars could be catastrophic. Both seizing and securing lodgment for follow-on forces is an essential capability.

To take a lodgment area and make it safe for reinforcements while meeting the aggressive Army timetable, the enabling forces must be even faster. CONUS-based Army paratroopers can be dropped anywhere but can't keep a door open long against a well equipped enemy. A Marine expeditionary unit, with its own tanks and light armored vehicles (LAVs), offers additional combat power, but not much; and there would be sustainment issues. On the other hand, a combination of Army paratroopers and marines relying on

Air Force airlift and fires to complement prepositioned equipment could meet this compressed timeline with sufficient troops.

Creating a New Paradigm

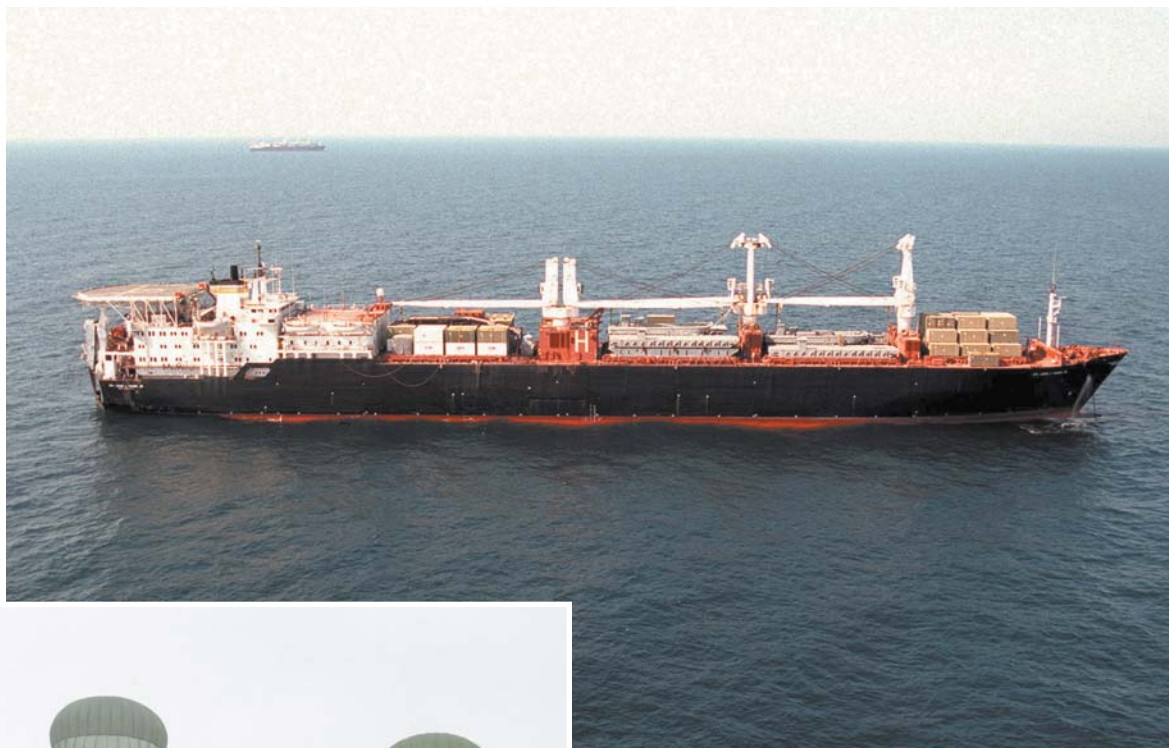
Although the Marines have a tradition of amphibious combat, expeditionary warfare is their true mission. The current preeminence in amphibious warfare is based on circumstances that arose in the Pacific during World War II. Few military operations conducted today call for large-scale opposed landings. The Marine Corps must adapt and become flexible as an expeditionary force by concentrating on small-scale violent and nonviolent contingencies with MEUs and winning the first battle to enable the Army to enter a theater to take the lead in winning the war.

An example of finding the right capability for expeditionary warfare was the Urban Warrior exercise series. Expertise in urban areas will be useful in many contingencies, including winning the first battle of a conflict, and supporting Army warfighting while maximizing the Marine role. Yet it is only one of the needed competencies. Although many assume urban warfare is the future, if everyone is focused on street fighting the capability to seize ground with heavy forces will erode. The Army must still be able to beat organized conventional enemies.

The Persian Gulf War was an undervalued demonstration of Army and Marine Corps roles for the future. Although the Marines fought in large formations, it is untrue that they could not be distinguished from the Army. The war-battle distinction was foreshadowed despite the hasty Iraqi capitulation that prevented a clear display of appropriate ground fighting responsibilities. The Army smashed the Republican Guard to win the war as the Marines struck defenses in a supporting role and were positioned to capture Kuwait City.

The war demonstrated the tremendous power of Army heavy forces. If we expect to repeat this 100-hour victory, the Army should not lighten too much while hurrying to reach a battlefield. Heavy armor has limits, however, and lighter forces remain critical. In addition to Kuwait City, opportunities for light forces in urban areas could have developed from Basra to Baghdad if the coalition had pursued grander objectives. Marines trained in urban warfare would have made ideal spearheads for such assaults. Another useful lesson was that even though the Marine amphibious ability was not used because of anticipated losses, the threat of invasion tied down substantial Iraqi forces. While amphibious warfare should lose its central role for the Marine Corps, it should be retained as one item in the expeditionary tool kit.

Maritime prepositioning ship in Persian Gulf.



Fleet Combat Camera Group, Pacific (Gloria T. Barry)



31st Communications Squadron (James D. Green)

Airborne training near Aviano air base.

Winning the first battle requires a faster response than sealift can deliver. LAV-equipped units may be the ideal reinforcement, balancing under-armor capabilities with deployability. Airlift assets can move such units and must be a major part of the Marine shift to expeditionary battle.

Prepositioning and reliance on the Air Force can increase strategic mobility for the Marines just as they have for the Army, but prepositioning must be modified for the new mission. Placing more prepositioned stocks on land is not advisable. Army land-based prepositioning has serious drawbacks. These sites represent high priority fixed targets for any enemy contemplating war. In addition, although they can be configured to cope with the specific local threat, the United States can't

afford to place sets everywhere. Equipment sets afloat also require good ports near airfields to link troops and weapons, limitations that could prove to be problems against a robust anti-access strategy. On balance, afloat prepositioning is preferred for the Marines; but the Army thinks its afloat stocks are superior because they can sail anywhere. But even afloat sets suffer from maintenance problems and a lack of adequate anchorages.

One answer is steaming prepositioning ships. Taking the concept one step further, sailing with an amphibious ready group (ARG) will protect prepositioning squadrons. As ARGs rotate to homeports, prepositioning ships could unload weapons and vehicles for maintenance before sailing again. Such squadrons travelling with ARGs will allow the Marines to reinforce landings rapidly. Two battalions plus brigade assets either in the United States or on Okinawa could be combined with LAV variants and heavy equipment to support an embarked expeditionary unit. One battalion and brigade assets could be on immediate deployment notice while a reserve battalion would have longer to prepare for movement.

Expeditionary Battle Force

In a straightforward application of the battle force concept, an MEU battalion landing team would debark at a port and occupy a nearby airfield. The squadron would rapidly unload while the Air Force airlifted personnel. If the team must

Target detection at
Camp Bonesteel,
Kosovo.



55th Signal Company (Daniel Ernst)

conduct an opposed landing, MEU combat aviation assets and accompanying ships, including naval aircraft, would support Marine units. Meanwhile, the squadron would go to a friendly port to unload near an airfield where the Marines would arrive.

The amphibious group would then load the troops as a second assault wave to reinforce the battalion landing team. If the crisis developed slowly, the squadron would land equipment before the MEU initiated action, shortening the time to get a second wave on ARG ships. Or tactical air-

lift could move equipment and troops from an intermediate staging base to the area of operations even if only a primitive field is available. V-22s would be particularly valuable. Cooperation between the Ma-

rine Corps and Air Force to practice linking airlifted personnel with prepositioned equipment is essential. In addition, the Air Force needs more strategic airlift as well as improved intra-theater assets to augment Marine V-22s.

If airfields are too far inland for Marine sea-based assault, Army airborne troops can secure objectives. Thus under this concept there is a limited role for the Army. The airborne battalion can deploy anywhere on short notice and Rangers are equally ready. Accepting the supporting role of the Army actually expands the utility of the Marine Corps beyond the littorals. With Army

airborne troops landing in brigade strength to seize airheads, airlifted marines could dominate cities with dismounted riflemen and fan out with LAV-equipped units into the countryside.

In short, Army airborne and Marine forces can supply the light rapid reaction units for first battles supported by carrier air wings and cruise missiles plus long-range Air Force assets. Marine Corps prepositioning can also put light armor into first battles. Army heavy forces and Air Force squadrons exploiting prepositioning can get to selected areas in small numbers, but for the quantity needed to win a decisive victory slower sealift must suffice. Medium divisions should be formed at the expense of Army light infantry units to provide mechanized capabilities that blend power and strategic mobility. Such forces will be slower to deploy than airborne units and weaker than heavy divisions but may bridge the gap between the first battle and offensive war. A strategic expeditionary corps that controls all service assets may have a role in fielding a joint expeditionary capability.

The final element in the range of capabilities is the Reserves. Enhanced readiness brigades of the Army National Guard have a role in winning MTWs. Although the active components can fight some first battles, mobilization is needed to win major wars. Thus the National Guard should be refocused on its traditional mission, preparing to fight and win large-scale conventional conflicts requiring full-scale mobilization.

The Army must remain focused on winning wars, and conventional campaigns are the core of this mission. The revolution in military affairs might make hyper-campaigns of blinding speed possible, but they will be significant operations aimed at defeating organized large-scale resistance. The Nation needs a strategically deployable battle capability to buy time for the Army. The Marine Corps can provide that competency as a fully capable expeditionary force. **JFQ**

**accepting the supporting role
of the Army actually expands
the utility of the Marine Corps
beyond the littorals**

The Security of the Americas

Throughout most of its history the United States has conducted relations with Latin America based on an



Guyanans operating assault craft.

55th Signal Company (Sean Terry)

exclusive issue: first, checking the influence of European powers, then combating Communist threats, and today stemming the flow of drugs.

The articles in this JFQ Forum argue that the future will

be markedly different. The Americas share compelling security interests that necessitate cooperation on a continual basis to meet the aspirations and apprehensions of all countries in the Hemisphere.

Economic factors occupy a leading role in rethinking security relations with Latin America. About half of all U.S. trade moves north-south today. Included in this flow of goods and services is some 30 to 40 percent of U.S. oil imports. In addition to energy resources, the region contains some of the busiest avenues of international trade. The Panama Canal remains a central element in that network and a key pathway for world commerce. Although the United States formally turned over the canal to Panama, this waterway remains important because of its role as an economic and strategic transit point for allies and friends. Closing military bases in the Panama Canal Zone and developing more complex economic ties are emblematic of dramatic changes in the region.

The United States can no longer secure its interests by guarding strategic points or casually interacting with countries in Latin America. The Caribbean illustrates dynamics that compel north-south integration and a prescription for updating the U.S. approach to its southern neighbors. The success and future prospects for hemispheric trade will depend in part on security partnerships that advance regional stability, free markets, and democratic institutions.

There are also powerful underground economies that shape the region. Billions of dollars are generated by illegal drugs, eroding the fabric of local institutions. Thus counterdrug operations are not only focused on

stemming the movement of drugs into the United States, but are integral to attempts to protect national integrity. Plan Colombia, which includes a comprehensive package of foreign aid and military assistance, is a case in point.

But military assistance is only one component of Plan Colombia, and the counterdrug effort is just the most visible initiative by the United States to adapt to the new realities of Latin America. Border disputes and domestic insurgencies—traditional bugbears of hemispheric relations—are far less prominent than in the past. Nonstate and transnational threats such as illegal drugs, migration, natural disasters, environmental degrada-

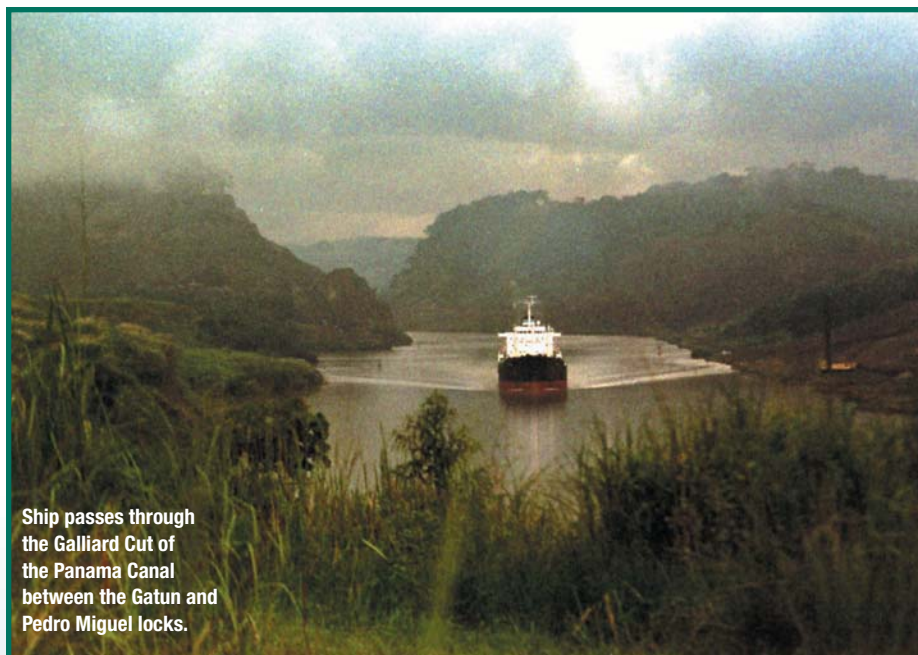
tion, and disease are primary concerns. Engagement calls for more than military solutions, making interagency cooperation ever more critical.

U.S. Southern Command (SOUTHCOM) has helped to build capabilities for responding to natural disasters in the region. With the Office of Foreign Disaster Assistance, an agency of the Department of State, nongovernmental organizations, and many other institutions, the command is improving capabilities to handle natural disasters while combining

Bolivian soldiers near
Cordoba, Argentina,
Cabanas '00.



55th Signal Company (Cory Montgomery)



Ship passes through the Galliard Cut of the Panama Canal between the Gatun and Pedro Miguel locks.

AP/Wide World Photos (Julie Plezencia)

resources to assist neighbors. As a result, responses to regional disasters has been significantly enhanced in recent years, though there is room for improvement.

Moreover, although the region can be subdivided into the Southern Cone, Andean Ridge, Central America, and Caribbean, engagement must address the unique conditions in each country. At the same time, cooperation among neighbors is still the best course of action for building trust, sharing resources, and tackling regional issues. For example, when Bolivia and Peru aggressively countered drug trafficking, the flow moved over their borders to other states. Single state solutions prove inadequate in deal-

ing with threats that do not recognize national sovereignty and frontiers. Initiatives taken by Colombia will succeed if its neighbors coordinate their policies and efforts.

The region has also experienced a strengthening of civilian control over the military as well as a reduction of oppression in the name of internal security. Remarkable developments occurred throughout Latin America over the last decade with the encouragement and support of the United States. While U.S. efforts have represented a positive force, much of the credit for improvements must go to dramatic change in the security environment and the maturation of civil institutions.

As the security environment evolves, the unified command plan will become a topic of further debate. Responsibility for the Caribbean and adjacent waters moved from U.S. Atlantic Command to U.S. Southern Command in 1997. As a result, SOUTHCOM has a much larger area under its purview, but this provides a more coherent and comprehensive way of addressing regional affairs. It should be noted, however, that Mexico stands outside this framework. Consequently, military contact is handled on a bilateral basis between Washington and Mexico City.

This JFQ Forum suggests that active engagement in the security of the Americas is essential but that U.S. efforts must be more responsive, nuanced, and skilled in integrating the military with other instruments of national power. Effective engagement will require a deeper understanding of regional as well as political, economic, and social issues. As myriad links between North America and South America grow, the pressure to confront security concerns will follow.

JFQ



KYARNG PAO (David W. Altom)

Effective Engagement

The Case of Ecuador

By JOHN R. GROVES, JR.

The United States recognized the opportunity to reduce its military presence in Europe and Latin America after the Cold War. A peacetime strategy was needed to promote stability, economic progress, and democratic institutions. In Europe, the Partnership for Peace (PFP) initiative served to encourage military-to-military and military-to-government assistance and exchange programs in former Warsaw

Pact countries and newly independent states. Its subset, the National Guard State Partnership Program, has sought to extend and build upon mil-to-mil relations.

Although related, the programs differ. State partnership originated with the National Guard Bureau and the Army and Air National Guard of participating states and includes Europe and Latin America and may be extended to Southeast Asia. It links individual states with militaries in partner countries to improve bilateral relations. Program goals reflect an evolving mission for the National

Major General John R. Groves, Jr., ARNG, is adjutant general of the Commonwealth of Kentucky and a member of the Reserve Forces Policy Board.

Guard and promote regional stability and civil-military relations in support of U.S. policy.

Sponsoring states use the PFP concept to engage host countries in Europe and increasingly in Latin America. It combines National Guard assets including civilian skills and ethnic affinities as well as support from state governments, education institutions, and the private sector.

The PFP program remains a strong force in fostering relations between NATO and newly independent states. Similar needs for engagement exist today in Latin America. State partnership builds on the European experience to shape the environment and reinforces democratic institutions and economic progress. U.S. Southern Command (SOUTHCOM) has aggressively advanced the strategy of engagement within the region. Awareness of

Kentucky initiated one of the first state-to-country partnerships in 1997

host country conditions and emphasis on cooperation, professionalism, and respect for participants have been its guiding principles. Theater engagement planning coordinates and combines active component training and assistance in host countries, under the CINC and in cooperation with our ambassadors and their country teams. The results have been effective exercises and exchanges and continuous, diversified shaping activities. Eleven state partnership programs currently exist in the SOUTHCOM region.

Latin American Bellwether

Unique conditions in Ecuador have led to a singular engagement plan. Kentucky initiated one of the first state-to-country partnerships in 1997, organizing its efforts to meet host country requirements and U.S. interests. Ecuador has three north-to-south geographical bands—the tropic lowlands, Andean range, and rain forest—with their respective subgovernance issues of ethnicity, poverty, regionalism, unemployment, environment, and infrastructure.

State Partnership Program

Partnerships with foreign defense establishments were first proposed by U.S. European Command (EUCOM) in consideration of the concerns expressed by the Russian Federation to active U.S. military personnel in the region and a decision to staff liaison teams with members of the Reserve components. In 1993 the National Guard Bureau recommended pairing states with Baltic nations (Estonia, Latvia, and Lithuania). From this initiative emerged a military-to-military program for Central and Eastern Europe. Since then it has grown beyond the Joint Contact Team Program established by EUCOM to become a tool for engagement throughout Latin America and Europe and has been expanded to the Pacific region, promoting interaction in the social and economic as well as military spheres. State partners participate in training, exercises, internships, exchanges, and civic leader visits. Activities are coordinated through CINCs, country teams, and other agencies to build democratic institutions that assist nations in many regions of the world. Partnerships create long-term relationships based on confidence and trust. Current participating countries (*and their state partners*) include:



130th Airlift Wing (Charles R. Ware)

Albania (*New Jersey and New York*), Belarus (*Utah*), Belize (*Louisiana*), Bolivia (*Mississippi*), Bulgaria (*Tennessee*), Croatia (*Minnesota*), Czech Republic (*Nebraska and Texas*), Ecuador (*Kentucky*), El Salvador (*New Hampshire*), Estonia (*Maryland*), Honduras (*Puerto Rico*), Hungary (*Ohio*), Jamaica (*Washington, D.C.*), Kazakhstan (*Arizona*), Latvia (*Michigan*), Lithuania (*Pennsylvania*), Moldova (*North Carolina*), Macedonia (*Vermont*), Panama (*Missouri*), Paraguay (*Massachusetts*), Peru (*West Virginia*), Philippines (*Hawaii and Guam*), Poland (*Illinois*), Republic of Georgia (*Georgia*), Republic of Kyrgyzstan (*Montana*), Romania (*Alabama*), Slovakia (*Indiana*), Slovenia (*Colorado*), Turkmenistan (*Nevada*), Ukraine (*California and Kansas*), Uruguay (*Connecticut*), Uzbekistan (*Louisiana*), and Venezuela (*Florida*).

JFQ

Until recently the country's military was largely deployed against an invasion from Peru. Ecuador and Peru engaged in a violent border clash in 1997. The prospect of all-out war was real. Signatories to the Rio Accords that drew boundary between the two countries in 1945—Argentina, Brazil, Chile, and the United States—intervened, created a buffer zone, and cooled down tempers. For almost two years an observer mission, fielded by

the guarantor states, contained the situation. The dispute was ended by treaty in October 1998. [For details, see Glenn R. Weidner, "Operation Safe Border: The Ecuador-Peru Crisis," *Joint Force Quarterly*, no. 11 (Spring 98).]

After the treaty was signed, representatives of Ecuador and Peru as well as the United States attended a symposium in Cincinnati on emergency management. The state partnership programs of Kentucky and West Virginia brought together officials from Ecuador and Peru on neutral ground

Building school in Ecuador.



National Guard combat engineers.



KYARNG PAO (David W. Altom)

sucre) was recently tied to the dollar, and preliminary reports indicate that the economy has stopped its freefall. Needed investment, including savings deposits in Ecuadorian banks, are positive signs along with larger revenues from oil exports.

Ecuador was one of the first countries in Latin America to move toward democracy when the military government called for free elections in 1979. But with six presidents over the last few years, punctuated by the only recent coup in the region, the future is uncertain. Although the coup in January 2000—led by the senior military commander—lasted only a few hours, President Jamil Mahuad was ousted and Vice President Gustavo Noboa took over when Mahuad tried reforms that his opponents found too draconian. Until recently, even a failing banking system and a decision to renege on international loans could not create a consensus for action. At the same time polling by the Inter-American Development Bank and the European Union disclosed that Ecuadorians had the least regard for democracy in the region, with only 41 percent preferring this form of government in 1998.

Strikes, ethnic violence, corruption, and damage from El Niño also have confronted the country as a resource-constrained military battles narco traffickers. Added to this volatile mix is the fear of internal alliances among unions, indigenous Indian groups, and Colombian guerrillas.

for reasons of mutual interest. A small but positive step was taken toward shaping the geopolitical environment between the countries.

Despite peace with Peru, Ecuador is in turmoil. Although it has abundant natural resources and adequate infrastructure, Ecuador lacks the discipline required to join the mainstream of fiscally responsible, self-supporting,

and stable nations. Indeed, Ecuador received the dubious distinction of being the only country to default on Brady bonds that allow mostly Latin American countries to shed debts owed from the 1980s. On a more optimistic note, the national currency (the

Kentucky-Ecuador State Partnership

Following the model of the Partnership for Peace program developed in Eastern Europe, Kentucky officially joined Ecuador in July 1997 in establishing the first state-to-country partnership in Latin America. With the exception of Operation *Nuevos Horizontes* (New Horizons), each of the following activities have been funded by U.S. Southern Command:

■ **Medical.** Beginning with a medical readiness training exercise (MEDRETE) in Alahuela in 1996, there have been five deployments by the Kentucky National Guard and a reciprocal visit by Ecuadorians to conduct MEDRETE operations and emergency medical training for military and civilian healthcare providers.

■ **Disaster Assistance.** Two north-to-south and two south-to-north military support to civil authorities exchanges have taken place involving military and civilian disaster response specialists. Additionally, participation by the Kentucky National Guard and *Defensa Civil* in Ecuador, as well as counterparts from West Virginia and Peruvian civil defense ministry in a symposium in 1999 led to a disaster emergency mutual assistance compact between Ecuador and Peru.

■ **Symposium on 21st Century Strategies.** Two events were conducted in cooperation with faculty from the Patterson School of Diplomacy and International Relations at the University of Kentucky. A four-day seminar in Ecuador at the *Escuela Politecnica de Ejercito* was attended by that nation's military and civilian leadership.

■ **Military Support to Civilian Authorities-Law Enforcement.** A south-to-north exchange by Ecuadorian military and national police officers and the Kentucky National Guard to observe law enforcement training, crime scene preservation, and forensic evidence analysis techniques in use by military police, Kentucky State Police, and Lexington Urban-County Police. A north-to-south reciprocal visit by the U.S. personnel took place in 1999.

■ **Military-to-Military Coordination.** South-to-north visits by Ecuadorian army, navy, and air force liaison officers took place in 1997 and 1999 to provide an orientation to operations involving the Kentucky National Guard.

■ **Nuevos Horizontes I.** U.S. Forces Command sponsored the deployment of 2,000 members of engineer, medical, aviation, and military police units from the Kentucky National Guard to Esmeraldas Province in 1998 to construct schools, clinics, and sanitary facilities in conjunction with conduct of joint MEDRETE operations.



Texas Army National Guard in Argentina.

55th Signal Company (Valentino Garcia)

Like many partnership programs, the Kentucky National Guard has completed a number of engagement activities. They are coordinated with SOUTHCOM goals for Ecuador and the Andes. Annual planning and scheduling meetings consider command projects and National Guard training to develop engagement events. Annual training may be dedicated to the partnership mission while other events are funded by SOUTHCOM and involve National Guard members for deployments beyond normal two-week training periods. Occasionally exercises funded by U.S. Army Forces Command (FORSCOM) or the Joint Chiefs enable deployment of Reserve components for several months. Deploying battalion-size engineer units to both Panama and Ecuador are examples. These activities mainly used members of the National Guard who rotated to the host country in an annual training status for two weeks, with a small staff to provide continuity.

Partnership efforts have included support to civilian authorities through disaster assistance and law enforcement exchanges, medical readiness training exercises, rural health care, mil-to-mil visits, and symposia conducted in Ecuador by faculty members from the University of Kentucky. A six-month deployment in 1998 of over 2,000 engineer, medical, aviation, and military police personnel from the Kentucky Army and Air National Guard assisted with a FORSCOM-supported operation known as *Nuevos Horizontes* (or New Horizons). Though not a traditional CINC activity, it was a benchmark event with a continuous and broadly dispersed series of infrastructure improvement projects at the grass roots level. Units exercised the full range of mobilization tasks and deployed into environments where total self-sufficiency was demanded under conditions of high operational activity. Training benefits for the National Guard, mostly cycled in deployments of 15 to 18 days, were the best possible under peacetime conditions. Retention remains high. The local impact was the creation of long-term cultural and community improvements to enhance

Infusion of U.S. funds and effort into Colombia to counter narcotics trafficking and insurgents has yet to make itself fully felt. But early indications are not encouraging. Drug trafficking is a cancerous threat to the already precarious state of governance in Ecuador.

The impact on Ecuador from increased counterdrug initiatives in Colombia remains unclear though

here preliminary indications are worrisome. Especially in the border area, the spillover from Colombian guerrilla and trafficking groups has burdened law enforcement and military personnel. The extent to which Colombian narco interests will move into Ecuador is not known.

JFQ

medical and educational opportunities for thousands of mostly rural people. Moreover, an intangible benefit is the sense of accomplishment embedded in the history of the participating units.

People Are Key

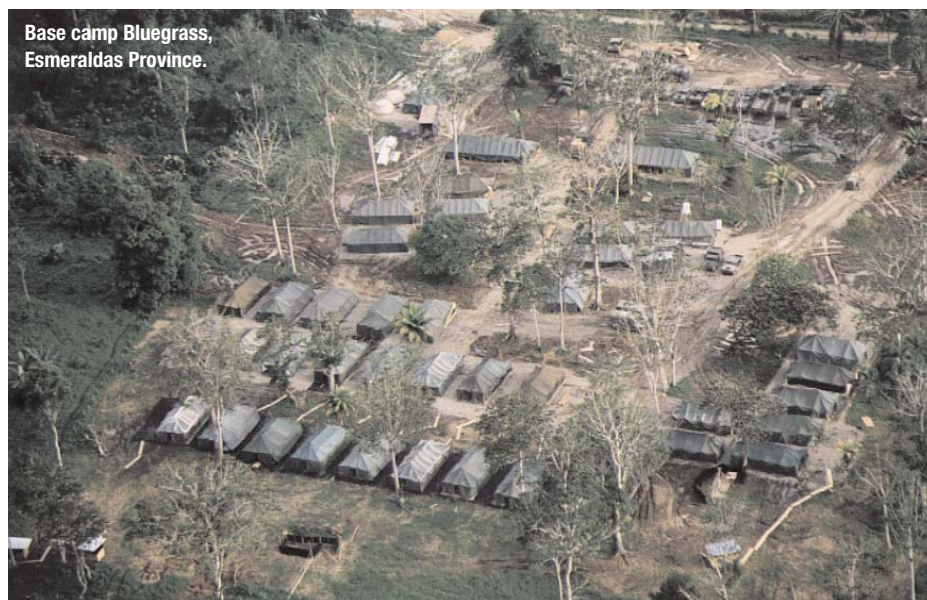
State partnership activities have been criticized as lacking in methods to objectively measure outcomes. While some engagement falls into the categories of goodwill or information exchange, the basis for Army and Air National Guard deployments is clear—training value and accomplishing mission essential tasks. The deployment of the Kentucky National Guard exposed engineer units to real world missions under demanding conditions, including the movement of vehicles and equipment by road, rail, and sea.

Many partner states have reinforced mil-to-mil activities through networking and ventures in collaboration with cultural, business, educational, and government organizations in their states. The Kentucky National Guard has worked with groups having longstanding contacts in Ecuador, most notably the Partners of the Americas (founded in 1964 as the people-to-people component of the Alliance for Progress) whose volunteers include farmers, artists, emergency planners, building officials, sports teams, and university faculty. Part of the long-term vision of the program is that military-to-military activities will gradually

the value of the state partnership program is day to day engagement

be offset by interaction involving non-military interests, initiative, and institutions in furtherance of democratic institutions and market economics.

The peoples of Latin America are generally aware of civic life and governance in the United States. This awareness results in part from immigrants to this country who remain in close contact with their families at home. Although comparatively few immigrants from Ecuador have settled in Kentucky, those who have settled elsewhere are a source of information on democratic institutions. This ebb and flow of knowledge about the United States and



Base camp Bluegrass,
Esmeraldas Province.

KYARING PAO (David W. Allom)

its value system is fertile soil for the grass roots engagement which the program seeks to cultivate.

The value of the state partnership program is day to day engagement. Although Kentucky and West Virginia were aligned with Ecuador and Peru when border hostilities were taking place, the program can take little credit for the peace accord. The same can be said for the military coup in Ecuador with its counterproductive and embarrassing implications. Program participants were little more than bystanders. Counterdemocratic tendencies in Ecuador are part of a political culture in which the military has seen itself as the second team ever ready to govern when civilian institutions fail.

The country has a tradition of democratic idealism, but its economy and internal conflicts have blocked progress. Now threats from drug trafficking and guerrilla activity are enormous.

There is no quick fix for Ecuador or any other developing country. The key is contact between peoples. In their limited but effective way, state partnerships seek to build confidence in the rule of law and commitment to the institutions in which democratic principles are grounded.

The Kentucky National Guard and counterpart organizations in other

states—working with the active components through unified commands—are engaged in efforts to diminish the potential of conflict in various regions of the world. Winning on the battlefield remains job number one, but achieving national security objectives without a resort to arms is also worthy of our effort.

JFQ

Human Rights and



Paraguayans participating in multinational exercise.

1st Combat Camera Squadron (David L. Wilcoxson)

Military Conduct

A Progress Report

By GEORGE R. VICKERS

Increased awareness of human rights over the last thirty years has led to new standards for state actors in peace and war. Human rights concerns have been particularly salient in the Western Hemisphere, where military dictatorships overthrew

civilian regimes in much of the Southern Cone and Andes in the 1960s and 1970s, and where U.S. policies supported regimes in Central America that were opposed by Marxist-inspired guerrillas during the 1980s.

Fresh Start Strategies

Since the Cold War, democratic governments have promoted constitutional reforms aimed at subordinating the military to civilian control and

George R. Vickers is executive director of the Washington Office on Latin America and coauthor of *Democracy Weakened? The October 20, 1996, Nicaraguan Elections*.



Argentine soldiers
at checkpoint,
Cabanas '00.

55th Signal Company (Albert Eaddy)

preventing human rights abuses. Latin American militaries have also undergone a self-examination to adapt their roles and missions to the changing strategic environment. By and large

democratic transition in many nations removed the armed forces from internal security operations

they have endorsed democratic principles and human rights. At the first Defense Ministerial of the Americas in 1995, representatives reviewed a commitment by the armed forces to remain subordinated to civilian authority, act within constitutional bounds, and respect human rights.

Reflecting changes in national security strategy, the U.S. military has played a critical role in promoting democracy and human rights. While Cold War strategy was dominated by deterring communist expansion and nuclear war, the strategy of engagement and enlargement proclaimed by the Clinton administration stressed enhanced security, prosperity at home, and democracy abroad. Rooted in a belief that there is an affinity between democratic systems and free market economies, and that democratic states are less likely to go to war with each

other, this strategy aimed to ensure that regimes consolidate democratic institutions and increase respect for human rights.

The incorporation of democracy and human rights as national security policy objectives has been accompanied by operational changes in the role and mission of the forces deployed in the hemisphere. Human rights training has been intensified and efforts to reform military justice in Latin America have been introduced.

While these initiatives have lowered the decibel level between human rights advocates

and the military, there is no consensus on their effectiveness. Two crucial dilemmas arise in attempting to harmonize such efforts with other objectives. First, training has met obstacles that limit its impact. The backgrounds of many militaries have afforded them considerable freedom from civilian control while portraying them as guarantors of the state. Moreover, a legacy of repression and dictatorship continues to polarize societies and inhibit civil-military relations.

Another dilemma involves threats such as drug trafficking, organized crime, and terrorism. In most mature democracies responsibility for dealing with such threats falls to civilian institutions. But in much of the hemisphere these challenges have overwhelmed new democratic governments, leading to a call for the military to play a central role. The democratic transition in many nations removed the armed forces from internal security operations; thus human rights organizations and democracy activists fear that proposed roles and missions will reinforce

impunity and lead to a return to violations. The distinct historical and cultural contexts from which Latin American militaries have emerged make it difficult to transfer practices developed within the unique U.S. experience.

Evolving Programs and Policies

Since the 1950s the U.S. Armed Forces have been provided with a modicum of training on the laws of war. Alleged abuses during the Vietnam War forced a reexamination of human rights training. After the investigation of the My Lai incident by the Peers Commission, a DOD directive issued in 1974 required all military personnel to receive training in the laws of war commensurate with their responsibilities. Moreover, exercises were modified to convey the laws of war requirements such as introducing civilians into battlefield scenarios.

U.S. Southern Command (SOUTHCOM) did not have guidance on training until 1990 when the Commander in Chief, Southern Command (CINCSOUTH), General Maxwell Thurman, USA, issued a policy memo. It required all personnel to undergo awareness training, investigate and report alleged abuses, and influence host countries to obey internationally accepted norms. In addition, it prescribed responsibilities for unit commanders, military assistance groups, and SOUTHCOM staff elements. When General George Joulwan, USA, became CINCSOUTH, he supplemented the memo with a video presentation that unequivocally laid out responsibilities for reporting violations and emphasized that the command mission included human rights.

Subsequent CINCs have reenforced education within SOUTHCOM. Under General Barry McCaffrey, USA, a steering group was established to provide advice on human rights and ensure policy implementation. During his tenure the command also prepared a pocket-sized reference card summarizing standing orders and reporting procedures. Human rights organizations were invited to observe training. General Wesley Clark, USA, continued these programs as CINCSOUTH.

Chileans searching for sniper during exercise.



55th Signal Company (Cory Montgomery)

The Armed Forces began inserting specific human rights training into programs designed for Latin America in the early 1990s. The 7th Special Forces Group, for example, issued its own guidance. In addition to requiring training for all personnel involved in mobile training teams and deployment training, it required instruction to foreign personnel “if consistent with mission and/or training requirements/objectives.”

For decades the main U.S. facility for influencing military personnel from the region was the School of the Americas in Panama. The curriculum did not include formal instruction even after the school was relocated to Fort Benning in 1984. Although human rights issues were treated peripherally in counterinsurgency training, it was not until 1991 that the curriculum was revamped when a policy memo stated, “The School of the Americas systematically advocates human rights. To this end, instructional materials in all courses will stress respect for human rights as indispensable to successful military operations.”

Congress approved funds beginning in fiscal year 1991 to expand the international military education and training program to promote instruction for foreign civilian and military

officials in, among other things, “creating and maintaining effective military judicial systems and military codes of conduct, including observance of internationally recognized human rights.”

In a speech delivered at the School of the Americas in August 1994, McCaffrey stressed the responsibility of commanders to ensure respect for human rights and outlined measures to prevent abuses, which included:

- zero tolerance of abuse and punishment of violators
- effective training
- clear written rules of engagement
- treating soldiers with respect
- leading by example
- controlling troops
- recognizing honorable conduct.

McCaffrey also instituted an annual conference in conjunction with the Interamerican Institute on Human Rights. The first was held in 1996 and brought together senior military and civilian leaders from the region as well as representatives of human rights organizations to discuss “the role of the armed forces in the protection of human rights.” The agenda focused on obligations of the military under different international covenants and pertinent training in the armed forces.

Although the conference allowed representatives of national organizations to interact with high-ranking officers from their countries, participants from both sides suggested greater focus on incorporating human rights issues in operational training exercises and developing more pragmatic and mission-related arguments for respecting them.

SOUTHCOM sponsored a working group in 1997 composed of representatives of various international and regional organizations and officials with responsibility for human rights training. It produced a consensus document that specified objectives for doctrine, education and training, internal control systems, cooperation with external control systems, and the delineation of police and military functions.

Deliberations highlighted possibilities and difficulties of reaching a consensus between civil and military representatives on advancing human rights. On the positive side, a relatively detailed consensus was forged during the two-day meeting. At the same time there were major differences over priorities. Military officers stressed education and training as key to improving performance. They acknowledged the importance of incorporating support for democracy and respect for human rights in doctrine. Civilian participants, on the other hand, emphasized the need for both internal and external control mechanisms to ensure accountability for violations.

General Charles Wilhelm, USMC, became CINCSOUTH prior to the meeting in 1998 that sought to develop a consensus on criteria for measuring performance. Wilhelm suspended this effort in favor of technical assistance to reform codes of military justice and human rights training. From 1997 to 2000 such assistance was provided to Colombia, Paraguay, Peru, and Venezuela.

Message Received?

Efforts to promote human rights in Latin American militaries in the 1990s came at a time of civil-military tension in many countries. In the aftermath of long periods of military dictatorship in Argentina and Chile, for example, and after the end of civil conflict in El Salvador and Guatemala,

Bolivians unloading relief aid, Cabanas '00.



55th Signal Company (Cory Montgomery)

investigating past human rights violations met stiff resistance from militaries in the region, which argued that their mandated mission to counter internal threats legitimized and justified

investigating past human rights violations met stiff resistance from militaries in the region

intervention. Moreover, unlike the United States and Western Europe in the wake of World War II, codes in Latin America required military personnel to obey orders regardless of their legality.

Countering such arguments, human rights and other groups held that excesses committed by armed forces violated international law and covenants that state agents were obligated to respect. In many cases national constitutions and law were breached. The groups contended that until there was accountability for past abuses and an end to impunity, the military was a threat to the consolidation of democracy. Welcoming reports of truth commissions to investigate abuses, nongovernmental groups complained that negotiations ending conflicts and restoring civilian rule had

left impunity intact; thus they demanded prosecution of those who had committed abuses.

Even without transition agreements for dealing with past violations, there were often efforts to redefine or limit military roles by removing the responsibility for internal security and restricting the armed forces to defending against external threats. Sometimes this involved constitutional change, but everywhere it called for shifting doctrine from the national security focus of the Cold War.

Deep polarization was both an incentive for and obstacle to efforts to promote civil-military dialogue and human rights training. Many senior officers feared that reforms in military justice that transferred jurisdiction to civilian courts would expose their armed forces to ex post facto laws and vengeance by those same people whose efforts to overthrow the state had necessitated intervention. As an Argentine officer, General Osiris Villegas, put it in defending General Ramón Camps (who was accused of homicide, illegal deprivation of liberty, and torture of prisoners):

The real accused in this trial is the army, as an institution, in a political trial. Acts

of war are not brought to trial; they are not justiciable. Camps and other officers who defended their patria and its institutions are being tried under the terms of ex post facto laws and in the glare of the media. This allows the subversives who lost the war to determine their fate in collaboration with a government seeking revenge and political advantage rather than justice . . . with no effort by the same government to bring to justice the terrorists and subversives or to subject them to public exposure and repudiation, as has been done with the military officers.¹

It must also be said that some military leaders in the region regard U.S. efforts to promote institutional human rights reforms as hypocritical. They resent being blamed for the consequences of adopting policies that the United States promoted in the 1960s and 1970s. Some even perceive emphasis by Washington on democracy and human rights as part of an attempt to subordinate Latin American security concerns and advance U.S. interests.

Ironically some Latin American human rights organizations, particularly those representing the families of victims, also take a conspiratorial view of U.S. efforts to promote military justice and human rights training. They oppose any form of military-to-military collaboration until active and retired officers accused of abuses are brought to justice in civilian courts.

New Threats, Ancient Rights

If the transition to democracy has fostered a new emphasis on individual rights, it has also produced a far more complex array of challenges. The international and regional legal architecture for promoting and protecting human rights is based on obligations under international covenants to control actions of state agents. It was commonly argued that only states can commit human rights abuses because of their obligation to guarantee rights. In Latin America, however, non-state actors often pose the greatest threat to human rights. Drug cartels and organized crime have overwhelmed and subverted efforts to strengthen civilian law enforcement, and in the Andes,



Colombians during human rights training.

AP/Wide World Photos (Scott Dalton)

Caribbean, Central America, and Mexico, have become a parallel power to the state in controlling national territory. In this environment, demands for internationally recognized individual, civil, and political rights are increasingly countered by demands for harsher measures to restore order. Social cleansing actions and vigilante efforts to punish criminals are growing

the growing salience of human rights is a response to the changing global political environment

in frequency and popularity while support for democracy and human rights is eroding.

These new threats pose a dilemma for the United States in ending military involvement in internal security. The DOD counterdrug strategy has promoted an expanded role for armed forces in the region in combating drug trafficking. The danger is not only that increased military participation on the ground risks abuses, but that reliance on militaries as instruments of counterdrug strategy undercuts Washington in promoting reform to bolster civilian control and respect for human rights. That dilemma was underscored when Peruvian President Alberto Fujimori rejected calls from the United States, the

Organization of American States, and international observers to postpone the second round of elections until better guarantees could be assured. Asked whether he feared sanctions and a possible cutoff of aid from the United States, Fujimori replied, "What sanctions? Are we talking about counterdrug cooperation? That is a two-way proposition."

It may not be always possible to make human rights and democracy the top priority of U.S. strategy. There may be a conflict between strategic objectives and the concrete circumstances of particular countries. The task is to anticipate conflicts and minimize their consequences.

Future Implications

Although incorporating democracy and human rights objectives into hemispheric policies in the 1990s was a deliberate response to changes in overall national strategy, they do not represent merely the political whim of a particular administration. On the contrary, the growing salience of human rights in national policy is a response to the changing global political environment.

Over the last thirty years, the emergence of new laws, treaties, and precedents has created a body of international humanitarian law that provides standards and requirements for state actors in both peace and war. Among the most important are the Convention on the [Imprescriptibility] of Crimes of War and Crimes against Humanity and the Convention against Torture. In the Western Hemisphere, the American Declaration and the American Convention on Human Rights established an institutional framework for promoting and enforcing compliance with international norms.

Even though the United States has not ratified all international human rights instruments, new precedents call on all states to abide by the norms they define. While the United States cannot be forced to abide by decisions it opposes, the growing international consensus constitutes powerful moral and political pressure.

National law and policy have evolved partly in parallel with international law. Since enactment of the Harkin amendment in 1975, Congress has conditioned economic assistance on respect for human rights and has increasingly attached similar terms to security assistance. The Leahy amendment was extended from prohibiting security assistance to abusive militaries to a prohibition on assistance to specific units harboring alleged violators. These initiatives have fostered development of elaborate procedures to monitor and evaluate human rights performance in other countries.

Harmonizing objectives relating to democracy and human rights with other security goals in the Americas is a vital challenge. Past failures have sometimes fostered opposition to defense policies, limited options in significant ways, and also forced changes in strategic objectives. In addition, an expanding body of international humanitarian law in an increasingly globalized world is likely to require more formal and detailed attention to human rights. **JFQ**

NOTE

¹ See Brian Loveman, *For La Patria: Politics and the Armed Forces in Latin America* (Wilmington, Del.: Scholarly Resources, 1999). This paraphrases statements made by Osiris G. Villegas, *Testimonio de un abogado* (Buenos Aires: Compañía Impresora Argentina, 1990).

U.S. Southern Command



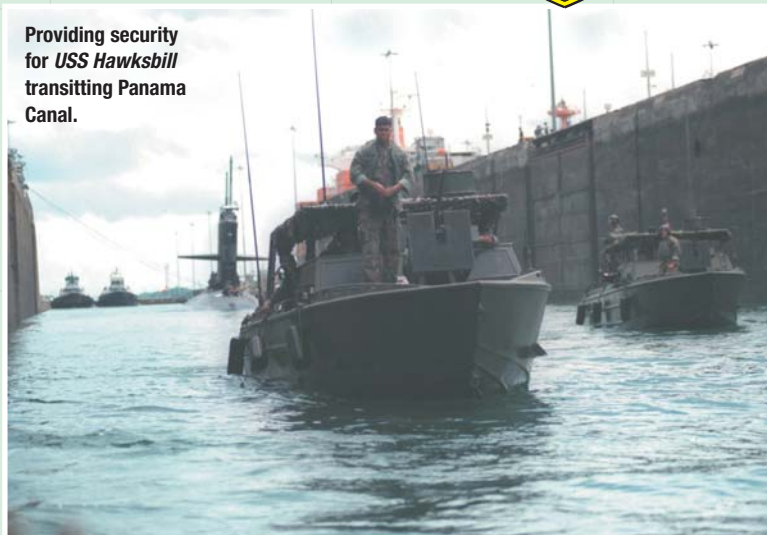
The SOUTHCOM area of responsibility (AOR) includes the landmass of Latin America south of Mexico, waters adjacent to Central and South America, the Caribbean Sea with its 13 island nations and European and U.S. Territories, the Gulf of Mexico, and a portion of the Atlantic Ocean. It encompasses 32 countries, 19 in South and Central America and 13 in the Caribbean, and covers 15.6 million square miles, a sixth of the world landmass assigned to regional unified commands.

Traditionally the countries of the area are divided into four subregions: Southern Cone (Argentina, Brazil, Chile, Paraguay, and Uruguay); Andean Ridge (Bolivia, Colombia, Peru, and Venezuela); Central America (Belize, Costa Rica, El Salvador, Guatemala, Honduras, and Nicaragua); and Caribbean (Antigua and Barbuda, Barbados, Dominica, Dominican Republic, Grenada, Grenadines, Guyana, Haiti, Jamaica, St. Croix, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Suriname, and Trinidad and Tobago). SOUTHCOM has responsibility for security assistance in Mexico although that country is outside its area of responsibility.

The SOUTHCOM mission is shaping the environment within the theater by conducting military-to-military engagement and counterdrug activities. The command promotes democracy, stability, and collective approaches to threats to regional security or U.S. interests while preparing to meet future hemispheric challenges. With its headquarters in Miami, Florida, SOUTHCOM has a total of 800 military personnel and 325 civilian employees. In addition, the command has both liaison officers and representatives from the Department of State, Drug Enforcement Administration, Coast Guard, Customs Service, and other Federal agencies.

JFQ

Providing security for *USS Hawksbill* transiting Panama Canal.



2nd Marine Division



U.S. Southern Command Area of Responsibility



U.S. Navy (Corey Barker)

The geographic area of responsibility for the conduct of normal SOUTHCOM operations includes Central and South America and the Pacific and Atlantic Oceans from 92° West, east to 30° West, north to 8° North, west to the Guyana/Venezuela coastal border, and the Caribbean Sea and its island nations and European possessions, the Gulf of Mexico, and the Atlantic Ocean south of 28° North and west of 58° West.



4th Combat Camera Squadron

See the SOUTHCOM homepage (<http://www.southcom.mil/home>) for details on the area of responsibility, component commands, theater strategy, and other issues, or contact:

U.S. Southern Command
ATTN: Public Affairs Office
3511 NW 91st Avenue
Miami, Florida 33172-1217
Telephone: (305) 437-1213/
DSN 567-1213
Facsimile: (305) 437-1241
e-mail: uscpa@hd.southcom.mil



Unloading C-5 in
Asuncion, Paraguay,
for training exercise.

2nd Marine Division Combat Camera Unit (Tyler J. Melke)

The Legislative Role

Argentina's
lower house.



AP/Wide World Photo

in Argentine Defense Reform

By PABLO CARLOS MARTINEZ

Before democracy was reestablished in Argentina in 1983, its defense issues were always the province of the armed forces. The loss of the Malvinas (Falkland) Islands in a brief but violent conflict with Britain, the negative experience of an autocratic regime, and above all the rift caused by human rights abuses, led to a crisis that called for a new defense policy. The military began to abandon its self-perception as an autonomous corporation with the power

to impose its will on the rest of society. At the same time, economic elites abandoned their propensity to use their wealth to retain power through the military.

Systemic Change

The task of the post-1983 political leaders was affirming democracy by managing defense affairs in the same way as foreign, economic, educational, and legal issues. The usual alternative in Argentina—finding a strong man or democratic general—was exhausted. To establish a new order it became necessary to forge a broad-based consensus and eliminate political partisanship, thus initiating a national policy.

Pablo Carlos Martinez is secretary of the Argentine senate defense committee and advisor to the bicameral committee on inspection and control of internal security agencies and activities and intelligence.



President Menem
opening congress.

these countries formed the *Mercado Común del Cono Sur* (MERCOSUR)—or Common Market of the Southern Cone. Thus Argentina was free of open conflict with its most important neighbors.

Defense policy was defined by foreign policy and emphasized cooperation and integration, such as regional economic coordination and its instrument, MERCOSUR; entry on the world stage of peacekeeping and security treaties; acceptance of a market economy; and active participation in U.N.

peace operations. Respect for democracy as a system of values was also affirmed, although some minority sectors risked crossing the line by forging agreements with military factions which were involved in uprisings against President Alfonsín.

Two acts stood out in the course of affirming civilian leadership. First, President Alfonsín decided to bring junta members responsible for repression and human rights abuses to justice. For the first time, active and retired military members were indicted, tried, and condemned by a federal court and the supreme court. While the number indicted was reduced because of the sanc-

tioning of the laws of proper obedience and *punto final* (military personnel who committed illegal acts under orders of superiors would not be charged and there would be a statute of limitations for all charges), observance of the law remained regardless of the civilian or military status of the accused.

Second, there was a new insurrection shortly before the presidential pardon of imprisoned military and guerrilla leaders under Menem. This time the military obeyed its orders and put down the revolt. There had never been such a response by the armed forces. Commanders reacted with discipline and heroism. The military culture had begun changing under a policy developed over the last decade by

isolating those in uniform who resisted civilian supremacy.

New Legislative Order

Like the United States, the Argentine constitution gives congress broad authority in defense matters. The legislative branch authorizes the executive to declare war or make peace and regulates the military in peacetime. The senate approves promotions of senior officers. In addition, the legislature has considerable budgetary authority over the defense establishment.

Although congress was given these prerogatives when the country was founded, it almost never played an important role in defense affairs. In the post-1983 governments, however, it has invoked its constitutional powers with vigor. Fiscal restrictions imposed severe limits on military spending. The number of enlisted personnel and units was also reduced. Changes begun in 1983 required a new definition of roles for the armed forces. To form it, congress passed two laws on national defense and internal security, providing an institutional architecture that defined the degree to which force may be used against threats. Attributes, missions, and functions were delineated, as were corresponding relationships between the powers of the state.

These laws sought to affirm the supremacy of civilian policy, effectively ending attempts at military autonomy. This does not diminish professionalism of the military; instead, it subordinates the armed forces to political decisions and the checks and balances and legitimizing mechanisms of democracy. A clear distinction was made between defense and security considerations, weakening a domestic national security view that identified a significant portion of the citizenry as the enemy.

Restructuring the ministry of defense and empowering the joint staff were consequences of these reforms. Under the law of internal security, the minister of the interior was made the head of the national police by presidential delegation, thereby restricting intervention in internal security by the

By 1983 the international situation anticipated the end of the Cold War and need for change in Buenos Aires. A new vision of national security was emerging, one not based on preparing to combat internal threats aided by external enemies and fight for disputed territories. A credible democratic government opened up possibilities for coordinating defense policy with a regional and global strategic framework. Argentina began recovering its international credibility, leaving behind the

President Alfonsín decided to bring junta members responsible for human rights abuses to justice

effects of the Malvinas defeat and the disrepute of the military dictatorship.

Introducing change was not simple. To build trust both in a state and a region, democracy requires transparency; therefore it was necessary for Argentina to make strategic decisions explicit after 1983. Difficult choices had to be made, including negotiating the Beagle Treaty in 1984, the first step toward resolving the border dispute with Chile. The process begun during the presidency of Raúl Alfonsín (1983–89) and concluded under Carlos Menem (1989–99) ended conflict with that country. Problems with Brazil, originating over construction of dams on the Parana River, were resolved. Finally,



First defense ministerial of the Americas, 1995.

DOD (Helene C. Stikie)

armed forces. Cases specifically authorized by law were logistical support of the police force, defense of military establishments, and auxiliary use under terms contained in the constitution and with congressional authorization in cases of internal unrest. Furthermore, when it is decided that the armed forces should intervene, in no circumstances may doctrines or forms of organization and training be developed or equipment procured by the military for internal security. This categorical separation was necessary in order to distance the armed forces from social conflicts.

A process of reconciliation between the political parties was needed to achieve a consensus to pass both laws. In addition, the temptation to reorganize the defense system by resorting solely to the fiscal tourniquet had to be resisted. Simply begging the military through reduced spending would not bring the desired result. Politicians also joined the national debate. Almost every party created special commissions to study defense issues and propose policies. The armed forces Permanent Seminar 2000 was a successful venture in idea sharing. It was organized by Senator Eduardo Vaca, chairman of the senate national defense committee, who sought every opportunity to acquire defense knowledge.

In addition to political activism, the Argentine experience revealed a need to balance action and counsel from academics and military professionals. Political scientists together with judicial specialists, economists, and administrators worked closely with active and retired officers to advise legislators. Stimulating this dialogue required open debate, primarily for diverse actors who lacked an appreciation of defense affairs because the nation was just emerging from cruel confrontations that had splintered civil-military relations. Nongovernment organizations such as foundations and research institutes became protagonists for generating ideas, gathering information, and interacting with foreign institutions.

Seminars and exchanges multiplied, but generally outside universities, which were reluctant to accept defense as a legitimate area of research. In fact, it was only several years after democracy was restored that a pilot program began at National University at La Plata for naval students to take courses at a university. Moreover, the joint staff established a center for strategic studies.

Building Trust

In addition to reform, the wall of suspicion had to be torn down. The military and civilians had to put prejudices aside. Legislators met with the chiefs of staff to discuss concerns and take advantage of the ability of the majority party to influence the defense agenda and find solutions on the executive and legislative levels. It was not enough to listen only to the military hierarchy. Mid-level, junior, and noncommissioned officers joined the debate. Retired military personnel also aided legislators by providing technical support on defense initiatives as did legal, economic, and administrative professionals.

A pilot program to assemble the defense committee chairmen of the MERCOSUR countries was started at the initiative of Senator Vaca. The objective was to improve the knowledge of ruling elites and generate trust to make timely decisions without interference from the media, which often complicated relations among countries. On another plane, legislators began taking an active role in meetings of defense ministers from throughout the hemisphere which were held in Williamsburg, Virginia; Bariloche, Argentina; Cartagena de Indias, Colombia; and Manaus, Brazil.



Mothers of Plaza de Mayo protesting in Buenos Aires.

AP/Wide World Photo

To expedite reform, the senate defense committee resolved in 1995 to convene a series of public hearings to

the senate resolved to convene public hearings to inform legislators on the status of civil-military relations

inform legislators on the status of civil-military relations not only in Argentina, but also from an international perspective. The executive branch favored these hearings, and even the armed forces showed interest. Each benefitted from broaching the subject on neutral territory, which promised dispassionate analysis on reform issues, from strategic to budgetary matters.

At the first hearing, which was attended by the vice president and minister of defense along with military and security force leaders, the opening speaker was the Brazilian secretary of

strategic affairs. Hearing from a major strategic ally and a key member of MERCOSUR was an invaluable experience for the legislators. The Brazilian view of international and regional issues was decisive in establishing a framework in which defense transformation could be undertaken. The presence of a Brazilian official in the Argentine congress was one of many signs of the mutual trust between the countries over the last decade.

The hearings respected plurality to the extent that retired senior officers, some of whom had played critical roles in the military government, offered their opinions. Even so-called *carapintadas* (painted faces)—military personnel who took part in at least four insurrections against democratic power—were allowed to state their views.

Specialists from France, Germany, Spain, and the United States, addressed the necessity to develop new strategic views as the old concepts

crumbled with the Berlin Wall. They also argued that it was necessary to transform the armed forces on all levels. Moreover, change should not be regarded as punishment for the military but an inevitable consequence of global transformation.

One unique aspect of these hearings was the participation of the ministries of foreign affairs and economics. They offered fiscal guidelines within which the new strategic framework had to be formulated. Gone were the days when defense issues could be discussed without international and economic consideration. One participant stated that the regional situation “foreshadowed a gradual synchronization in strategic thought based on cooperation, and not on competition or conflict.”

Bold Move

The senate sought to clarify shifts in foreign policy since the Malvinas (Falklands) War and strategic change

Malvinas War

Argentine claims of sovereignty over the Malvinas (Falkland) Islands date to the early 19th century, although Britain administered the territory after 1833. A junta led by Lieutenant General Leopoldo Galtieri seized the islands in 1982. Criticized for fiscal mismanagement and human rights abuses, the junta thought that liberating the Malvinas would unite their countrymen behind the government. Argentine forces invaded on April 2, overcoming the defending British garrison at Port Stanley. The next day South Georgia and South Sandwich fell. By the end of the month, Argentina had deployed more than 10,000 troops. Public approval ran high and most governments in the region were sympathetic except Chile, which clashed with Argentina over islands in the Beagle Channel. A perceived threat from Chile prompted Argentina to keep most of its elite troops at home.

Britain assembled a task force to respond to the invasion. On April 25, South Georgia was retaken. In early May the Argentine cruiser *General Belgrano* was sunk by a submarine. After the main British force arrived, land-based Argentine aircraft launched strikes and sunk *HMS Sheffield* and the container ship *Atlantic Conveyor*. Moreover, another destroyer and two frigates were sunk and several vessels also damaged. Argentine forces failed to prevent the British from landing near Port San Carlos and advancing to Darwin and Goose Green. Then the British turned toward Port Stanley where the Argentine garrison surrendered on June 14, effectively ending the conflict. [For details, see Robert J. Scheina, "Argentine Jointness and the Malvinas," *Joint Force Quarterly*, no. 5 (Summer 94).] In the event, Britain captured 11,400 and killed some 750 Argentines.



Architects of Malvinas campaign, Puerto Argentina.

Argentine Navy

structure, neither objective was achieved by the legislature.

The opportunity to terminate compulsory military service was presented with the cover-up of the murder of a soldier in Patagonia. The incident caused tremendous public outrage. Menem, seeing his chance, acted swiftly. The system was reformed virtually overnight.

The last task in the transformation process was reorganization. The initiative was launched by an opposition congressman and former minister of defense. He developed a mandated program to be executed over a five-year period. As program law, compliance had to be verified; and it had to be adaptable to changing circumstances.

Much of the work in drafting legislation was performed using an innovative methodology. Committees, formed to analyze the main themes, drew on the experience of retired senior officers. Both legal and financial specialists in budgetary techniques joined military advisors in formulating proposals on issues under study by the legislators. Such cooperation would have been impossible without the common approach and trust fostered during fifteen years of democracy and the experience gained by political elites in defense matters. Having legislators who once served in the executive branch and ministers who were legislators had an added value.

This cultural change created a new political climate. A paradoxical condition arose when the executive office remained neutral in the face of reorganization and congress took the initiative. The work fell upon a small group of legislators, all members of the defense committee of the house of representatives. The law was formed and voted on with discipline and consistency, first by the lower house and then by the senate.

Reorganization Law

The elements of reform were providing for a cadre of technical personnel trained to conduct joint and combined operations; a smaller number of

in the Menem regime, thus further distancing itself from the tendency in the region to regard armed forces as national guardians for dealing with internal conflicts. It explicitly favored the new thinking, "a strategic defense concept based on conventional dissuasion and cooperative balance." A resolution in March 1996 also demanded resources to guarantee the "proper level of readiness for the completion of the mission and, in turn, undertake [military] modernization."

Accordingly, the executive branch subsequently approved the directive for the realization of integrated planning that incorporated senate proposals and added greater precision to definitions of defense requirements. Collaboration between the powers was

achieved. Legislative and executive branch officials acted in concert and cooperation without infringing on their respective powers.

Ending compulsory military service was more problematic. Young Argentines had become increasingly reluctant to fulfill their obligations. But approval of a law to discontinue the draft and recruit a volunteer force was delayed as the senate awaited an agreement with the armed forces that never materialized. The Malvinas War demonstrated that the age of conscripts had passed. But in the effort to simultaneously convert to a professional force and organize a reserve



55th Signal Company (Tracy Trotter)

This agreement represented the real test of consensus on reform law. An international financial crisis, which had a severe impact on Argentina, did not permit the expected increase in defense spending. The other source of funding for reorganization—selling nonessential military assets—was slowed by recession. Thus the military had to rely on credit to expedite modernization. Noncompliance with the law mobilized congress, especially the senate, where various proposals were introduced to establish a more credible defense budget. They were intended to counter estimates by the ministry of the economy that were being used to pass for compliance with the reorganization law.

Budget shortfalls produced adverse effects that had to be addressed. One was an exodus of qualified personnel. For example, the salaries of pilots in the private sector were as much as eight times larger than those of military aviators. In such cases the military lost its investment in training. Similarly, constant adjustments do not facilitate long-range planning because the decisions are modified continuously due to inadequate resources. Despite such difficulties, services have taken action to accomplish proposed reforms. The armed forces appear to be adjusting to fiscal realities. Abandoning weapon systems that can't be maintained, rationalizing infrastructure, and providing general support demonstrate that senior officers identify with transformation.

With passage of reorganization legislation, a new consensus and a strong compromise are needed; otherwise it will become a dead law. The defense ministry must play a more active role in orchestrating these measures, and congress will have to renew its initiative, taking full advantage of the best tool at its disposal—the bicameral committee on oversight. This will allow congress to play a continuing active role.

JFQ

operational units with adequate logistic support and capacity for extended operations; commands and staffs with training in operations, planning, and supporting headquarters; mobilization plans to increase operational capabilities; the resources to achieve objectives; and hierarchization of military personnel with proper remuneration. The key concepts included jointness, rationalization of recruiting, prioritization of operational requirements, personnel systems, and improved readiness. Quality was valued over quantity

bold reforms were enacted in the education of commissioned and noncommissioned officers

in terms of people. Bold reforms were enacted in the retirement and pension systems and in the education and training of commissioned and noncommissioned officers.

Professional military education had to be adjusted to the national education system to create a "better entrance of members of the armed forces into the general educational culture." Enlisted personnel who aspired to be

senior noncommissioned officers would need a high school diploma, a requirement that would take effect seven years after passage of the law. For field grade officers, the minimum educational requirement was a university degree. The criteria had a strong impact on military culture and produced a force that could handle organizational and managerial problems.

The legislature reserved oversight powers to itself in the form of a bicameral commission to monitor the reorganization process. In addition, the executive branch requested that congress enact a law approving the number of military and civilian personnel under review. Another aspect of the law was strengthening the role of the ministry of defense and the president as commander in chief. Thus the ministry was given extensive authority in defense production and acquisition.

Budgetary matters required the most attention. Defense resources for reorganization would grow by 15 percent over five years with increases in the first year of no less than 3 percent.

U.S. Strategic Interests in Caribbean Security

By IVELAW L. GRIFFITH

*USS George Washington
off St. Thomas, U.S.
Virgin Islands.*



USS George Washington (Joe Hennessey)

The Caribbean is strategically important to the United States although it enjoys a low priority in the overall context of Latin American policy. That situation is unlikely to change barring some dramatic event. Continued disinterest will result in further equivocal engagement. The Nation should adopt a more focused, proactive, and nuanced approach in dealing with the Caribbean Basin. Today U.S. interest centers on three aspects of the area: geography, geoeconomics, and geonarcotics.

Geography

The strategic importance of the Caribbean is found in its resources, sea lanes, and security networks. The Caribbean Basin is the source of fuel and nonfuel minerals used in both the defense and civilian sectors. Of particular significance are petroleum and natural gas produced in Barbados, Colombia, Guatemala, Trinidad and Tobago, and Venezuela. Moreover, though several countries and U.S. territories in the area do not have energy resources, they offer invaluable refining and transshipment functions (Aruba, Bahamas, Curaçao, Dominican Republic, Jamaica, Puerto Rico, St. Lucia, and U.S. Virgin Islands). Other mineral resources from the Caribbean

Ivelaw L. Griffith is professor of political science and dean of the honors college at Florida International University and the author of *The Political Economy of Drugs in the Caribbean*.

include bauxite, gold, nickel, copper, cobalt, emeralds, and diamonds.

The Caribbean Basin has two of the world's major choke points, the Panama Canal and the Caribbean Sea. The former links the Atlantic and Pacific Oceans and saves 8,000 miles and up to 30 days of steaming time. The canal has military and civilian value. And while it is less important to the United States than it was two decades ago, other countries remain very dependent on it, and many, like Chile, Ecuador, and Japan, are militarily or politically important to Washington.

Once ships enter the Atlantic from the canal they must transit Caribbean passages en route to ports of call in the United States, Europe, and Africa. The Florida Strait, Mona Passage, Windward Passage, and Yucatan Channel are the principal lanes.

The Caribbean is also our southern flank. Until a decade ago the United States maintained a considerable military presence throughout the Caribbean, mainly in Puerto Rico at the Atlantic threshold, in Panama at

the United States is the largest trading partner of Caribbean Community and Common Market countries

the southern rim, and in Cuba at Guantánamo on the northern perimeter. In 1990, for instance, there were 4,743 military and civilian personnel in Puerto Rico, 20,709 in Panama, and 3,401 in Cuba.

Much has changed since 1990, requiring strategic redesign and force redeployment. Today Puerto Rico is home to fewer forces, and U.S. Southern Command (SOUTHCOM) relocated from Panama to Miami in September 1997, leaving behind only small components. Guantánamo, long considered to have little strategic value, serves essentially as a political outpost in the last remaining communist bastion in the hemisphere, with about 1,200 military and civilian personnel.

During the 1980s the Soviet presence in Cuba included modern docks and repair facilities, reconnaissance aircraft, and satellite and surveillance

E-2C supporting counternarcotics operations.



U.S. Navy (Michael Rinaldi)

capabilities. The 28-square mile base located at Lourdes monitored missile tests, intercepted satellite communications, and relayed microwave communications to diplomatic posts in the Western Hemisphere. The facility was reputedly the largest maintained by the Soviet Union abroad. It is still in operation, but not at Cold War levels.

Yet fear of foreign encroachment persists. The United States is concerned about increasing Chinese interest and investment in Panama. Although such strategic affairs may not be crucial to Washington, they affect allies as well as regional stability and security and thus bear watching.

Geoeconomics

The mixture of geography, economics, and national power in the area exercises influence over trade and investment. For example, the Department of Commerce found that for the four-year period prior to 1988 a total of 646 U.S. companies invested over \$1.5 billion in Caribbean Basin Initiative (CBI) beneficiary countries. Moreover, from 1986 to 1995 U.S. trade surpluses with the area grew from \$297 million to \$2.6 billion. In 1995 exports grew by 15 percent, to \$8 billion, with

the Dominican Republic and Jamaica accounting for 55 percent. That year also saw surpluses with every country except Aruba, Dominican Republic, and Trinidad and Tobago. Last year the U.S. Trade Representative told an Inter-American Development Bank forum, "Taken as a whole, the Caribbean Basin is a larger market for our goods than . . . France, Brazil, or China. Likewise, the United States is the area's natural market, taking 80 percent of its exports and providing nearly \$50 billion in foreign direct investment."

The United States is the largest trading partner and source of capital flows for Caribbean Community and Common Market countries. CBI nations are a principal market for U.S. exports, totaling \$21.1 billion in 1998 (9.1 percent over the previous year). Exports to the Caribbean Basin accounted for 3 percent in 1998 (up 2.8 percent over the previous year). An estimated half of each dollar spent in the area is returned to the United States compared with 10 cents from Asia. Further, this trade supports some 400,000 jobs in this country and many more in the Caribbean.

Moreover, the Overseas Private Investment Corporation (OPIC) reported

in 2000 that from 1995 to 1999 it assisted in 38 projects in the area involving \$3.2 billion in investments, which are expected to generate \$1.5 billion in U.S. exports and, in turn, support 4,500 jobs in this country. Moreover, in February 1999, OPIC and Citibank established a \$200 million investment facility for Central America and the

Caribbean to help meet needs for medium- and long-term capital.

Geonarcotics

There are four dimensions in the drug phenomenon: production, consumption, trafficking, and money laundering. These activities threaten the security of states around the world.

Narcotics operations and capital ventures which they spawn precipitate both conflict and cooperation among state and nonstate actors in the international system.

Because of the global dispersion of drug traffic and physical, social, and political features of facilitating countries, power involves securing compliant action. In the drug world, this power is both state and nonstate in origin, and some nonstate sources exercise relatively more power than state entities. Politics revolves around resource allocation through the ability of power brokers to determine who gets what, when, where, and how. Because power in this milieu is not only state in origin, resource allocation is not exclusively a state function.

Drug operations generate complex relationships. Some involve nonmilitary pressures such as political and economic sanctions by the United States against countries it considers not proactive enough in combating drug traffic. Yet the problem entails more than the movement of drugs from and through the area; it involves money laundering, organized crime, corruption, arms dealing, and matters of sovereignty. Such activities are reported in the *International Narcotics Control Strategy Report* issued annually by the Department of State and are reflected in the following vignettes:

■ Operation *Dinero*, an international money laundering sting conducted out of tiny Anguilla from January 1992 to December 1994, led to the seizure of nine tons of cocaine and \$90 million in assets, including expensive paintings, *Head of a Beggar* by Pablo Picasso among them.

■ Cocaine seizures in only five nations—Bahamas, Belize, the Dominican Republic, Haiti, and Jamaica—totaled 3,300 kilos in 1993. Seizures for those same countries amounted to 6,230 kilos—almost double—during 1999.

■ Between 1993 and 1998, over 9,000 deportees were returned to Jamaica, most for drug-related offenses in Canada, the United Kingdom, and the United States.

■ In November 1998, American-owned Cupid Foundations closed its business in Jamaica after 22 years with a loss of 550 jobs. Cupid could no longer afford the fines incurred with the seizure of its merchandise by U.S. Customs because of attempts to smuggle drugs in its clothing.

Caribbean Community troops in Guyana, Tradewinds '99.



56th Signal Company (Michelle Labrie)

Table 1. Geographic and Economic Statistics

Country	Land Area (sq. km.)	Population	GDP (U.S. \$ million)	GDP Per Capita (U.S. \$)
Antigua and Barbuda	440	66,860	639	9,472
Barbados	430	265,630	2,496	9,789
Belize	2,960	238,550	705	2,949
Dominica	750	73,000	273	3,690
Grenada	340	96,200	360	3,758
Guyana	14,970	849,180	782	998
Haiti	27,800	7,800,000	3,900	460
Jamaica	10,990	2,576,000	7,445	2,893
St. Kitts and Nevis	360	40,820	305	7,193
St. Lucia	620	152,000	639	3,677
St. Vincent and the Grenadines	390	113,220	320	2,874
Suriname	163,270	412,070	1,104	2,474
Trinidad and Tobago	5,130	1,285,140	6,380	4,666

Sources: World Economic Outlook Database (International Monetary Fund) and World Development Indicators Database (World Bank).



■ Operation *Conquistador*, conducted March 10–26, 2000, involving the United States and 24 nations in the region, led to the issuance of 7,300 search warrants, arrest of 2,300 people, and seizure of 12,000 pounds of cocaine, 120 pounds of heroin, 150 pounds of hashish oil, 30 pounds of morphine base, 172 vehicles, 13 boats, and 83 guns.

■ Between November 24, 1999, and June 6, 2000, 12 freighters were seized in Miami on arrival from Haiti with over 6,000 pounds of cocaine hidden in their cargo.

■ Since mid-October 2000 Jamaica has produced a drug-related drama involving high-level police corruption, illegal wire-tapping of government officials, and the attempted assassination of the head of the National Firearms and Drug Intelligence Center.

Traditional and Emerging Issues

Security in the Caribbean has political, military, economic, and environmental implications and includes internal and external threats. Nonstate actors are as important as state actors. Indeed, many nonstate actors can mobilize more economic and military assets than some countries. Thus the security landscape reveals both traditional and nontraditional concerns.

Territorial disputes and geopolitical posturing are core traditional issues. Belize, Colombia, Guatemala, Guyana, Suriname, and Venezuela have serious disagreements, some of which involve multiple disputes. For example, Guyana faces claims by Venezuela for the western five-eighths of its 214,970 square kilometers of territory and by Suriname for 15,000 to the east.

Drugs, political instability, migration, and the environment are major nontraditional issues. There is no uniformity in the importance ascribed to them, but a comparison of the traditional and nontraditional categories reveals a generally higher premium on nontraditional issues. Some states, such as those in the Eastern Caribbean, face no traditional security concerns or overt threats.

The foremost nontraditional threat involves drugs. This multifaceted problem has increased in scope and gravity over the last decade and a half and added security effects. Crime, corruption, and arms dealing dramatically impact on national security and governance in political, military, and economic terms. They also infringe on national sovereignty.

Table 2. U.S. Jobs Dependent on Trade with Caribbean Basin Nations

Year	Jobs Dependent	New Jobs Created Per Year
1986	127,240	8,400
1987	138,120	10,880
1988	153,800	15,680
1989	165,800	12,000
1990	191,380	25,580
1991	200,260	8,880
1992	225,262	25,002
1993	248,552	23,290
1994	268,814	20,292
1995	306,120	37,306
1996	318,060	11,940
1997	368,640	50,580
1998	402,360	33,720

U.S. Department of Commerce formula of \$1 billion in exports equals 20,000 jobs.

Two decades ago most Caribbean leaders were reluctant to acknowledge that their countries faced a drug threat. But the severity of the problem grew until the danger was obvious inside and outside the area. For instance, at a meeting on criminal justice in June 2000, which was attended by officials

two decades ago most Caribbean leaders were reluctant to acknowledge that their countries faced a drug threat

of Europe, Canada, the Caribbean Basin, and the United States, the attorney general of Trinidad and Tobago spoke of “the direct nexus between illegal drugs and crimes of violence, sex crimes, domestic violence, maltreatment of children by parents, and other evils,” and remarked that “aside from the very visible decimation of our societies caused by drug addiction and drug-related violence, there is another insidious evil: money laundering.”

Engagement Challenges

Leaders in the Caribbean and the United States share a common assessment of the principal security concerns in the area: drugs, border disputes, poverty, corruption, natural disasters, illegal migration, insurgen-

cies, and the environment. Consistent with this view, SOUTHCOM is focused on counterdrug operations, peacekeeping, humanitarian assistance, and disaster relief.

One basic challenge in redesigning policy or strategy is determining which instruments and modalities should be changed. Except for Cuba, engagement does not warrant revamping existing practices. Some things work well and should be retained; others do not and should be modified. This discussion addresses both types.

Robert Pastor, who served on the National Security Council staff during the Carter administration, noted that Caribbean nations are too small and poor to directly challenge the United States. What really moved Washington was the threat of powerful adversaries from other parts of the world forging relationships in the area that facilitated the harassment of or attack on the United States or its neighbors. “When the threat diminishes,” he remarked, “so does U.S. interest. That accounts for the apparent cycle between preoccupation at moments of intense geopolitical rivalry and neglect at times of geopolitical calm.”

Today’s relative geopolitical calm justifies the concern of scholars and statesmen about the likelihood of a new phase of benign neglect or even worse. Hence it is important to highlight the challenge of staying engaged in both symbolic and substantive terms. Some years ago, the prime minister of St. Vincent and the Grenadines declared: “We have to behave like Grenada or Fiji to get attention, and when we stop misbehaving we are left to languish in blissful *obscurity*.”

Engagement demands flexibility and adaptability. For some missions, political expediency may require that nonmilitary personnel take the lead, or perhaps coastguardsmen as opposed to soldiers or marines. And flexibility and adaptability may be compromised by pushing the economy of force envelope too far. Also, engagement programs must not mistake silence for satisfaction. In addition, engagement requires the first team. U.S. leaders must not relegate decisionmaking to uninformed interns, junior staffers, or freshman bureaucrats.

Colombia, Cuba, Haiti, and Venezuela are clearly hot spots that should be watched closely; but so must other countries. Guyana bears scrutiny because of resurgent territorial claims, the impact of that dispute on investment and development (especially because U.S. and Canadian investors are involved), the likelihood of political instability, and the influence of drug trafficking. Another concern is violent crime in Jamaica, some of which affects foreign tourists and investors. In addition, Jamaican organized crime poses transnational dangers to law enforcement and economic interests. Drug trafficking and economic deprivation could also lead to renewed political instability.

The Dominican Republic faces issues of drug traffic, transnational crime, illegal migration, and political instability as that nation strives to translate rapid economic growth into less deprivation. The economy grew by 6.5 percent in 2000, 8.3 percent in 1999, and 7.3 percent in 1998, yet many Dominicans do not benefit from this wealth as some 20 percent of the country’s 8.5 million people live in poverty.



SH-3H during
counternarcotics
training.

U.S. Navy (David Rush)



Drilling holes for
moorings off
Guantánamo Bay.

U.S. Navy (Andrew McKaskle)

Programs must operate on several tracks encompassing broad interagency activities. Multifaceted engagement is especially vital in counternarcotics efforts. Countermeasures must be multi-level—regional and international as well as national—because drug operations are transnational. Moreover, the measures must be implemented on a multiagency level to grapple with jurisdictional, legal, social, and economic issues precipitated by the drug problem. In addition to government agencies, a range of corporations, non-governmental organizations, and international bodies such as the Organization of American States and the U.N. International Drug Control Program must play critical roles.

Multilateral security measures do not preclude bilateralism. Indeed, such measures may be more politically expedient because they can be designed and executed faster. There may be budget incentives to act quickly. Moreover, in light of resource difficulties, a premium should be put on regulatory and operational aspects of interagency work to guard against turf and prestige battles.

Whether it is an issue of drugs, territorial disputes, migrant flows, or the environment, engagement should be pursued on the basis of mutual interest. This is not always achievable. Sometimes even leaders of comparatively wealthy states, though partners, are unwilling to agree to collective efforts because of concern about their impact. Domestic factors such as political change and public opinion often make it difficult to honor or renew pledges. But despite such complications, leaders must not let the possibility of conflict undermine cooperation.

There are high stakes for the United States in the Caribbean. The stakes are also high for the Caribbean countries. New defense and foreign policy initiatives may encourage effective engagement and investment of the resources to match the national interest in an area that represents a global crossroads and an essential element for regional stability.

JFQ

Puerto Rico also warrants attention. Although a domestic question for the United States, Vieques detracts from U.S. conflict resolution credibility. While Vieques is allegedly indispensable for Navy training, this issue highlights a troubling aspect of relations between the mainland and the island.

President Fox
reviewing troops at
Campo Marte.



AP/Wide World Photos (Claudio Cruz)

Mexico's Search for a New Military Identity

By CRAIG A. DEARE

The election of Vicente Fox Quesada as president of Mexico has dramatically changed the political reality of his country and the region. Before the election of 2000, *Partido Revolucionario Institucional* (PRI) was in effect the Mexican political system for more than seven decades. Just as the end of

the Cold War required a thoroughgoing reassessment of U.S. national security strategy, the stunning defeat of the ruling party will significantly alter the way Mexico faces the future. These changes may well reshape both the country's security partnership with the United States and the role of Mexico in the Southern region.

Change and Challenge

Mexico's geostrategic importance to the United States has been a constant for years; thus its underlying political, economic, and social stability is

Lieutenant Colonel Craig A. Deare, USA (Ret.), is professor of national security affairs in the Center for Hemispheric Defense Studies at the National Defense University and has served as country director for Mexico in the Office of the Secretary of Defense.

extremely significant. It is the second largest U.S. trading partner after Canada and the second largest market for goods and services, surpassing Japan since 1997. As the fifth largest producer of oil in the world, 1.5 million barrels of Mexican petroleum exported each day satisfy almost 17 percent of the 9 million barrels demanded daily by its neighbor to the north. Increased trade with Mexico reduces poverty in Central America, easing illegal immigration into the United States, and maintains stability and economic health in that region.

Relations with Mexico will depend on how well it manages political, economic, and social transformation. The transfer of power from PRI to the *Partido de Acción Nacional* (PAN) was the first time there has been a peaceful change of regimes in the nation's history. The implications of the fall of PRI are difficult to overstate. When the party took control in 1929 from the *Partido Revolucionario Nacional*, Mexico had a primarily rural population of 15 million. When PRI left power, the country was 75 percent urban, increasingly industrial, and had nearly 100 million people. The political culture of Mexico was described in the past as corporatist-bureaucratic-authoritarian.

The system is authoritarian in the sense that one party, the Partido Revolucionario Institucional, has monopolized the national political life for six decades. It is top-down and "democratic-centralist" almost in a Leninist sense. It is bureaucratic in that it is a machine and a system that governs Mexico, not any single individual. It is corporatist in that the PRI incorporates within its ranks the major corporate or functional groups in Mexican workers, peasants, and the so-called "popular" sector which is supposed to include all others.¹

For over a half century one-party rule permeated every aspect of political and economic life.

Disassembling the legacy of PRI presents serious challenges. First is a largely centralized and command-directed economy that up through the 1980s left the country vulnerable to external market forces. It is true that



President Fox visiting military relief shelter.

AP/Wide World Photos (Jose Luis Magana)

real economic liberalization and reform began in the early 1980s, largely as a reaction to economic crises. Nonetheless, the growth has been unevenly distributed and remains focused on oil and sectors favored by central planners. Land reform, a fundamental issue of the 1910 revolution, remains problematic. Vast areas once held by wealthy landowners have been redistributed among millions of *campesinos*, a popular political move. But owners of small plots are finding it difficult to compete with efficient agro-businesses of developed nations, and further reforms are necessary. Endemic and constant corruption is more serious because of its effect on drug traffic. Moreover, the surprising uprising in 1994 by the *Zapatistas* in Chiapas underscores the fundamental problem of social and economic inequities in different regions.

Military Contacts

Though some social and economic problems of transformation have military implications, they require nonmilitary solutions. On the other hand, these problems must be

tackled as security issues, with illegal drugs among the chief concerns. U.S. demand for cocaine, coupled with supplies from the Andean ridge, has created a situation that threatens Mexico through increased criminal activity and corruption. Ideally, better relations with the United States should ease the burden of coping with military as well as nonmilitary threats to national and regional stability.

The objectives of Mexican foreign policy are national sovereignty, nonintervention in the affairs of other states, and adherence to international law. This policy has evolved because the country is located next to the United States. Given its geographical asymmetries, Mexico has sought to reduce intervention in its internal affairs. To further limit outside influence, it has preferred bilateral to multilateral dealings. This challenges policymakers in the conduct of affairs with their counterparts who find themselves screened from external actors by the *Secretaria de Relaciones Exteriores* (SRE), or foreign ministry, a condition which leads to complication and delay.



Zapatistas supporters
in Oventic, Chiapas.

AP/Wide World Photos (Eduardo Verdugo)

Mexico's perspective on national security issues must be appreciated before considering bilateral relations. Basically *national security* is not found in

the army and navy are independent cabinet-level agencies within which the air force and naval infantry function

the country's lexicon. After World War II, such expressions were avoided to escape confusion with the national security doctrine concept being used in the Southern Cone by authoritarian regimes. Mexico only began to use the term in the 1970s and 1980s, but without defining its scope. The military has historically seen its role as reinforcing national stability.

The debate over an acceptable definition has continued without either official or academic agreement. This is emblematic of a nation that has struggled with its place in the world despite being a major power on the Caribbean and Central American scene. Because the government has difficulty deciding

what constitutes national security, it has trouble assigning roles and missions. As a result, the army and navy have been relatively free in defining their missions over the past 40 years, principally because of governmental autonomy whereby accountability has not been traditionally demanded by the legislature or society. Indications from the new administration suggest that this approach could change. The United States must be attentive to this development.

It is also worth noting that the army and navy are independent cabinet-level agencies within which the air force and naval infantry function. This explains why these organizations are essentially different and must be dealt with independently in the short term.

As PRI built on support from various segments of society, a pillar of the corporatist model was the army.² By design, the army was part of the political structure. The navy has not occupied a similar role since it has developed on the margins and has not been formally included in the PRI system. Although most modern militaries have gradually

integrated services into a unified armed forces, the Mexican army and navy are established under the *Secretarías de Defensa* and *Marina* and exist separately and compete for scarce resources, a situation that generally favors the army. Although not a fortuitous relationship, the navy accepts it as a fact of life. Furthermore, there is no organization like a joint chiefs of staff, much less an office of the secretary of defense. This may change under the new administration, but it is a legacy of a political system developed by PRI and is regarded by many as a stabilizing relationship which should not be modified.

Attracting the attention of U.S. defense policymakers is a difficult proposition for Mexico. Its structure does not lend itself to dealing with the Pentagon. The defense and naval departments are led by four-star flag officers who are uneasy working with civilian officials at home, much less foreign governments. Similarly, the Chairman of the Joint Chiefs of Staff has no equivalent, nor does the Joint Staff. The defense secretariat owns the land and airspace while the naval secretariat controls the coasts and inland up to the ten kilometer mark. The army and navy coordinate when necessary, but the concept of jointness is foreign. Mexican services simply operate independently of one another. Clearly the structural interface is problematic.

One anomaly is the unified command plan. U.S. Southern Command (SOUTHCOM) has an area of responsibility that includes the land mass south of Mexico, the waters adjacent to Central and South America, the Caribbean Sea, the Gulf of Mexico, and part of the Atlantic. However it does not include Mexico which, like Canada to the north, is not assigned to a regional commander, a condition that satisfies Mexico. The country did not interact with SOUTHCOM when it was located in Panama and continues that practice now that the command is headquartered in Miami.

When defense matters require a high level of attention, Mexico turns to Washington which presents structural problems. The army or navy may appeal to one of several places. If



Mexican soldiers
boarding truck,
Chiapas.

AP/Wide World Photos (Eduardo Verdugo)

the issue is training or equipment, it may fall within service equities. If it is operational, the logical focus may be the Joint Staff, even though that organization does not support unified commanders. If it is a question of policy, Mexico may consult the Office of the Secretary of Defense. Needless to say, this interface structure cannot be described as user friendly.

Bilateral Relations

The coinciding interests and policies of Presidents George Bush and Carlos Salinas led to subtle improvements in relations between their militaries beginning in the early 1990s. The North American Free Trade Agreement in 1993 was a major help, a pact that would have been inconceivable ten years earlier. The *Zapatista* rebellion was seen on both sides of the border as potentially destabilizing for Mexico. As Presidents Bill Clinton and

Ernesto Zedillo continued to nurture a broader relationship, bilateral military affairs entered a new phase.

In the early 1990s the Chief of Staff of the U.S. Army, General Gordon Sullivan, and his counterpart, General Antonio Riviello Bazón, established a close relationship. In 1995 General Enrique Cervantes, Riviello's successor, went to Washington for Sullivan's retirement ceremony. There he called on Secretary of Defense William Perry and extended an invitation to visit Mexico. Later that year Perry made the first trip by a Secretary of Defense to Mexico and proposed forming a bilateral working group. The original five issues addressed by this group centered on items considered by Washington to have mutual interest: counternarcotics, education and training, force modernization,

airspace sovereignty, and disaster relief. The last issue was selected to ensure that Mexico would continue contributing to the process. Perry suggested the working group to Cervantes, who was interested but suggested such a decision had to be reached by President Salinas. Perry understood and raised the matter with the President. Because Salinas liked the idea, *Defensa* was tasked to make the system work.

The working group was organized with representatives from the Departments of State and Defense. State participation was seen as tied to the Mexican foreign ministry, needed because of the inability or the unwillingness of *Defensa* to participate without top cover. The Principal Deputy Under Secretary of Defense for Policy was charged with running the group because Mexico had indicated that its lead official would be the under secretary for bilateral affairs. The official of corresponding

protocol rank in the United States was the Deputy Secretary of State. The issue of interface was alive and well, with the Washington team led by a civilian DOD official and his counterpart being a civilian foreign ministry official from Mexico City as the military endeavored to act in this uncomfortable new role.

Another awkward aspect was the insistence on including *Marina* in the lashup. From the U.S. perspective, this bilateral relationship needed to include all elements of the Mexican defense establishment because the Department of Defense controls all components of the Armed Forces. In reality, the participation of *Marina* was seen by *Defensa* as unnecessary and unwelcome.

The first meeting was held in December 1995 in San Antonio at a downtown hotel rather than a military installation. Over the next four years the group experienced successes and failures because of many factors. Of the original topics, airspace sovereignty was dropped at the outset because of Mexican reluctance to discuss such issues with the U.S. military.

In the end the group focused on counternarcotics, owing to Mexican interest in the issue. This underscores a major lesson: Mexico aggressively pur-

sues matters of national interest but only politely entertains others. continual warnings that the operations and maintenance expense would be the responsibility of Mexico, the aircraft eventually were returned to the United States. The failure of this initiative came at the cost of goodwill established over years. Skeptics warned of the pitfalls of such an undertaking, but the players chose to believe that a new era of cooperation had arrived. It will take time to rebuild the lost trust.

Affairs between the United States and Mexico are among the most complex and extensive in the world. The textbook model for conducting foreign policy used by the Department of State does not fit this relationship. Federal agencies have intimate links with Mexico while many local and state governments operate bilaterally across the border. Rather than adopting a coherent policy, the United States pursues a bureaucratic maze of policies toward its neighbor. Thus relationships are difficult, especially in the realm of military contacts.

An assessment of military-to-military affiliation must consider differences between the two nations in strategic, political, and military terms. Transformation puts enormous internal pressure on Mexican institutions. Among issues that must be addressed are the change in regime (including an assertive legislature), economic transformation, endemic corruption, growing criminal activity, illegal immigration, and narcotics trafficking. Increasing wariness in Washington on the part of Congress has made these challenges even tougher. U.S. domestic political realities suggest that the near term prognosis is not promising.

Policymakers on both sides of the border will place greater attention on matters of mutual economic interest, while military issues are relegated to the periphery. The Department of Defense must continue to deal with

Mexico cautiously and respectfully. The fundamental lack of trust and confidence on the part of the Mexican military toward the United States, in particular in the army, makes it important to not push too far too fast, especially with the regime change. Time alone will reveal how successfully both sides handle the situation.

JFQ

NOTES

¹ Howard Wiarda, "Mexico: The Unraveling of a Corporatist Regime?" *Journal of Interamerican Studies and World Affairs*, vol. 30, no. 2 (Spring 1988), p. 2.

² President Lazaro Cardenas includes the army inside the ruling party. See Roderic A. Camp, *Generals in the Palacio: The Military in Modern Mexico* (New York: Oxford University Press, 1992).

Mexico aggressively pursues matters of national interest but only politely entertains others

sues matters of national interest but only politely entertains others. In an effort to make the relationship work, DOD developed a plan to assist in counternarcotics. The first element was a train-the-trainer program, implemented with counterdrug funding. More than 3,000 soldiers were trained between 1996 and 1999, mostly at Fort Bragg by the 7th Special Forces Group in tactics, techniques, and procedures for Mexico's airmobile special forces groups. This aspect of the program was relatively successful.

The second component was providing *Defensa* with 73 UH-1H helicopters drawn from the Army. Despite

Battling Storms

Delivering water at
Soto Cano air base.



U.S. Navy (Michael J. Turner)

Interagency Response to Hurricane Mitch

By MELINDA HOFSTETTER

One objective of the United States in the Western Hemisphere is minimizing the human cost of conflicts and natural disasters. This requires a capability for emergency response assessment to provide relief with the attendant objective, according to the Secretary of State, of decreasing "the need for U.S. disaster assistance through increased host government

disaster management." These objectives require marshalling Federal agencies in conjunction with other national, multinational, and nongovernmental organizations (NGOs). But the success to this point is debatable. The humanitarian crisis in the wake of Hurricane Mitch in October 1998 revealed that the ability of the Nation to respond to such complex contingencies remains deeply flawed.

Hurricane Mitch was the fourth most powerful Caribbean hurricane of the 20th century and the most devastating to hit Central America in 200

Major Melinda Hofstetter, USMC (Ret.), served on the faculty of the Joint Military Intelligence College and currently is associated with the Center for Disaster Management and Humanitarian Assistance at Tulane University.



years. Sustained winds of 180 miles per hour killed 10,000 and devastated large sections of El Salvador, Guatemala, Honduras, and Nicaragua with the greatest devastation in Honduras and Nicaragua. Heavy rain caused flooding, mudslides, demolished infrastructure, and further loss of life. Local economies may take more than a decade to recover from \$3.5 billion in property damage and the displacement of two million people. Yet this scenario was not unforeseen. When U.S. Southern Command (SOUTHCOM) began a series of exercises known as *Fuerzas Aliadas* (Allied Forces) in 1996 at Joint Task Force B (JTF-B), Soto Cano Air Base in Honduras, it posited a one-in-200-year hurricane hitting Central America.

First Responders

Foreign assistance began almost as the hurricane hit with over 40 countries offering relief. Mexico sent more than 400 soldiers and 28 transport helicopters, 12 cargo planes, 30

bulldozers, and two naval hospital ships. Argentina, Canada, Costa Rica, Cuba, Germany, Japan, the United Kingdom, and others also sent equipment and personnel.

Many countries, including the United States, forgave debts while the World Bank pledged \$1 billion in no-interest loans. In addition, the Inter-American Development Bank reprogrammed loans to the region and approved new financing for Honduras, Nicaragua, and Guatemala.

Despite this major response, the flow of information was hampered because of mass chaos and general unpreparedness for the disaster. After the hurricane hit, SOUTHCOM gave the green light to JTF-B to put all aircraft in the air and exercise lifesaving measures by plucking people from rooftops and the water and moving them to safe havens. Because JTF-B had insufficient assets, U.S. Army South in

Panama was ordered to deploy to Honduras. Poor weather delayed flights until November 2–3, when CH-47s, C-130s, and C-27s moved in-country.

Because a standing JTF-B mission was support of disaster relief, there was an order on the shelf and preparations for execution started within hours, without a directive from the Joint Chiefs. No warning or execute orders came from SOUTHCOM, and preparations were ad hoc. Moreover, SOUTHCOM issued guidance for developing an exit strategy before forces began to be deployed.

This operation was named *Fuerte Apoyo* (Strong Support) and conducted in three phases:

- Phase I: emergency response (October 28–November 28)—lifesaving and delivering aid such as food, water, and medical supplies

- Phase II: rehabilitation (November 28–February 20)—repairing critical infrastructure and providing relief supplies so that countries could complete work on their own, and reestablishing national capabilities for health and welfare, an explicit objective of U.S. policy

- Phase III: restoration (February 20–September 1)—implementing the long-term effort to assist affected nations in restoring pre-hurricane conditions.

Interagency Coordination

Presidential Decision Directive 56 (PDD 56), the policy on complex contingency operations issued in May 1997, directs interagency teamwork, identifies responsibilities, specifies planning for coordinating all Federal agencies, and offers timely strategic guidance. Even though it calls for a cabinet-level executive committee to supervise participation, the Commander in Chief, Southern Command (CINCSOUTH), reportedly issued initial guidance alone. The lack of civilian direction reduced unity of effort. Moreover, the so-called CNN effect, with media coverage and phone calls from the public replacing doctrine and planning, appeared to drive the early U.S. response.

In November 1998, Presidential Determination (PD) 99-03 directed the drawdown of \$30 million in both goods and services from defense stocks under the Foreign Assistance Act of 1961. The politically-charged nature of

Transporting equipment from Puerto Cortes, Honduras.



U.S. Navy (Leland B. Corner)

the operation led to disjointed actions on the highest levels, which hampered decisionmaking. As a result, a task force was organized under the White House chief of staff and co-chaired by the National Security Council and the Office of Management and Budget. But the PDD 56 concept of coalescing agencies did not materialize because many members of the task force were unfamiliar with political-military plan-

without implementation of PDD 56, guidance was not transmitted to the operational level

ning. Lacking a plan, no intent was defined, no assets were identified, no endstate was established, and no agency responsibilities were settled. Moreover, without implementation of PDD 56, major policy and doctrinal-level issues were left unresolved, and guidance was not transmitted to the operational level. In fact, formal requests for forces were often ignored because the source of funding remained

uncertain. The consequence of inaction on the national level included delays in phase II support, lack of coordination in the field, wasted resources, and duplication of effort.

Crafting the Response

Why was PDD 56 not implemented? One might hypothesize that a Rwanda-era mentality had taken over. During the Rwandan crisis, the highest levels of the Government were still reeling from the Somalia debacle and preoccupied with developing a political-military plan for Iraq. At the time of Hurricane Mitch, the National Security Council was busy planning for Kosovo and Iraq once again.

The Agency for International Development (AID) is the normal interagency coordinator for such relief. Through the Office of Foreign Disaster Assistance (OFDA) and with the authority of the White House, it assumes the lead in organizing humanitarian assistance, assessing needs, and procuring supplies, services, and transportation. This office can also fund certain activities carried out by NGOs and U.N. agencies outside the continental

United States. For Federal agencies to get involved formally and financially in foreign relief, specific conditions must be met. For natural or manmade disasters and complex emergencies, OFDA must determine that lives are at risk and that the host nation cannot manage the crisis and will accept help. Funds may be accessed only after a declaration of disaster by the country involved and the U.S. ambassador or chief of mission, which may result in:

- deploying regional advisors
- using disaster assistance authority (an immediate \$25,000 in cash may be authorized)
- providing disaster relief commodities from OFDA stockpiles
- deploying an assessment team
- deploying OFDA disaster assistance response teams (DARTs)
- funding proposals from voluntary organizations, NGOs, international organizations (IOs), and U.N. agencies.

The magnitude of the Hurricane Mitch crisis called for a combination of these responses.

Both Central America and the Caribbean benefit from a well established OFDA program. An immediate advantage during the hurricane response lay in the solid host-nation relationships the office developed over years. During and between disasters it committed considerable resources to prevention, mitigation, and preparedness, including training and stockpiling supplies. It employs the military only as a last resort, primarily because of expense and the heavy maintenance package. In addition, U.S. forces deployed overseas may be distrusted. Finally, there is a military concern over being tied down. Because of the scope of Hurricane Mitch, DOD was approached by OFDA and became subordinated to the agency, a normal practice during disaster relief operations.

When it became apparent that the storm posed a tremendous danger, a strong response by civilian and military components was expected. OFDA had an ongoing relationship with the Office of the Deputy Assistant Secretary of Defense for Peacekeeping and Humanitarian Assistance and with

C-5 arriving at Soto Cano with building supplies.



Unloading pallets of rice at La Mesa, Honduras.



West Virginia Air National Guard (Mike Pitzer)

U.S. Navy (Michael J. Tuernier)

SOUTHCOM, especially the command's logistics directorate.

Hurricane Mitch called for an even broader effort than the standard interagency relationships implied. As an OFDA official observed, "the disaster quickly exceeded our ability to coordinate." Consequently, a decision was made to assign liaison officers to U.S. military advisory groups in the countries affected and to SOUTHCOM headquarters. Beginning in late October, AID sent OFDA assessment teams to assist indigenous relief workers. Moreover, the dispatch of logisticians to liaise with the military advisory group in Nicaragua and the OFDA Central American headquarters in Costa Rica aided the flow of relief support.

Damage assessments were accomplished through the OFDA deployment of DARTs to each country affected by the hurricane. Four regional teams reported to Costa Rica. A team originally had been prepositioned in Belize where the storm threatened to strike initially, but after the hurricane switched course the team was sent to Guatemala and Costa Rica. A team from the United States traveled to Honduras. Besides assessment teams that went to Honduras daily, a group worked with ministries and the Emergency Operation Center in Tegucigalpa. The OFDA official at the center prioritized assessments and helped Hondurans get relief to hard hit areas. That same information was passed to JTF-B for helicopter support to carry assessment teams, food supplies, and relief items.

Regional Partnerships

The typical country team for such an operation consists of the ambassador, defense attaché, and military advisory group commander who play a major role. In Honduras the advisory group sent seven officers, three NCOs, and a number of civilians as liaisons to Honduran agencies, like the Standing Committee on Contingencies (COPECO), the equivalent of the Federal Emergency Management Agency. Officers were also dispatched to the Honduran military operations center to determine what assets were arriving from abroad and where they were needed. The Navy program manager in the group worked with his counterparts to determine how to rescue victims along the coast and move food via waterways, as most roads were impassable.

Seebees moving dirt and gravel for relief efforts.



COPECO had offices on the national and regional levels as well as local emergency centers. But its personnel thought the hurricane would hit the north coast, where all the assets had been moved. Then the storm hit the capital and traveled south. The committee lacked authority to request

the military advisory group worked with Honduran officials to determine relief priorities

what was needed from various ministries. It was understaffed and underfunded and suffered from poor facilities, communications, and maps. The telephone system was overwhelmed. These problems stalled relief efforts on the national level. With help from the advisory group, COPECO moved to quarters provided by a private engineering company with international phones, computers, copiers, and fax lines to emergency centers. This Honduran operations center, known as the National Commission for Emergencies (CONE), was subordinate to the ministry of government and justice.

The military advisory group worked with Honduran officials to determine relief priorities. An air tasking order was established to move supplies to the right places and in the right quantities. Daily meetings with host-nation officials reviewed available air and ground assets and the needs of individual districts, including food supplies. One result was the production of movement tables for the following 48 hours. JTF-B, AID, and OFDA formed a cell to receive calls for assistance and to coordinate with CONE members: ministries of health, transport, public works, and government, emergency centers, mayors, community leaders, and the military. Priorities were established based on available supplies, support personnel, helicopter capability, and distance to affected areas. CONE also hosted nightly briefings until its members were able to return to their own offices.

Despite the cell, the chaotic situation made planning integration difficult. The cell continued taking calls from the private and public sectors.

When CONE briefings ended, no consistent venue for sharing information existed. Exchange and response relied heavily on NGOs. In general, JTF-B coordinated with OFDA, which worked with NGOs on needs and damage assessment. Information was shared through after action reports. Pilots also provided data to the planning cell on landing sites, drop-off zones, resource validation, land and air accessibility, and disease hazards.

Host-nation agencies are vital despite institutional weaknesses. As noted by the report of the U.S. Army Center for Lessons Learned on Hurricane Mitch, the operation demonstrated that "integration of host nation military at every juncture . . . to create a common bond, improve situational awareness, and provide better all around security" is imperative.

Coordination and Training

Civil-military collaboration is vital in disasters. Yet lack of coordination, access, and unity of effort presented ongoing deficiencies in Honduras. Assessments were conducted by the Office of Foreign Disaster Assistance, U.S. Special Operations Command South, U.S. Army Corps of Engineers, U.S. Army Community Health Promotion and Preventive Medicine groups, U.S. Air Force Rapid Engineer Deployable Heavy Operational Response Squadron, Army Chief of Staff Special Medical Advisor, nongovernmental organizations, and more. Accurate and timely assessments remain critical to shaping force structure, tailoring supplies to areas, prioritizing relief by country, driving planning considerations, and avoiding waste and duplication. Within OFDA, for example, there is a requirement for baseline standards of information and a protocol for emergencies.

There are surprisingly few unknowns in disasters. The fundamental characteristics are well understood. The imponderables involve location, extent of infrastructure damage, and casualties. When a region has qualified health institutions and defense establishments, the Armed Forces can successfully integrate with host nations. With integration comes a key consideration for mission completion, keeping lines of communication open, which falls

within the realm of nontraditional missions. As seen in this relief effort, with 19 countries providing support immediately, a unified front toward achieving common goals is indispensable.

After the hurricane, CINCSOUTH ordered that training with emergency operations centers be expanded through command and OFDA initiatives. There is ample opportunity for in-country, host-nation training to forge effective partnerships in disaster mitigation. But many communities are still living on flood plains in Central America like their U.S. neighbors who build homes on the San Andreas fault. There will never be the perfect response, but continued multinational exercises in the region will develop relationships for future disasters. SOUTHCOM designed the *Fuerzas Aliadas* Humanitarian 2000 exercise to simulate multinational, interagency relief operations with the participation governmental and nongovernmental organizations from Central America, the Caribbean, and the United States. It also conducted a regionally-oriented disaster relief command post exercise to enhance military coordination with governments, regional agencies, and other actors.



Sailors and marines arriving at Managua, Nicaragua.

U.S. Navy (Leland B. Comer)

A regional response coordination center could be organized in Miami under the supervision of OFDA or the United Nations. During Hurricane Mitch, many donors went straight to the countries concerned. The nature of some contributions may never be known because they bypassed existing



Unloading vehicles at San Jose, Guatemala.

U.S. Navy (Leland B. Comer)

coordination centers. In place of such bilateral responses, a regional response coordination center could gather similar requests to develop a macro list of needs to show donors. If there had been such a center in Miami, the first contact made by donors would have occurred in an area where the lines of communication and transportation were unaffected by the storm. These steps would have represented a regional approach while reducing workloads and shifting the task of finding supplies and generating prioritized needs and transportation plans to specialists (military, government, and international and nongovernmental organizations) at the regional center.

Civil-military communication can encourage a standard for international disaster response, establishing a template for long-term recovery. Countries affected by Hurricane Mitch decided that strong national bodies can handle information and interaction on the municipal level. These

bodies involve communities in self-help projects, emergency management courses, technical training, and emergency and risk planning.

Hurricane Mitch in Central America revealed a need to become more agile. The key to multilateral humanitarian assistance lies in not regarding each relief operation as unique. Mitigating the impacts of disasters is in the interest of everyone and thus such missions require careful consideration of the mechanisms necessary to acquire and use reliable information. Some obstacles to information flow are endemic to crisis management. Therefore, a sensible approach is for civilian and military groups to devise a combined program regulated by policies of accountability and transparency. **JFQ**

Amphibious assault
vehicle, RIMPAC '00.



out of joint

U.S. Navy (Michael D. Smothermon)

The Paradox of Joint Culture

By DAVID T. FAUTUA

Since the passage of the Goldwater Nichols Act in 1986, critics have raised the dangers of forming too close a bond among the services. Their fear is that doing so will subvert institutional traditions and culture, thereby stifling important but diverse perspectives. The friction of ideas was considered to be natural and necessary for joint warfighting. Being too joint, the argument goes, will breed collusion. Yet while some operators and theorists have outlined the pitfalls of restricting service-specific legacies, they have charged that not

doing so impedes true jointness. The absence of joint culture, moreover, has also meant that purple-minded members of the Armed Forces have found an absence of shared values in which to ground strategic thinking apart from priorities set by the services. Joint nonculture has triumphed. Indeed, articles published under the rubric of Out of Joint in *JFQ* have been largely devoted to the topic; thus a rereading of these contributions may explain the cognitive dissonance surrounding joint culture in the minds of joint warfighters.

Making the Journey

The inaugural issue of the journal was published in Summer 1993 and introduced readers to Out of Joint with an article that laid the foundation for the “undesirability of absolute jointness.”

Lieutenant Colonel David T. Fautua, USA (Ret.), is chief of strategy and campaign plan manager in the Joint Futures Lab, U.S. Joint Forces Command, and adjunct professor at the Joint Forces Staff College.

Contributed by Seth Cropsey, "The Limits of Jointness" contended among other things that "True jointness demands seamlessly linked operations between different military capabilities." But that fortuitous marriage would only occur if the services could "quarrel" over the meaning of jointness based on "ideas rooted in experience." In other words, open competition among the services over their unique perspectives on warfighting was seen as a precondition of jointness. Cropsey worried that Goldwater-Nichols defined "jointness as a diminution of the power of the individual services" and that Joint Pub 1, *Joint Warfare of the Armed Forces of the United States*, imposed "political correctness" by stating that "there is no room for rivalry on the joint team."

By not allowing the services to "squabble," ideas essential to jointness would be muffled, "such as the unequal division of budget cuts based on national requirements or national security strategy that may not rely on balanced forces." The way to find a common perspective, according to Cropsey, is not to exhort the military to get one, but to "provide one that is based on the ideas rooted in experience."

Michael Vlahos pursued the same argument in "By Our Orthodoxies Shall Ye Know Us" (Autumn 93). Like Cropsey, he praised the practical application of jointness, but was troubled that the term would become a rhetorical "grail," thereby causing tunnel vision in strategic thinkers. Jointness also appeared to him as counterintuitive, even sinister, given service parochialism during peacetime. Vlahos suspected that the concept is really a peacetime survival tactic used to stave off budget cuts. Under the politically unassailable cover of jointness, the services found a way to not only mask service-centric pursuits but to sanction them. In this light, jointness spelled disaster, which Vlahos warned would "not focus our minds on the next challenger or the next war."

What is striking about both Cropsey and Vlahos is that despite acknowledging how service cultures have been obstacles to jointness, they prescribe reliance on service traditions to achieve it. "Ideas rooted in experience" are precisely what define and confirm service distinctiveness.

It is difficult to imagine that legislation can muffle service-centric culture. Beyond service trumpeting, the authors leave an unveiled impression that their knights could win wars seemingly on their own, affirming that "we breed cranky individualism because we believe, when all is said and done, that warfare is about LeMay being superior to Krushchev, or Horner being superior to Saddam." Moreover, if deceit and pursuit of self-interest lurk in the nature of jointness as Cropsey thinks, it appears counterintuitive to conclude that protecting service traditions will somehow curb deceit and the pursuit of narrow-minded interests.

Jointness as Synergy

It took a third contribution by Bernard Trainor, "Jointness, Service Culture, and the Gulf War" (Winter 93-94), to finally suggest that joint culture was a crucial but as yet incomplete building block in elevating service thinking to the level of joint warfare. Without joint culture, the services would present their requirements "without regard to their compatibility with that of other services." Nor would service culture accommodate "a joint way of thinking" under a joint

Out of Joint: A Universal List (1993-1999)

Seth Cropsey, "The Limits of Jointness," issue 1 (Summer 93), pp. 72-79; Michael Vlahos, "By Our Orthodoxies Shall Ye Know Us," issue 2 (Autumn 93), pp. 108-10; Bernard E. Trainor, "Jointness, Service Culture, and the Gulf War," issue 3 (Winter 93-94), pp. 71-74; Carl H. Builder, "Roles and Missions: Back to the Future," issue 4 (Spring 94), pp. 32-37; J.L. Whitlow, "JFACC: Who's in Charge?" issue 5 (Summer 94), pp. 64-70; The State of Civil-Military Relations: Two Views—A.J. Bacevich, "Civilian Control: A Useful Fiction?" pp. 76-79, and Mackubin Thomas Owens, "Civilian Control: A National Crisis?" issue 6 (Autumn/Winter 94-95), pp. 80-83; Robert B. Kupiszewski, "Joint Education for the 21st Century," issue 7 (Spring 95), pp. 72-76; Michael C. Vitale, "Jointness by Design, Not Accident," issue 9 (Autumn 95), pp. 24-30; William W. Mendel, "New Forces for Engagement Policy," issue 10 (Winter 95-96); David Yost, "Where Are the Arleigh Burkes Today?" issue 11 (Spring 96), pp. 125-27; Douglas C. Lovelace, Jr., and Thomas-Durell Young, "Joint Doctrine Development: Overcoming a Legacy," issue 14 (Winter 96-97), pp. 94-99; Harvey M. Sapolsky, "Interservice Competition: The Solution, Not the Problem," issue 15 (Spring 97), pp. 50-53; Lawrence B. Wilkerson, "What Exactly Is Jointness?" issue 16 (Summer 97), pp. 66-68; Charles J. Dunlap, Jr., "Joint Vision 2010: A Red Team Assessment," issue 17 (Autumn/Winter 97-98), pp. 47-49; C.P. Ankersen, "A Little Bit Joint—Component Commands: Seams, Not Synergy," issue 18 (Spring 98), pp. 116-21; Vincent M. Dreyer, Bruce C. Emig, and James T. Sanny, Jr., "The Joint Evaluation Report—Career Enhancer or Kiss of Death," issue 20 (Autumn/Winter 98-99), pp. 65-70; William A. Owens, "Making the Joint Journey," issue 21 (Spring 99), pp. 92-95; Peter F. Herrly, "The Plight of Joint Doctrine after Kosovo," issue 22 (Summer 99), pp. 99-104; Susan E. Merdinger, "Recipe for Failure: Centralization and U.S. Joint Forces Command," issue 23 (Autumn/Winter 99-00); Barry M. Blechman, Kevin P. O'Prey, and Renee Lajoire, "Grading Theater Engagement Planning," issue 24 (Spring 00), pp. 98-103; and Damian J. McCarthy and Susan A. Medlin, "Two Hats for the Joint Force Commander?" issue 25 (Summer 00), pp. 91-98.

JFQ

Aboard *USS Vincennes*
in Yokosuka Harbor.



out of joint

U.S. Navy (Dennis Cantrell)

command. For an exasperated contributor, J.L. Whitlow in "JFACC: Who's in Charge?" (Summer 94), the advent of the joint force air component commander was a thoroughly "unjoints" event. Problems of target prioritization and of command and control systems used in managing joint air operations was that they were "generally not joint, but Air Force."

A jarring assessment of how little things had changed almost five years later was offered in "Making the Joint Journey" (Spring 99) by a former Vice Chairman of the Joint Chiefs of Staff, Admiral William Owens. He found "service

parochialism is still the most important factor in force planning." Over a decade after Goldwater-Nichols was enacted, military operations remained more joint in name than

practice and the joint requirements process was observed more in rhetoric than execution. *Crystalline stovepipes* is the term applied by Owens to service approaches to jointness, something that he detected even in supposed joint commands. CINCs generally exercise command through assigned service components. Thus when the Joint Staff requests input on force structure, CINCs "usually compile the separate recommendations

furnished by service components . . . which are often drafted back in Washington by service staffs." This practice was also the subject of another contribution entitled "A Little Bit Joint—Component Commands: Seams, Not Synergy" (Spring 98) by C.P. Ankersen that identified it as a structural impediment to jointness. Component command headquarters act like the tentacles of the services rather than purple-minded staffs of joint warfighters working cooperatively under the joint commander.

Owens recommended radical change, arguing for consolidating military requirements under a joint requirements committee, a senior decision-making body chaired by the Secretary or Deputy Secretary of Defense and with the Chairman (or his designated representative) as principal military advisor. Only service chiefs (or vice chiefs) would be included, along with four senior civilians from the Office of the Secretary of Defense. "We should strip out all other requirements bodies," Owens advised, "and consolidate analytic resources in the new requirements committee staff." The process of determining requirements would be removed from the services, which would implement decisions of the committee. To "strip away" parochialism from

***crystalline stovepipes* is the term applied by Owens to service approaches to jointness**

Exercise at Joint
Readiness Training
Center.



U.S. Army (Raymond A. Barnard)

the battlefield, Owens proposed combining the “great enablers of combat power” (that is, intelligence, communications, logistics, and medical care) with the services acting as executive agents for these critical support functions.

These dramatic proposals were a refutation of the notion that protecting service cultures and traditions would eventually lead to jointness. If anything, the joint journey had proven the need for limiting service cultures as a means of curbing parochialism. As Owens saw it, the problem had to be corrected at the source, at service academies and in officer training programs where the objective was not simply to commission good officers but rather “good Army, Navy, Marine Corps, and Air Force officers.” By urging that the early education of officers inculcate joint culture, Owens raised more worrisome concerns. One could not help questioning the much heralded efficacy of the joint education or the value of joint doctrine itself.

A number of practitioners and theorists also warned of danger in an emerging joint culture. Lawrence Wilkerson, for instance, cautioned in “What Exactly Is Jointness?” (Summer 97) that true jointness is “not created by doctrine, joint or otherwise” nor “imparted by fiat” nor even to be regarded as “seamless.” From seminar discussions and comments by students, he concluded that true jointness is nothing more than the trust and understanding that soldiers, sailors, marines, and airmen have in their comrades as, above all,

experts in their service core competencies. “That is the only foundation on which true jointness can be built.”

No Safe Haven

Turning to education, Wilkerson fretted over “knee-jerk change” initiated by the Joint Staff, like the attempt to introduce learning objectives for force protection and risk management. These objectives were promulgated without much forethought to existing service priorities and appeared to be “rooted in political expediency,” which he found influences action by the Joint Staff. “That is why the increasing power of the Joint Staff is so troublesome,” he continued, “not now or over the next year but for the future.” Though Wilkerson stated that the increasing power of the Joint Staff did not yet fully “impinge” on the flourishing of service cultures or “healthy competitiveness,” he predicted that given its current direction it certainly will in time.

This was the same risk that Harvey Sapolsky had identified in “Interservice Competitor: The Solution, Not the Problem” (Spring 97). Without interservice competition, the services would “prefer to collude” and, even more distressing, use jointness as a “shield against public scrutiny.” Offering a cautionary insight that seemed to anticipate a proposal by Admiral Owens to expose both cadets and midshipmen to joint culture, Sapolsky cited “separate academies, distinctive uniforms, and unique military traditions” as attributes of the services that helped maintain public support for the Armed Forces. “Luckily, the services have not

F-15s from Kadena air base, Japan.



18th Communications Squadron (Marvin Krause)

entirely lost their identities, although some promoters of jointness wish they had."

It is perhaps not surprising that joint specialty officers (JSOs) have not escaped attention in an emerging joint culture. An assessment by Vincent Dreyer, Bruce Emig, and James Sanny, "The Evaluation Report—Career Enhancer or Kiss of Death" (Autumn/Winter 98–99), surveyed students and faculty at the then Armed Forces Staff College and found some troubling differences in understanding among immediate and senior raters on standards for evaluating JSOs. Of the raters queried, only 36 percent felt positive about their comprehension of the evaluation systems of the other services. Army officers felt the most in-

formed "though not strongly," followed by Marine raters and lastly by raters from the Navy and Air Force. Lacking confidence in raters, usually

from other services, an unsettling 78 percent of respondents saw a need to prepare or write portions of their evaluations for self-protection. Just as bothersome was the comparison of perceptions among officers of joint assignments before and after their tours. A total of 73 percent of the respondents who had no joint experience felt that a joint tour would impact favorably on their careers. That figure dropped to 50 percent when JSOs were

interviewed. The article concluded that the average joint specialty officer "seems less optimistic about promotion after joint duty," a judgment that seems to render premature claims of a corps of joint officers "rarely before found in our military institutions and culture."

Developing joint doctrine also has been hobbled by the lack of a supportive joint culture, if indeed such a thing can exist in this contentious arena. From the outset attempts to connect notions of joint culture and doctrine have been an exercise in forging links that break. This is partly due to the devotion of the services to their own strategic doctrine, which explains their violent resistance to accommodation. There are also differences in how services regard doctrine. Douglas Lovelace and Thomas-Durell Young addressed them in "Joint Doctrine Development: Overcoming a Legacy" (Winter 96–97), stating that historically "the services have not agreed on what doctrine means."

Lovelace and Young found that while the Army accepted joint doctrine as authoritative, the primacy of the soldier led to a caveat that doctrine is subject to judgment in application. That perspective contrasts with a culture in the Navy which "focuses on technology and independent operations" and "defines doctrine as conceptual"; and with the Marine Corps which emphasizes warfighting as primary and considers doctrine "a codification of its essence rather than a body of knowledge to be consulted in preparing for and conducting war." And those perspectives differ from that of the Air Force which "sees weaponry as

developing joint doctrine also has been hobbled by the lack of a supportive joint culture

a defining feature of war" and technology as supreme; therefore that service tends toward "a subordination of doctrine and operational procedures." Given that joint doctrine was intended to transcend individual perspectives and integrate the contributions of each service to warfighting, one can understand how the absence of a cohesive joint culture has complicated the task. Meanwhile, the endless process of building consensus among the services on draft publications leads planners to "reach for the lowest common denominator."

The Future of Jointness

That the idea of joint culture is a seemingly self-contradictory proposition to the ambitions of a self-professed joint military remains a puzzling paradox. Equally astonishing is how the term has survived as an expression of a possible truth even as proponents for jointness decry initiatives that might actually draw the services closer or recoil at the slightest suggestion of delimiting service cultures. Those who find this predicament as simply indicating a divided joint community unable to reconcile internal differences will overlook the profound irony that undermines the joint process. The joint community views this question as a Hobson's choice between service and joint culture. Advocates of joint culture may be struggling in vain to convince the joint community to discover a middle way to nurture, reassure, and sustain purple-minded warfighters because the military simply believes no such course exists or should exist.

Unfortunately, operationalizing joint doctrine in combat has cast doubt on the importance of a culture of shared values and a common theory of victory. If anything, as Peter Herrly pointed out in "The Plight of Joint Doctrine After Kosovo" (Summer 99), the Air Force-only conduct of Operation Allied Force in Kosovo "was inconsistent with joint doctrine in both word and spirit." Accepting the nature of the operation and the obsession with casualties which resulted in excluding ground forces, Herrly said that the debate "runs deeper than terminology and reveals shortcomings in military culture." He worried that decision-makers would increasingly conclude that there would be an "orderly, discrete, and bloodless military option: the air campaign" in wars of the future. As a former chief of joint doctrine on the Joint Staff (J-7) and a key participant in the devel-

opment of Joint Pub 1, *Joint Warfare of the Armed Forces of the United States*, Herrly reminded us that despite mantras on fighting wars jointly, airpower had become the policy tool of choice for combat and "has several times become further distorted to mean salvos of cruise missiles."

Whether the debate on joint culture continues along a paradoxical path depends largely on the degree of enlightened self-interest that the services place on jointness and thus their willingness to adjust institutional norms to accommodate the cultures of the other services. The prospect is not promising, given single-mindedness in pursuing service transformation agendas which encourage fierce competition for scarce resources. There is no doubt that the services will make efforts to cast transformation as joint-friendly, notwithstanding underlying disparities. Thus claims by the Army that a digitized, lighter, information-based objective force will contribute to jointness must be weighed against claims by the Air Force that it does not have sufficient lift for those light divisions because of internal priorities that favor strategic bombing aircraft.

Improving Army strategic speed may be a moot point as the Navy deploys new land-attack destroyers and the Marine Corps fields air amphibious formations to dominate littorals, an area that was once a province of the Army. And if strategic airpower should win the day, the conventional wisdom that the man on the ground is the ultimate arbiter of war will have to be amended.

Changes in service cultures, albeit modest or logical, are difficult and must come from within the Armed Forces. Thus if the description offered by Admiral Owens on the state of jointness is accurate, no amount of externally driven reform will fundamentally alter service culture. Perhaps the most that can be expected at this time is a forthright recognition that any common perspective is jeopardized if the services continue to operate under an illusion of joint culture. Without a cohesive culture of shared values that transcends service interests and inspires purple-minded warfighters to think as a team, genuine jointness will be muted by service parochialism when convenient, whether on a battlefield or joint staff. Many will be unsurprised and even take comfort from this situation. That is the curious paradox of joint culture.

JFQ



U.S. Army (Raymond A. Barnard)

Tracking exercise, Fort Polk.



Members of Parachute Regiment securing Lungi airport.

Headquarters Land

Organizing British Joint Rapid Reaction Forces

By RICHARD M. CONNAUGHTON

Britain sent the spearhead battalion of its joint rapid reaction force (JRRF) to Sierra Leone in May 2000. The unit took control of the airport at Lungi and began restoring order to the capital of Freetown, a preliminary to evacuating Britons and foreign nationals. Some 36 hours earlier, the unit had been in barracks at Aldershot. Operation Palliser was a classic example of a rapid reaction mission, something often sought yet rarely achieved. It validated

the concept of integrating operational planning, preparation, and execution under a permanent joint headquarters (PJHQ).

Thinking Joint

Both the previous Conservative and current Labor governments have viewed the capability to mount rapid reaction operations as in the national interest, in keeping with global responsibilities as a permanent member of the U.N. Security Council, to play a part in resolving selected crises. Britain had an inefficient response system in 1994 and a constant though apparently contradictory political intention to improve military efficiency while achieving cost savings.

Colonel Richard M. Connaughton, British Army (Ret.), is the executive director of National and International Consistency and the author of *The War of the Rising Sun and Tumbling Bear*.



CmC Fleet

Helicopter carrier
HMS Ocean during
operations at sea.

four-star chiefs of staff have no responsibility for command and control of operations

Before the establishment of PJHQ, command of joint forces deployed overseas was usually achieved by appointing one of three service commanders in chief as joint commander who, in turn, would designate his headquarters as joint headquarters. A chief was not normally appointed until the cabinet chose to deploy forces. This ad hoc, reactive arrangement was never efficient nor truly joint. In July 1994, to improve crisis management and responsiveness by the chain of command,

the secretary of state for defence announced the creation of a single, permanent joint headquarters under a chief of joint operations (CJO). The formation of a joint

rapid deployment force was also announced, to become operational by April 1996 at the same time as the new headquarters.

Development of PJHQ was the outcome of the Defence Costs Study (1994). From this so-called front-line first study came the operational, efficiency-based requirement to separate policy from operations, a consequence of which would be creation of PJHQ. An earlier study, *Options for Change* (1991), planned to reduce manpower levels in the Ministry of Defence from 12,700 to 3,750 by 1998. Reductions in Whitehall on that scale were possible partly because of the belief by the government that the core ministry responsibility was policy and that the function of operations could be separated and moved to a more efficient site in the suburbs.

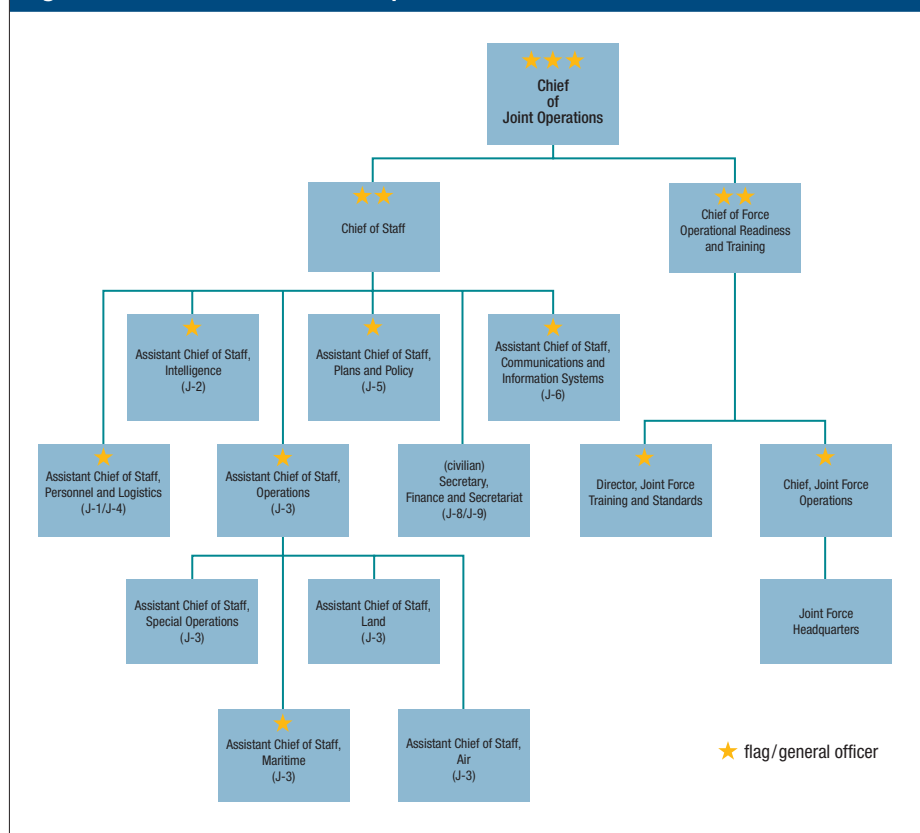
Responsibility for the defense and security of the United Kingdom rests with the ministry. Four-star chiefs of staff advise the chief of the defence staff (CDS) on military aspects of defense policy which affect the services, how the services are engaged, and service capabilities. CDS then represents their views to the government. Chiefs have no responsibility for command or control of operations. The commanders in chief retain full command and are responsible for delivering fully manned, trained, and equipped component elements at agreed states of readiness. The relationship between the single service supporting commands and PJHQ is reportedly very good.

The Defence Cost Study recommended establishment of PJHQ to permit "a proper, clear, and unambiguous connection between [government] policy and strategic functions and the conduct of operations at the operational level to be achieved." This proposed simplification of command and control resonates with the Goldwater-Nichols Act of 1986. In the post-Cold War era, when armed forces can increasingly be utilized in pursuit of diverse foreign policy objectives, the number of political actors interested in influencing operations has grown. Conceptually, CDS must shoulder the aspirations, interests, and often divergent opinions of the broad range of political leaders on the strategic level, leaving PJHQ to focus on operations.

An unambiguous connection between CDS and PJHQ has not been established. A ministry committee, the defence crisis management organization (DCMO), intervenes between the two, thus blurring command and control lines and providing further points of contact for political and military intervention. Prime Minister Winston Churchill loathed military committees: "You may take the most gallant sailor, the most intrepid airman, or the most audacious soldier, put them at a table together—what do you get? The sum total of their fears."

Britain divides activity on the strategic level into grand and military strategy. The difficulty of having DCMO intervening between CDS and PJHQ is the overlap of interest as organizations compete to perform on the military strategic level. As one commentator explained, "The problem with DCMO is that members bring to it their own experience and memories of the operational level of conflict so that instead of providing strategic level direction there is a tendency to duplicate that which is the responsibility and within the competence of PJHQ." It became evident after Operation Palliser that relations between DCMO and PJHQ had to mature. Political leaders and commanders must reflect on their precise areas of responsibility and confine themselves to them.

Figure 1. Permanent Joint Headquarters (PJHQ)



Planning Operations

In addition to dealing with crises, CJO is responsible for deliberate planning in the form of joint guides and contingency/operational plans. The latter replace joint theater plans originated in the Foreign and Commonwealth Office, essentially noncombatant evacuation operations concerned with extracting nationals in an emergency. Merging deliberate and crisis action planning enhances PJHQ flexibility. Nowadays, crises and subsequent operations do not telegraph their imminence, and PJHQ has a proven system of spotting, monitoring, and prioritizing emerging crises.

PJHQ classifies conflicts in four categories (quiescent, stirring, quickening, and surfaced), which then are put in three categories of interest. The normal state is the lowest level of activity, whereby intelligence is maintaining a watching brief on areas of operational interest and creating a priority list. Concurrently, staff planners are engaged in the joint staff development of contingency plans. Step 1 occurs when it is evident that a

crisis is emerging. A multidisciplinary contingency planning team is organized on the working level under a senior officer from the planning division. A team is expected to master the situation in order to advise the entire chain of command.

Not all efforts move to the third category of interest (step 2), formation of an operations team (OT). If a crisis evaporates or a decision is made that no operational activity is necessary, the contingency planning team may be disbanded. If the team progresses to step 2, it is subsumed into an operations team headed by a dedicated leader with a rank appropriate to the scale of operations. The role of the team is dealing with details associated with command, deployment, sustenance, and ultimately the recovery of the assigned force, and to be proactive and responsive in interfacing with the ministry and supporting commands. It does not deploy assets but continues until the operation is over. Unlike the United States, which allocates regional responsibilities to unified commands, PJHQ maintains a global watch and JRRF has a global liability. It is this crisis action planning that is undertaken with the ministry as part of the defence crisis management organization, whose main players are not collocated but are linked by a service

video conferencing system which also includes single service headquarters and key allies. The organization conducts conferences at least daily to review ongoing and emergent operations.

Implementing Joint Capabilities

Vice Admiral Sir Ian Garnett is the current chief of joint operations. His headquarters of 438 personnel has as its primary role:

To be responsible, when directed by CDS, for the planning and execution of U.K.-led joint, potentially joint, combined, and multinational operations, and for exercising operational command of U.K. forces assigned to combined and multinational operations led by others, in order to achieve [the ministry's] military strategic objectives.

CJO has no permanently assigned forces. Assets only come under his headquarters for operational missions. The ongoing military contribution to Bosnia, Kosovo, and the Middle East is therefore the responsibility of PJHQ. Added tasks include command of sovereign base areas in Cyprus, Gibraltar, and the Falkland Islands. Exclusions are precise, namely the strategic nuclear deterrent and defense of home base (territorial waters and



Marines aboard
HMS Ocean.

Figure 2. Joint Force Headquarters Deployments

Operation	Location	Timeframe
Caxton	Montserrat	March 1996
Purposeful	Central Africa	November–December 1996
Determinant	Congo/Zaire	March–June 1997
Alleviate	Albania	June–July 1997
Bolton	Kuwait	February–April 1998
Carrick	Indonesia	May–June 1998
Ladbrook	Congo	August–September 1998
Desert Fox	Middle East	December 1998
Basilica	Sierra Leone	January–February 1999
Agricola	Kosovo	June 1999
Langar	East Timor	September–December 1999
Barwood	Mozambique	February–March 2000
Palliser	Sierra Leone	May–June 2000

U.S. Marine Corps (Jimmie Perkins)

airspace, Northern Ireland, and counterterrorism). In general war, PJHQ has a role under article V of the NATO Treaty, possibly forming the national joint headquarters. CJO operational responsibilities include direction, deployment, sustainment, and recovery of the joint force.

Under CJO are two staff officers of two-star rank, a chief of staff, and a chief of joint force operational readiness and training (CJFORT). The branches under the chief of staff reflect U.S. and NATO staff organizations, facilitating the proper interaction with a NATO-organized coalition. A combined headquarters is similarly organized with branches 1 through 9, the principal difference being that it would be staffed by representatives of two or more member states. As a development of the St. Malo initiative, an Anglo-French combined headquarters exercise was held in June 2000. In short, both the chief of staff and PJHQ staff are organized to work with coalition partners.

CJFORT responsibilities were intended to ensure preparedness. The position of deputy for operational readiness and training arose from the Strategic Defence Review (1998) with the role of preparing JRRF and joint force headquarters (JFHQ) and monitoring readiness and joint training across five components (land, sea, air, special forces, and logistics). This involves directing tier 3 training on the operational and military strategic levels, coordinating tier 2 training on the tactical and operational levels through defense exercise planning, and formulating and assessing standards and essential tasks for JRRF with reference to manpower, equipment, sustainability, and collective performance. Oversight is achieved through monitoring, testing, and reporting on training and operations and facilitating dialogue among the services to exploit training opportunities.

JRRF comprises a pool of combat and support forces from which the United Kingdom will meet all short notice, crisis action planned, military contingencies. Its mission is:

To be a pool of highly capable force elements, maintained at high and very high readiness and trained to the required joint standards. JRRF is to be deployable and sustainable in joint force packages, tailored to meet the operational requirement, in order to conduct operations up to medium scale warfighting, nationally or multinationally under NATO, [Western European Union], U.N., [Organization for Security and Co-operation in Europe], or ad hoc coalition auspices.

The pool comprises the best trained units from across the military. This shift from relying on core formations is where JRRF differs from its



9821 Signal Company (Jeremiah Lancaster)

Scimitars deployed in
Egypt, Bright Star.

predecessors. The inclusion of special forces is another. Pool units are configured into two echelons. First echelon force readiness varies from 48 hours for spearhead forces and a joint task force headquarters (JTFHQ) to completion in 10 days, followed by more substantial second echelon capabilities with a phased entry in 11 to 30 days.

The first JRRF echelon could represent a potent force. It can contain a maritime task group organized around a carrier with frigates and destroyers, cruise missile capable attack submarines, maritime patrol aircraft, mine warfare protection forces, and royal fleet auxiliary (RFA) support ships. The naval element might also include an amphibious task group.

JFHQ is commanded by a chief of joint operations, a brigadier from the army or Royal Marines

In addition to light forces, the army could be represented by lead battlegroups from 1 Armored Division with parent brigades in the second echelon. Successful positioning of assets depends upon the force alignment with the strategic lift required to move it to be in place to deal with precise crises (six roll on-roll off vessels have been ordered and C-17 aircraft are to be leased pending the availability of the Airbus A400M in 2006–2007). Apache Longbow helicopters will soon be available. The Royal Air Force (RAF) first echelon contribution will be taken from across a range of capable systems. This is particularly important because of the need for air that can respond rapidly with intelligence, surveillance, target acquisition, and reconnaissance as well as the destructive capability to support light, high readiness land forces. Of note is the

construction of joint task forces from elements in the JRRF pool, as this leads to an inevitable ad hoc nature in the deploying force. Although this can be mitigated through training, there is a need to develop a genuine desire to fight as a team.

JFHQ is commanded by a chief of joint force operations (CJFO), a brigadier from the army or Royal Marines who will normally oversee JRRF operations that fall within the one-star command level. A larger scale operation would probably have a two-star commander. A group of two-star officers from all the services have appointments making them potential JTF commanders. The 55 members of the staff are broadly organized in the J-staff tradition. The headquarters forms the deployable element of PJHQ.

The JRRF concept is evolving, with phase 1 development having been completed in 1999. Culmination of phase 2—development of the full capability—will be Exercise Saif Sareea, planned for the Middle East in late 2001. Meanwhile, procedures are being refined as deployments go on. For example, there are operational liaison and reconnaissance teams (OLRTs), one of which can always move on 24 hours notice. Ideally the 6-man team will be commanded by CJFO, supported by staff officers who can be drawn from any branch of the staff. The impression that the team is top-heavy may have arisen during Operation Langar in East Timor, where the CJFO presence with an augmented OLRT was evident despite the total ground contribution of only a battalion tactical headquarters and a Gurkha company. The team also contains individuals with valuable experience who can advise ambassadors or heads of government in hot spots like Sierra Leone.

Jointness in Action

By May 2000 the U.N. peacekeeping force in Sierra Leone had seriously deteriorated. A number of the 8,700 peacekeepers had been killed and as many as 500 detained by the rebel Revolutionary United Front. Secretary General Kofi Annan appealed to the United States, United Kingdom, and France for forces. "We know that the international community and the Western countries were not ready to go to Rwanda, and after Sierra Leone I think there's going to be very little encouragement for any of them to get involved in Africa." These nations, who had plausible rapid reaction capabilities, declined the invitation from Annan to put combat troops in Sierra Leone under the U.N. flag.

Britain announced that it would only provide technical and logistical support to the United Nations per earlier agreements. Anticipatory contingency action was thus put in hand in the event that an evacuation of entitled personnel was necessary. At 1000 hours, the JTFHQ

commander, Brigadier David Richards, was ordered to deploy to Freetown to prepare a non-combat evacuation operation (NEO) under national auspices. He would have the capability to conduct the evacuation in a hostile environment and his OLRT was as much a reconnaissance as operations organization. Emerging hot spots were under constant review. British forces practiced an NEO in Sierra Leone over Christmas 1998 and two operations were conducted in the country during 1999.

Annan's linking of rapid reaction to Rwanda was apposite. To better respond to crises the United Nations formed the standby arrangement system in 1993. It contained information on units from member states available in principle on short notice. When acts of genocide began in earnest in April 1994, the details of 19 member states were held in the database. As urgent calls went out, no state made its forces available. All the database provided was swifter negative responses.

A decision was made after the Rwandan crisis to replace the database with a high readiness brigade (SHIRBRIG). National components would be designated from states normally associated with traditional chapter VI peacekeeping. Provision was made for command and control, training, and standard operating procedures.

SHIRBRIG made no move toward East Timor or Sierra Leone. When Bernard Miyet, the head of the U.N. Department of Peacekeeping Operations, was asked to account for this inaction, his military adviser, Lieutenant General Giulio Fraticelli, replied:

There are two issues related to the employment of SHIRBRIG. Firstly, it is not an entity that is currently under the control of the U.N. Each deployment needs the approval of the individual contributors. Secondly, the current advice we have from SHIRBRIG is that it will only be made available for operations mandated under chapter VI of the U.N. Charter, although we believe the SHIRBRIG nations are reviewing this policy. The mission in Sierra Leone . . . is mandated under chapter VII of the Charter (enforcement).

Because chapter VI peacekeeping is initiated only after diplomatic efforts and with consent of the parties involved, there is arguably no requirement for rapid reaction.

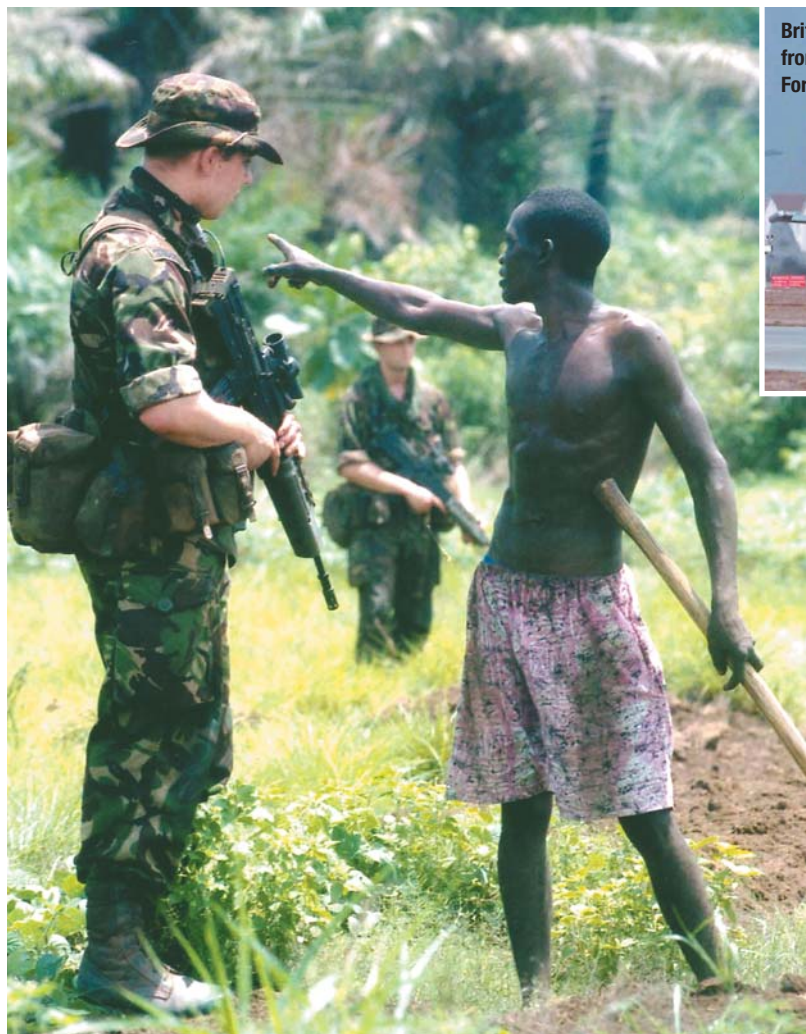
Initial support by London in response to the crisis in Sierra Leone stood in stark contrast to the zero response of SHIRBRIG. Britain, however, was the former colonial power in the country and provoked international condemnation by breaking the U.N. arms embargo. Accordingly there was a compelling reason for making good not only for having supported mercenary activities

but also because of valid criticism of the late response by Britain to floods in Mozambique in early 2000. SHIRBRIG and the prevarication over Mozambique prove that military effectiveness is insignificant in the absence of the political will to use it.

Some JTFHQ officers joined operations team planners in PJHQ to enhance understanding with subordinate headquarters. The eight key OLRT officers were in the air eight hours after being ordered to deploy 3,500 miles, arriving at Lungi Airport by midday on May 6. Richards requested PJHQ to immediately release the lead company of the spearhead land element, then the remaining forces. Because NEO could not be properly effected without helicopter support, four Chinooks were ordered to Sierra Leone via Gibraltar, Tenerife, Mauritania, and Dakar. The first pair arrived on the evening of May 7, only 30 hours after being tasked.

Meanwhile, the concurrent political and military activity





British EA-3 lifting off from Aviano, Allied Force.



U.S. Air Force (Keith Reed)

operating in the hostile environment of Sierra Leone within 36 hours. They faced a drugged-up, well-armed guerrilla force intent on inflicting casualties to stimulate the kind of withdrawal seen in Mogadishu (1993) and Kigali (1994). Moreover, the British troops were not acclimatized or fully protected against malaria, endemic in Sierra Leone. But they were trained to recognize symptoms: of the 4,500 personnel deployed, only 80 contracted the disease.

Some 299 expatriates were evacuated in the first 48 hours but the calming influence of the military stemmed the flow. By now OLRT had become JTFHQ, and Richards realized his mission was complete. However, he faced the probability that withdrawal would lead to the failure of the U.N. mission and fall of the elected government. JFC continued to perform protective operations. In the tradition of mission-oriented orders, this initiative was endorsed by London some days after it was unavoidably implemented in Sierra Leone. Following the evacuation, JRRF was ordered to protect the airhead to allow U.N. elements to enhance and reinforce.

The success of Palliser was largely due to commanders on the tactical and operational levels who were entirely focused on their responsibilities. On the tactical level, the paratroopers pressed on, keen to engage in the business for which they were trained until relieved by the commandos on May 26. In mid-June, 42 Commando also withdrew, leaving behind a profoundly more confident United Nations, a bolstered president, and a large team to help train the Sierra Leone army.

JFHQ staff members are used to working routinely on the operational level. Daily political-military meetings held in Freetown were rooted in traditional intervention doctrine. Their aim was penetrating the rebel decision cycle. Key considerations in that effort are the media; legal means; tasking special forces; information operations; liaison with coalition, political, and civil

Patrol from 42 Commando, Sierra Leone.

upon which rapid crisis reaction is founded moved apace. On May 7, orders were sent from London to redeploy Royal Navy assets. The amphibious ready group, led by the helicopter carrier *HMS Ocean*, sailed from Marseilles to Gibraltar and then to West Africa. This group had spent up to six months annually in the Mediterranean. In addition to *HMS Ocean*, it comprised the frigate *HMS Chatham*, two landing ships, and a replenishment vessel. Embarked in *HMS Ocean* was the 600-strong 42 Royal Marine Commando Group, which had heavier weapon support than the spearhead battalion, 1st Battalion Parachute Regiment. In the event close air support was required, the carrier *HMS Illustrious* with seven Sea Harriers and six RAF Harriers, with an RFA ship, was ordered to make for the West African coast from Lisbon.

On May 8, Lungi Airport had been secured and 1 Parachute Group, which included strong special forces elements, began to dominate its tactical area of responsibility. The paratroops were



Permanent Joint Headquarters

Chief of joint operations being briefed.

agencies; campaign planning; and force level logistics. As ever, success depends greatly on the commander, who must be a natural leader, the ultimate professional, schooled in joint and combined operations, politically aware nationally and internationally, and an astute manager of media relations.

Looking Ahead

The Strategic Defence Review provided real momentum for developing a joint operational capability. Operations in Sierra Leone, East Timor,

and Kosovo were supported by ministry funds, which was militarily and fiscally sound. The \$490 million (£325 million) CJO budget is used for routine expen-

ditures. As PJHQ is streamlined, it has directed responsibilities for formulating joint operational doctrine to a doctrine and concepts center. Logistic support has been rationalized under a chief of defence logistics. Joint helicopter command has been formed for command and control of battlefield helicopters, including 67 British-built WAH-64 Apaches. Both Harrier GR-7 and Sea Harrier FA-2 have been amalgamated in joint force 2000, which became operational in 2000. Joint training is planned for army and RAF ground-based air defense. A joint nuclear, biological, and chemical defense force has been organized with army and RAF assets. Moreover, there has been a basic change in officer training, combining service staff colleges into a joint staff college.

The movement toward an enhanced joint operational capability is unstoppable. The process will enlarge understanding and harmony with

other government departments and allies with a view to greater flexibility and interoperability. Joint staff officers represent a purple wave of the future who are doctrinally aware of the need to work together for interservice ideals.

Such laudable achievements reflect organizational change rather than a bottom-up initiative to influence attitudes. Joint and combined operations rarely reach down to touch common soldiers. Traditionally they are staff oriented. Therefore it is unsurprising to discover, after the organization of the joint nuclear, biological, and chemical regiment, for example, that there is no disciplinary act for joint organizations; thus the army commander cannot personally discipline the RAF members of his unit. And, as change progresses, servicemembers must realize that they are part of more than their own services.

As a teaching vehicle, Operation Palliser was rich in both lessons and promise. It defined the coming of age for PJHQ. "The real key to success," according to Brigadier Richards, "was and will remain the quality and motivation of personnel on every level; a willingness to encourage and use individual and collective initiative; a determination not to be thwarted by inevitable setbacks matched by a corresponding preparedness to innovate; an inability to accept anything other than excellence in the pursuit of assigned tasks; and, as ever, an irrepressible humor that ensures high morale."

JFQ

daily political-military meetings were rooted in traditional intervention doctrine

The Coast Guard and Maritime Security

By BRUCE B. STUBBS



U.S. Coast Guard (Patrick Montgomery)

Providing port security
for *USS Cole*.

The mission of the Coast Guard includes safeguarding the maritime interests of the Nation: the exclusive economic zone, areas adjacent to the continental shelf, and other waters of importance collectively known as *deepwater operating areas*. By deploying to deepwater regions for a range of unilateral, joint, interagency, and combined operations, the

fifth service protects American lives, property, and interests, thereby assuring maritime security.

Geopolitical realities, economic globalization, shifting demographics, technological change, finite resources, and fragile environments are dramatically affecting maritime interests. Oceans and waterways, in addition to carrying trade vital for the economy, will continue to act as conduits for transnational issues such as pollution, overfishing, illegal immigration, drug smuggling, terrorism, and proliferation. Moreover, burgeoning foreign economic links will further increase the volume and value of waterborne trade as well as challenges to maritime security.

Captain Bruce B. Stubbs, USCG (Ret.), is a technical director for Anteon Corporation; he served on active duty as the director of operational capabilities at Headquarters, U.S. Coast Guard.

South Korean fishing boat under observation.



MH90 helicopter with over-the-horizon inflatable boat.

U.S. Coast Guard

U.S. Coast Guard (R.N. Chaney)

To protect U.S. national interests against threats—known and unknown—the Coast Guard is developing an operational concept for safe-

the closer a threat appears to the United States, the more comprehensive the requirements of the Coast Guard

guarding deepwater regions. It will include maritime awareness, active and sustained presence, dynamic positioning, and standoff tactics. It is designed to ensure deployment of military, multi-mission, and maritime force packages on-scene when and where needed.

Knowing the Sea

Maritime awareness means possessing extensive knowledge of all events and activities that can impact on the maritime security and safety of America and its citizens. Events include vessel transits, fishing activities, pollution incidents, emergencies at sea, and illegal activities.

General awareness involves an overall knowledge of events, activities, and trends in a region. Operational commanders as well as deployed forces need an understanding of maritime

events in areas such as the Gulf of Mexico and the Bering Sea. Focused awareness is detailed knowledge of events and activities occurring in specific areas at all times. Deployed forces require knowledge of events in assigned patrol areas as well as fishing grounds, rookeries, sanctuaries, chokepoints, and shipping lanes or transit corridors. In addition, the closer a threat appears to the United States, the more comprehensive the requirements of the Coast Guard.

Both types of awareness can be achieved by various means, including space-based national sensors, maritime patrol aircraft (MPA), unmanned aerial vehicles, shore-based over-the-horizon radars, all-source intelligence, data links between netted forces, and shipboard sensors such as air- and surface-search radars and passive electronic surveillance systems. Moreover, awareness is not exclusively a service concern but rather a national task achieved by a two-way flow of information between the Coast Guard and other agencies, particularly the Department of Defense.



Mariners disembarking from HH-60J after rescue.

U.S. Coast Guard (Eric Eggen)



U.S. Coast Guard (Stephen Baker)

Raider boats conducting demonstration.

Operational data passes to maritime intelligence fusion centers (MIFCs), one on each coast. Their role is to collect, fuse, and analyze all-source intelligence and operational data and provide it to the Coast Guard in its areas of responsibility to build common situational awareness.

Surveillance of immense maritime regions, a prerequisite for general and total awareness, demands a range of national, shared, and service-specific space-based, air, surface, undersea, and land-based sensors and platforms. The optimal combination of systems reflects a balance between economy and effectiveness. Leveraging information and intelligence assets of other agencies helps

compensate for the size of forces relative to the area covered.

Realizing focused awareness is an immense challenge. It requires integrating surface assets and organic aircraft and boats, supporting MPA, and other systems. General awareness may also be reached by all-source intelligence gathered without committing MPA and surface assets. Such awareness comes from deployed forces that provide active and sustained presence. Dispersed but interconnected, these assets are key to surveillance and detection. A flow of tactical and operational data exists between deployed deepwater elements and MIFCs, each dependent on the other for force-wide situational awareness to determine if events warrant a response.

Presence

The Coast Guard seeks to eliminate threats early—at the source, either in international or U.S. territorial waters. Attacking problems at the source involves mobile training teams, marine safety offices overseas, foreign officers training in service schools, foreign naval and coast guard exercises, and multinational bodies such as the International Maritime Organization.



U.S. Coast Guard (Stephen J. Baker)

Coast Guard Cutter
Albacore off Virginia
Beach.

**armed helicopters and OTH-RHIBs
can generate standoff operational
assets that far exceed those
available today**

Pursuing security at sea cannot be exclusively reactive. As noted in *The National Oceans Conference Report: America's Ocean Future*, "International maritime criminal activities pose clear threats to our borders, our economy, our environment, and our national security and require strong offshore law enforcement." The Coast Guard attempts to initially address threats abroad. Failing that, it depends on intelligence and surveillance and on the deployment of forces to deter, contain, or respond before a danger reaches our shores. Consequently, the service maintains an active and sustained presence in domestic and international waters where the United States has vital interests. They will act as a highly visible deterrent and rapid response force.

Active presence embodies and displays U.S. authority and resolve but is broadly acceptable because of the service's reputation as a military, law enforcement, and humanitarian force.

Dynamic Positioning

The Coast Guard does not maintain a constant presence in every deepwater area. Instead it relies on dynamic maritime positioning based on intelligence and cuing. Just as police forces field their heaviest presence in high-crime areas, the bulk of deepwater presence is deployed in areas that most threaten maritime security. Intelligence and cuing, when combined with advanced command, control, communications, computers, intelligence, surveillance, and reconnaissance (C⁴ISR), add to deployed, highly mobile assets that place forces in the right place at the right time.

Overall awareness of maritime events guides dynamic positioning. Combining all sources of intelligence, including historical knowledge of trends in threats and real-time surveillance data, the Coast Guard can shift efforts and forces between areas. This requires highly mobile assets and flexible command, control, and logistics systems.

Forward-patrolling forces will generally respond to an event. They may be reinforced in response to larger contingencies or to conduct coordinated campaigns.

Standoff Maritime Tactics

The capabilities of planned deepwater replacement forces must be increased. By exploiting cutting edge technologies and the speed, range, and endurance of both armed helicopters and over-the-horizon, rigid-hull-inflatable-boats (OTH-RHIBs), it can generate standoff operational assets that far exceed the capabilities of those available today.

Because of advances in technology and operational doctrine, it is no longer necessary to put cutters alongside surface vessels to conduct a mission from start to finish. Instead a major cutter with armed helicopters or OTH-RHIBs can quickly make contact with ships within eyesight or 100 nautical miles away, depending on weather and tactical scenarios. With such means for delivering boarding teams, the role of cutters is reduced in the active portion of a law enforcement mission, providing true standoff capability for a quantum change in flexibility and usefulness.

Development of robust, integrated standoff capabilities also will require the Coast Guard to organize its forces into multimission maritime action units (MAUs). These units would maintain focused awareness within 200 nautical miles of a deployed cutter and influence events in that area. The air and boat assets deployed as well as the dedicated MPA would act as extensions of cutter



U.S. Coast Guard (Robin Resier)

Boarding fishing vessel in North Atlantic.

sensors and weapons. Units would establish a robust C⁴ISR system to receive, evaluate, and act on information obtained by cutter-deployed and supporting assets. Aircraft, OTH-RHIBs, and maritime mission teams would transfer video and data for rapid analysis and decision. Cutters would exchange tactical data via voice and data-link channels. MIFC on each coast would aid units by providing tailored offboard intelligence while the major cutter would pass operational data back to MIFC. Data shared with other agencies would be fused into the overall MAU tactical picture.

Putting It Together

Commanders determine the type and level of Coast Guard presence and response capability needed in their areas of responsibility. Matching forces with operational demands, they apportion forces to subordinate commands during periodic scheduling conferences.

On the operational level, surveillance and detection of threats are conducted in several ways. MIFCs may analyze intelligence and information from numerous sources and detect a threatening trend, such as increased smuggler, alien migrant, or illegal fishing traffic. Conversely, the centers may receive reports of a specific activity from deployed Coast Guard maritime action units, patrol aircraft, other forces or agencies, ship manifests, private individuals, or commercial ships. In both cases, the intelligence centers update their situational awareness.

To counter an adverse long-term trend, commanders may react to increased threats by the allocation of MAUs or MPAs to conduct additional surveillance, deter activity, or rapidly respond to incidents. If a major emergency like mass

migration is involved, commanders may initiate these activities and surge added Coast Guard maritime action units and other forces. The assets reinforce the on-scene units or sustain an active presence in areas vacated by other MAUs.

Once forces are committed, operating and supporting commands as well as elements from other services have access to a distributed common operational picture. Coast Guard headquarters and other Federal agencies can also access pertinent data, helping build situational awareness across commands, echelons, and organizations 24 hours a day, every day.

On-station maritime action units get tasking and information from commanders. They also receive from and provide data to the center, Coast Guard units, and DOD or other force providers. A unit responds to potential or actual maritime events as directed by an operational commander or the judgment of a major cutter commanding officer (or commander of a multicutter task unit), who is acting within the limits of standing orders. Tactically, individual units retain command authority, but they have access to a range of information. Hence, although a unit may be the only presence in a given area, it is not isolated from intelligence flows and assistance from higher commands.

A maritime action unit relies on sensors aboard its boats and aircraft and assigned MPA, as well as data generated offboard, to build tactical situational awareness. Once committed to prosecuting a contact, it fuses operational and tactical data to generate total maritime awareness of the area, including classification and identification of both threats and legitimate contacts and activities.

The nature of the prosecution phase is determined by the mission and particular situation. The object of MAU efforts can be people in the water or escaping drug-laden boats. Consequently the maritime action unit must tailor its operations to the task at hand. The major cutter acts as the C⁴ISR interface with other forces and sometimes supports operations with its embarked assets.

Finally, once the situation has been resolved, the unit is ready for immediate retasking. By dint of training and multimission equipment, it can redeploy to any new assignment.

The unique instrument of national power contributed by the Coast Guard that upholds maritime security is focused on awareness, active and sustained presence, dynamic positioning, and standoff tactics. It doesn't depend on exotic new technologies, but rather on efficiently exploiting capabilities that are present or on the horizon, both inside and outside the service. **JFQ**



Pre-deployment view
of defense support
payload.

Space Warfare Meets Information Warfare

By GORDON D. ISSLER

Operation Desert Storm has been proclaimed as the first space war. Because the ability of the United States to operate in space was not challenged, there was no battle for space superiority. However there was a contest for information superiority. Both sides conducted surveillance and reconnaissance operations to gather and exploit information.

Major Gordon D. Issler, USAF, serves in the Intelligence, Surveillance, and Reconnaissance Directorate at Headquarters, U.S. Air Force, and also has been assigned to U.S. Space Command.

Coalition forces gained an edge with superior intelligence, surveillance, and reconnaissance assets and effective operational security and deception activities. This superiority enabled the coalition to mask its true intentions and convince the Iraqis that an amphibious operation was forthcoming even as forces moved in place for the left hook maneuver that caught the enemy by surprise.

Information warfare has been a central element of military operations for the Armed Forces since the Persian Gulf War. Defensive and offensive information operations are conducted to gain information superiority over an enemy. With the

13th MEU Combat Camera (Branden P. O'Brien)

Communicating with
USS Tarawa, East
Timor.

increasing importance of achieving information dominance, the role of space has become prominent. As the Secretary of Defense has reported:

The support provided by space forces significantly reduces the fog, friction, and uncertainty of warfare. Joint forces can rapidly see, hear, and exploit the environment when space forces are properly integrated into the joint plan. This results in improved situational awareness, reduced response time, and a considerably more transparent battlespace, which provides the [joint force commander (JFC)] dominant battlespace awareness.

Given the importance of space to information operations, the next conflict may include a space war in the face of efforts to diminish U.S. advantages.

Recent decisions indicate that DOD leaders regard space operations as inextricably linked to information operations. Changes in the unified command plan assigned increasing responsibilities for information operations to U.S. Space Command (SPACECOM). It assumed responsibility for the military computer network defense mission, and command and control of the Joint Information Operations Center (formerly known as the Joint Command and Control Warfare Center) in October 1999 and for the military computer network attack mission in October 2000.

Until legal, political, and technical constraints on the weaponization of space are overcome, operations should be focused on fostering the objective of gaining and maintaining superiority in the information campaign. This article examines the merger of these areas to produce a synergistic effect on the operational level.

Space Operations

The doctrinal void for military space operations should be filled by Joint Publication 3-14, *Tactics, Techniques, and Procedures for Space Operations*. When approved this pub will provide an overview of missions conducted by military space forces, establish procedures for their support to the warfighter, and identify space forces that are deployed in the theater. It covers four primary missions: space support operations, force enhancement, space control, and force application. Two of these areas are well known to warfighters while the other two are not fully developed. Support operations include spacelift, satellite command and control, and surveillance and deconfliction of space systems which provide capabilities to execute space operations. Force enhancement includes reconnaissance and surveillance, environmental monitoring, communications, imagery and global geospatial information and services, and positioning—delivering spacepower to joint forces in the form of battlespace awareness.

Control consists of surveillance, protection, prevention, negation, and ensuring the friendly use of space while denying it to an enemy. This mission area is restrained by earlier decisions not to weaponize space as well as budgetary and technical limits. In addition, a plethora of commercial satellites that provide remote sensing, imagery, and communications services to potential enemies complicates space control negation. The force application mission is focused on weapons that pass through space, such as intercontinental ballistic missiles. Since space control and force application have not matured as warfighting capabilities, efforts must be directed to space support and force enhancement to expand the current U.S. information advantage.

Joint Pub 3-14 offers direction for planning space support to operational level warfare by joint task forces (JTFs). Unfortunately, it adopts a construct that synchronizes forces rather than integrating information throughout JTF.

A supported CINC/JFC/JTF commander should designate a coordinating authority for space operations under the JFC (for example, the [joint force air component commander]). In this position, the designated coordinating authority will coordinate space support on behalf of all commanders in theater in support of the JFC's objectives and act in the capacity

Positioning satellite communications, Kosovo.

55th Signal Company (Eric Hughes)



Combat direction center aboard USS Theodore Roosevelt, Allied Force.

U.S. Navy (Donna McKissic)

of "supported commander" for space with primary responsibility in theater for joint space operations planning purposes. To ensure prompt and timely support, CINCSpace may authorize direct liaison authorized between the coordinating authority and service components of SPACECOM.

On the operational level, however, space activities differ from those on land, at sea, or in the air because their effects are unique; providing information while not deploying forces in theater

that must be synchronized or deconflicted. Space-derived information should be integrated in JTFs across functional lines. Space provides key communications, intelligence, weather, warning, and navigation

information even though it is not the end-all, be-all for any functional area. Although it is a critical battlefield operating system, the Armed Forces fight with a system of systems; it must be integrated with other systems, and not organized separately in order to achieve superiority in command, control, communications, intelligence, navigation, and information processing.

space provides key communications, intelligence, weather, warning, and navigation information

If a component needs intelligence, it goes to the JTF (J-2), and the intelligence community determines the appropriate system to task for the desired information. If a component needs added communications capacity, it goes to the JTF (J-6), and the communications community determines the appropriate system. There are synergistic effects within these functional communities.

Joint Pub 3-14 goes on to discuss the space forces that deploy in theater to support a JTF. "[SPACECOM] deploys task-organized [joint space support teams (JSSTs)] operational control to the JFC/JTF commander to facilitate tasking and use of joint space forces, provide space-derived information, and ensure space support is provided to the combatant commander." This appears to duplicate or even contradict earlier identification of a "coordinating authority for space operations." The draft publication also recognizes the capability of component space support teams that deploy to support service components of JTFs. Additional deployable support teams such as the National Intelligence Support Team (NIST) and the Joint Information Operations Center (JIOC) team are also considered to be complementary to efforts by space support teams. But such teams are only stopgap measures. Current missions and

Titan II lifting off,
Vandenberg Air Force
Base.



U.S. Air Force (Jennifer C. Wallis)

doctrinal guidance are not sufficiently balanced or mature to facilitate the integration of space and information operations.

Information Management

Although space concepts are not well developed, concepts for information operations have matured rapidly. Joint Pub 3-13, *Joint Doctrine for*

Information Operations, provides an overview of information missions conducted by joint forces, an organizational construct for JTF information operations,

and a planning methodology to integrate such activities into joint campaigns.

The Armed Forces conduct information operations to maintain superiority and operate inside an enemy observe, orient, decide, and act (OODA) loop. A coherent strategy directs offensive and defensive information operations toward JFC objectives. Offensive operations integrate both assigned and supporting capabilities and activities, supported by intelligence, to affect enemy decisions and promote specific objectives. Actions attempt to degrade, disrupt, or destroy information and information systems through the coordinated employment of operational security

measures, deception activities, psychological operations, electronic warfare, physical destruction, special information operations, and perhaps computer network attack.

Defensive operations integrate and coordinate policies, procedures, operations, people, and technology to protect information and information systems. Activities include counterdeception, counterpropaganda, counterintelligence, electronic warfare, and special operations, employing both lethal and nonlethal means.

For effective integration in a joint force, commanders organize an information operations cell. JFCs typically assign the responsibility to staff members, usually the operations officer (J-3). The composition of the cell is mission dependent, but it retains the central responsibility of crafting a coherent strategy aimed at contributing to JFC objectives. This strategy is developed on the JTF level, then disseminated to components for detailed planning and decentralized execution. The cell chief normally functions as a member of the Joint Target Coordination Board and also participates in developing the joint integrated prioritized target list. Joint Pub 3-13 identifies the joint activities and defense agencies that can support JTFs through the cell, including the Joint Warfare Analysis Center, Joint Communications Security Monitoring Agency, National Security Agency, Defense Intelligence Agency, and Defense Information Systems Agency. Moreover, JTFs are supported by a JIOC support team that deploys in-theater and typically is integrated in the information operations cell. The center is the primary agency for support of combatant commands with joint information operations and assists in planning, coordinating, and executing information operations worldwide.

Integrated Operations

To facilitate information operations, CINCSPACE should retain combatant command and operational control of military space forces supporting JTFs that operate in wartime locales (orbits) each day with a global view. Space capabilities must be deployed in a theater or synchronized with other theater assets. They are global and hence, to optimize capabilities, they should be managed on the strategic level by a single functional component commander. In addition, space supremacy is not a viable objective on the operational level, just as the effort to completely deny enemy access to space is prohibitive. Strategic offensive and defensive considerations are beyond the level of the operational commander. Moreover, because the SPACECOM mission includes computer network defense, computer network attack, and JIOC operational control, it is logical to take the integration of

CINCSpace should retain combatant command and operational control of military space forces

Analysts testing
command post,
Roving Sands '00.



1st Combat Camera Squadron (Jim Vanhegy)

space and information operations to the next level. CINCSPACE should merge JIOC support teams and JSST and integrate space support into JTF operations via the information operations cell. Space operations can be organized in this way because it is not necessary to deploy large forces in theater. Their assets are already deployed and providing information from on-orbit locations. The limited space forces that deploy in a theater should integrate into the information operations cells on JTF and component levels and facilitate identification of realistic information requirements. These personnel can communicate JTF needs to SPACECOM, which then plans tailored space operations (as a supporting command) to provide information.

Planning space support for JTFs should be eliminated from annex N (space operations) and integrated into the information operations plan in the basic plan and in annex C (operations). This would provide increased visibility for space operations and ensure that both space and information operations are seen as integral to the joint campaign plan rather than included in a separate annex. Integrating space operations in a joint campaign via the information operations cell can produce synergistic effects that will enable information superiority and dominant battlespace knowledge.

The elements of surveillance, prevention, protection, and negation can be integrated as part of the information operations campaign. The surveillance of space objects identifies enemy space

order of battle to include commercial assets, projects when they will pass over friendly forces, and determines the kind of information provided. Armed with this knowledge, plans can be developed for defensive and offensive information operations to mask JFC intentions. The space control mission of negation is actually an offensive information operation (attack), because current space systems are information systems.

Space support must be integrated into planning for information operations and coordinated through information cells. Establishing a single authority for coordinating support and placing it within a component degrades the synergism of integrating space and information on the operational level. Assigning JIOC and computer network defense and attack missions to SPACECOM should contribute to integrating and merging joint space support teams with JIOC support teams and create joint information superiority teams. These teams should train and exercise to deploy in support of JTFs and provide expertise for the information operations cell. In addition, the separate annex for space operations must be eliminated. Planning for space support to JTFs must be integrated with information operations planning and inserted in the operations annex of the campaign plan.

JFQ

General Joseph Lawton Collins

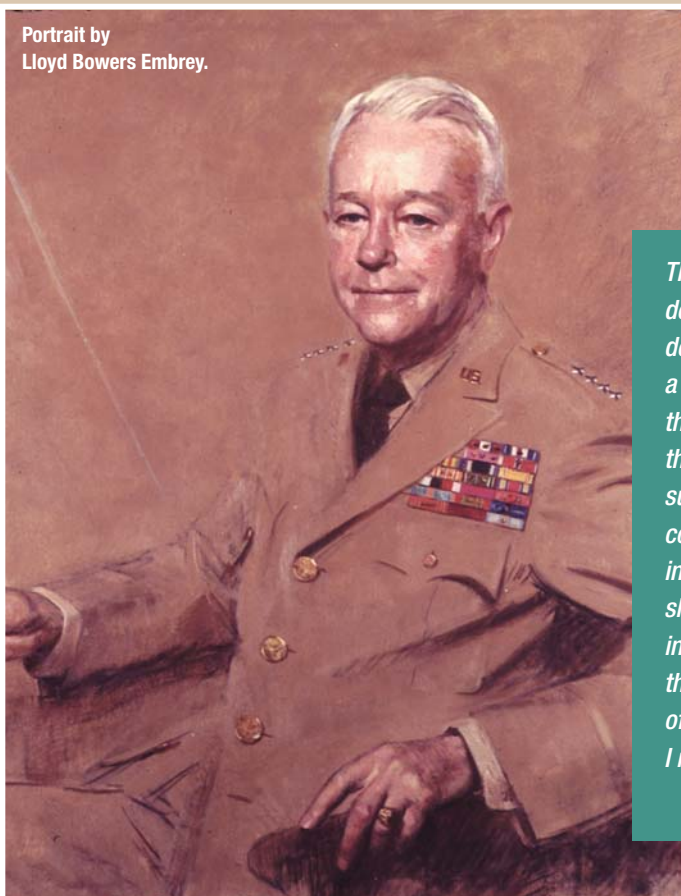
(1896–1987)

Chief of Staff, U.S. Army

VITA

Born in New Orleans, Louisiana; graduated from Military Academy (1917); infantry school of arms and regimental service (1917–19); commanded 3^d Battalion, 22^d Infantry, in France (1919); assistant chief of staff, American Forces, Germany (1920–21); instructor at West Point (1921–25); company officer course, infantry school (1926); field artillery school (1927); instructor, infantry school (1927–31); executive officer, 23^d Brigade, Manila, and assistant chief of staff, Philippine Division (1933–34); completed Army Industrial College (1937); student and instructor, Army War College (1937–40); chief of staff, VII Corps (1941); chief of staff, Hawaiian Department (1941–42); commanded 25th Infantry Division on Oahu and at Guadalcanal (1942–43); commanded VII Corps, Normandy and during European campaigns (1944–45); deputy commander in chief of staff, Army Ground Forces (1945); chief of public information (1945–47); deputy chief and vice chief of staff, U.S. Army (1947–49); chief of staff, U.S. Army (1949–53); U.S. representative to military committee and standing group of NATO (1953–54); special representative to Vietnam with rank of ambassador (1954–55); returned to NATO assignment (1955–56); died in Washington, D.C.

Portrait by
Lloyd Bowers Embrey.



The question arises periodically as to what a Chief of Staff should do if, in all conscience, he cannot support the budget or other policy decisions of the President or the Secretary of Defense. In such a case he is entitled by law to appeal directly to the President, over the head of the Secretary, if necessary. I believe that in loyalty to the President as Commander in Chief, a Chief of Staff should support the President's programs unless, in a crisis, a chief is convinced that the security of the country is at stake, in which instance he should ask to be relieved. I came close to such a point shortly after the outbreak of the Korean War when I felt impelled to inform Secretary Louis Johnson at an Armed Forces Policy Meeting that I would be unable to accept any further cuts in the number of active divisions in the Army. If the Korean War had not intervened I might well have been relieved or forced to resign.

—From *Lightning Joe: An Autobiography*

Doctrine

FORCE MULTIPLIER

Joint Publication 2-0, *Doctrine for Intelligence Support to Joint Operations*, provides an overview of intelligence support for joint operations. Unlike an earlier version that appeared in 1995, designed as a stand-alone volume, the new pub relegates many details to supporting documents. But the key themes remain and permeate the discussion, advising joint force commanders on the qualities of intelligence and maximizing its contributions. At the same time the pub stresses that JFCs must bring intelligence staffs into both decisionmaking and planning processes from the outset of an operation. Above all, intelligence (J-2) and operations (J-3) staffs must work together to ensure that mission objectives and strategy established by JFCs can be implemented effectively.

Joint Pub 2-0 outlines both the support intelligence offers and the role it can play in military operations. The pub presents a conceptual model of the intelligence process, although part of the description of various phases of the intelligence cycle is prescriptive rather than real life. While dissemination of intelligence to senior consumers works well, it reaches various echelons in the field less smoothly. The challenge for timeliness remains, particularly on the tactical level.

The need for flexibility by intelligence staffs is emphasized. Interaction of various phases of intelligence can disrupt the normal sequence; and urgency can dictate the complete omission of some phases. Joint Pub 2-0 treats the responsibilities and tasks of intelligence on the strategic, operational, and tactical levels. Again the flexibility and requirements for early J-2 participation in planning and decisionmaking is highlighted. Joint intelligence also is presented as an integral part of an overall command, control, communications, computers, and intelligence structure which enables an unbroken flow of information among national, theater, and field intelligence agencies. It provides a seamless integration of the decisionmaking cycle with all intelligence phases to ensure access by commanders to the latest data. Recognition of requirements to synchronize these efforts underscores the need for collaboration between operators and intelligence officers. This precisely designed architecture facilitated the performance of organizations including the Defense Intelligence Agency, National Military Joint

Intelligence Center (NMJIC), theater joint intelligence centers, and joint intelligence support elements in the field during Desert Storm and Joint Endeavor.

Current intelligence doctrine reflects the technology of the late 1990s. The need to support JFCs in visualizing battlefields and gaining information superiority is crucial in military operations. Doctrinal precepts, particularly those related to joint intelligence architecture, have been adapted to a high-tech environment. Technology in turn provides a new dimension to intelligence operations. For example, Task Force J-2 has been able to request support from service intelligence centers and those outside a theater of operations. But with virtual capabilities, including video teleconferencing and other electronic media, such a federated effort can operate more effectively in real time.

One vital aspect of the architecture is the capability for communications and data transfer. The need for real-time information and analysis has made the multimedia-capable joint worldwide intelligence communications system (JWICS) the standard mode of transmission of sensitive and compartmented intelligence as well as other data. Though there are still elements with incompatible computers, all echelons of a theater command structure can talk to counterparts in other theaters or Washington on any level of classification. For instance, during operations in Haiti, the President used video teleconferencing in NMJIC to speak with the various commanders.

Joint Pub 2-0 should not only be required reading for J-2 staffs and other members of the intelligence community, but also for joint commanders and their staffs. Military consumers should understand how to make intelligence work for them. JFCs must drive intelligence, which remains an indispensable ingredient in their calculations. **JFQ**

ALSA PUBLICATIONS

The Air Land Sea Application Center (ALSA) is tasked to develop multiservice tactics, techniques, and procedures to facilitate joint information exchange and operational solutions across the entire military spectrum, meeting the needs of warfighters. The following publications recently appeared: *Bomber Maritime Operations*; *Multiservice Procedures for Integrated Combat Airspace Command and Control*; *Introduction to Tactical Digital Information Link J and Quick Reference Guide*; *MTTP for NBC Defense of Theater Fixed Sites, Ports,*

and Airfields; and *Suppression of Enemy Air Defenses* [find these as well as other related titles on the ALSA Web site at <http://www.dtic.mil/alsa>]. **JFQ**

Lessons Learned

GROUND ZERO

The Joint Warfighting Center (JWFC) was established in 1994 while the Joint Center for Lessons Learned (JCLL), one of its elements, became operational in 1998. The JCLL mission is to collect, analyze, and distribute lessons learned, issues, and observations from operations, training events, and other sources to enhance combat effectiveness and interoperability of joint forces. Thus JCLL addresses issues including methodology for collecting lessons (such as joint after action reports), representing these lessons in a database (such as unclassified lessons on the Internet and classified lessons on SIPRNET), publicizing information on JCLL to promote lesson sharing (such as those activities published in JCLL bulletins), and technologies for lessons learned processes.

The joint after-action reports database was developed for the joint warfighting community. When alerted for a contingency, U.S. forces can consult the data for lessons learned from previous operations. Currently there are 1,900 active lessons in the JCLL database.

For more information, write to: Commander, U.S. Joint Forces Command, ATTN: JWFC (Code JW4000), 116 Lakeview Parkway, Suffolk, Virginia 23435-2697; Fax at (757) 686-6057; or send e-mail to jcll@jwfc.jfcom.mil; or via the Internet at <http://www.jwfc.jfcom.mil/dodnato/jcll/>. **JFQ**

History

KOREAN WAR

The Air Force Historical Foundation and Air Force Historian will host a symposium on "Coalition Air Warfare in the Korean War" on October 17-18, 2001, in Washington. For more details, write the Air Force Historian, ATTN: AFHSO, 200 McChord Street (Bldg. 94), Bolling Air Force Base, Washington, D.C. 20332-1111 or send e-mail to JacobNeufeld@Pentagon.af.mil. **JFQ**

Invitation to the Revolution

A Book Review by

FRANÇOIS L.J. HEISBOURG

Lifting the Fog of War

by William A. Owens with Ed Offley
New York: Ferrar, Straus and Giroux,
2000.

256 pp. \$25.00
[ISBN: 0-374-18627-8]

In an otherwise convincing case for reshaping the Armed Forces through a revolution in military affairs (RMA), William Owens invokes three arguments that do not entirely pass muster. First, he claims the U.S. military is faced by “imminent” and “general” collapse because of the gap between current levels of funding and the block obsolescence of weapon systems procured in the Reagan years. But he points out elsewhere in *Lifting the Fog of War* that America accounts for a third of all defense spending around the world, more than during most of the Cold War. Indeed, the United States and its allies in Europe and Asia command two-thirds of global expenditures on defense, and most other countries are neither actual nor potential adversaries. So notwithstanding the problems that the end of the Reagan buildup will undoubtedly spark, the significant amount of available resources does not make a *prima facie* case for a revolutionary treatment. Indeed many would argue, as Owens does occasionally, that American resource needs could be greatly reduced through a change of strategy rather than technological means. He complains in particular about an excessive number of open-ended military commitments during the Clinton years.

Admiral Owens, a former Vice Chairman of the Joint Chiefs of Staff, also justifies an all-out RMA through his expectation that China will become a peer competitor of the United States by 2010–2015. He considers the quarter century between the collapse of the Soviet Union and the rise of China as a strategic pause which must put to good use via a revolution in military affairs. The first

problem with this reasoning is that China is credited with technological capacities which seem exaggerated, at least in view of a tendency to downplay European potential. The nations of Europe have a combined gross domestic product several times larger than China's and a level of defense spending more than twice as large. Yet Europe—second only to America in the use of information technology—is given short shrift, whereas China is credited with extraordinary RMA potential. This doesn't mean that there isn't a significant gap in military capabilities between the United States and Europe or that China won't become an ever greater regional power that may act in an inimical manner. But unless it were inordinately careless, Washington should remain well ahead of Beijing in the RMA race, given the latter's vast accumulation of low-tech legacy systems and a highly hierarchical communist leadership, factors which are clearly not RMA-friendly.

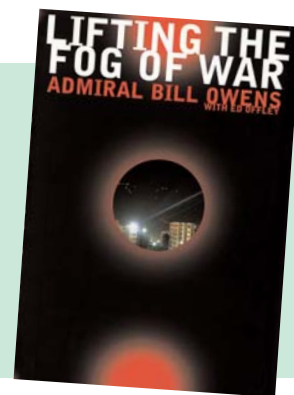
The second problem is that the United States may learn, as Britain did between 1815 and 1914, that what appears as a relatively brief strategic pause may actually be a lasting phenomenon. Owens rightly criticizes limited attempts at military reform during the first half of the 1990s, which posited a fairly rapid reconstitution of Russian military capabilities, but he may be making the same mistake by focusing on a medium-term Chinese surge. The United States has been used to dealing with a single major enemy, the Axis, then the Warsaw Pact. It doesn't follow that the post-Cold War era is simply a waiting period to recast the 1941–90 paradigm: we are as likely to face a long period with multiple risks. The parallel drawn by Owens between the collapse of France in its race against Prussia

in 1870–71 and military prospects today is hardly compelling: America as an island superpower is far more reminiscent of imperial Britain after Waterloo.

Finally, Owens justifies support for the revolution in military affairs by arguing that it will challenge “hoary dictums” on the fog and friction of war. Without question, emerging technology increases the scope and depth of battlespace vision. And there is no doubt that the United States is uniquely placed to attain battlespace superiority. But an enemy can be relied upon not to cooperate: what can be hidden will be hidden; what can be made ambiguous will be made ambiguous. The Israelis had excellent intelligence on Egyptian dispositions on the eve of the Yom Kippur War in 1973; and the buildup of Iraqi forces along the border with Kuwait did not go unnoticed in 1990, especially because a typical system of systems aspect of technology (a radar-bearing aerostat) was actually being tested in Kuwait as Iraq invaded. Indeed, an immediate effect of RMA technology is putting constraints on warfighting: thus collateral damage in general, blue-on-blue casualties in particular, and targeting errors have become unacceptable because they can't be blamed on technological limits. By comparison, anti-American crowds did not take to the streets in Gaullist France when its ambassador was killed and its embassy was bombed in Hanoi by American planes: such collateral damage was accepted as a misfortune of war. Greater battlespace awareness creates new standards of conduct, an evolution that one can only welcome—but which introduces new friction.

Lifting the Fog of War

was the subject of a recent *JFQ* book lecture by the author which was held at the National Defense University on June 7, 2000, and televised by C-SPAN [see videotape 157710].



François L.J. Heisbourg is chairman of the Geneva Center for Security Policy and vice chairman of the council of the International Institute for Strategic Studies.

Missing an issue? Copies of back numbers of *JFQ* are available in limited quantities to both members of the Armed Forces and to public institutions. Please send requests to the Editor at the address or FAX number listed on the masthead.

But this criticism carries very little weight in light of bottom line in *Lifting the Fog of War*. The revolution is going to happen one way or another. Indeed, this is the major justification for going down the RMA road, in the same way that over the last two centuries only militaries which integrated the tools of the industrial revolution had a chance of prevailing. Revolution has become a necessary condition of proficiency, whatever the strategic context; by restoring maneuver warfare versus attrition, it is well suited to a volatile environment which demands flexibility and mobility.

Because it is built around pervasive, close-to-real time command, control, communications, computers, intelligence, surveillance, and reconnaissance, the revolution in military affairs calls for jointness on all levels. Owens is at his best in discussing joint matters. This should be mandatory reading for all thinking members of the defense community. By emphasizing the organizational and cultural aspects of reform, he points out that RMA is unquestionably a revolution in *military* affairs, not simply a revolution in technology. It is regrettable that he does not consider the state of affairs in allied militaries. Lessons can be drawn from the Joint Chief of Defence Staff in Britain, longstanding British and French reliance on joint procurement structures, and movement toward joint professional military education. Such comparisons would be useful in addressing one American handicap vis-à-vis RMA: if the United States enjoys the unique advantage of global stature, it incurs the corresponding drawback of large force structures and organizations that find it hard to keep abreast of technological change as exemplified by Moore's law (the doubling of processing capability every 18 months). Finding the optimum balance between centralization (without which jointness won't happen) and delegation of authority (a condition for flexibility) will be key to the American revolution in military affairs.

Since most military operations after the Cold War have involved coalitions, there must not only be jointness within national militaries, but interoperability among allies and coalition partners. Owens does not go into detail on the freer flow of technology among allies, which is peripheral to his main theme. But as a European, this reviewer can only hope that, given his professional experience, he will find an opportunity in the future to focus on the inter-allied implications of the revolution in military affairs. **JFQ**

WINNING THE GOOD WAR

A Book Review by

COLE C. KINGSEED

A War to be Won: Fighting the Second World War

by Williamson Murray and Allan R. Millett
Cambridge, Massachusetts: The Belknap
Press of Harvard University Press, 2000.
656 pp. \$35.00
[ISBN: 0-674-00163-x]

With more than 4,000 titles on World War II currently in print, why is another general history of the 20th century's greatest conflict necessary? Williamson Murray and Allan Millett answer that question with *A War to Be Won: Fighting the Second World War*, a book that is likely to become the definitive single-volume account of military operations from 1939 to 1942. Having previously edited a series of works that advanced scholarship on military affairs in the 20th century—*Military Effectiveness* (New York: Routledge, 1988–89); *Calculations: Net Assessment and the Coming of World War II* (New York: Free Press, 1992); and *Military Innovation in the Interwar Period* (New York: Cambridge University Press, 1996)—Murray and Millett are two of this country's premier military historians. Their latest collaboration is a balanced assessment of operational aspects of the war, from its roots to an epilogue which analyzes the conflict in retrospect.

The authors trace the origin of the war beginning with the rise of fascism. After concluding that by late August 1939 the strategic balance had swung significantly against the Western Allies, Murray and Millett opine that the long road to September 1, 1939, was paved with good intentions, which were not enough in the world of Hitler and Stalin. By the time Germany attacked Poland, only cold steel could defend Western interests and aspirations. Half a world away the drama was simultaneously unfolding as Japan embarked on a war of conquest.

To illuminate the tactical and technological adaptations leading to World

War II, the book has a chapter on the revolution in military affairs that occurred in the aftermath of the Great War. Innovation and experimentation prepared the belligerents in varying degrees for restoring mobility to the battlefield. By 1939 tactical refinements gave German troops an initial advantage, which their leaders subsequently squandered because of an inability to grasp the strategic balance between means and ends. Meanwhile, the Allies embarked on war mentally and physically unprepared.

For the balance of their analysis, Murray and Millett focus on geographic theaters and make a significant contribution to an understanding of World War II. In considering the German conquest of France in 1940, for example, they conclude that the success of the *Wehrmacht* did not rest upon operational doctrine developed because of defeat in World War I. Rather it resulted from intelligent maturation of doctrine from 1917 to the Polish campaign. German capabilities were evolutionary, not revolutionary. The unifying theme was a coherent combined-arms approach to modern war.

Another aspect of this book is its balance; the Pacific Theater receives attention equal to that given to Europe. According to the authors, Midway represented the high-water mark in Japanese expansion but not a shift in the strategy of seize-and-hold. Japan still possessed advantages over the United States, but its high command temporarily lost the initiative. By 1944 dependency on oil spelled disaster as American submarines sank an increasing number of enemy merchant ships. With defeat inevitable, Imperial headquarters transferred the best army units and commanders from China and elsewhere to the inner defenses of Fortress Japan. The tenacity of enemy defenders on Iwo Jima and Okinawa convinced Truman and his advisors that the atomic bomb was a legitimate weapon to terminate the conflict.

If the intent of the authors is to challenge historical conventions, they succeed. Nowhere is this approach more evident than in their assessment of those commanders who waged the war. Of particular interest is Omar Bradley, whom they describe as the most over-rated American general of the war. Mark Clark, Simon Bolivar Buckner, and Douglas MacArthur also fare poorly, as does Chester Nimitz, whom Millett and Murray characterize as very cautious. Dwight Eisenhower gets high marks for managing the generals under his command, as "fractious and dysfunctional a group of egomaniacs as any war had ever

Colonel Cole C. Kingseed, USA, teaches history at the U.S. Military Academy and is the author of *Eisenhower and the Suez Crisis of 1956*.

Unloading British vehicles on D-Day.



National Archives

seen." Among the senior commanders, George Patton emerges as the most competent and the only one who understood the use of Allied ground mobility to exploit enemy tactical and operational weaknesses.

With due respect to other members of the Grand Alliance, the authors nonetheless confer the highest accolades to Soviet commanders, who mastered what their own theorists only dreamed of in the 1930s: operations that paralyzed an enemy by striking deeply into rear areas. The offensive by Soviets in summer of 1944 completely destroyed the Germans in perhaps the finest operational victory of the war. A subsequent offensive into the Balkans was equally impressive, "a masterful marriage of military operations to the goals of politics and grand strategy." Soviet commanders exhibited

outstanding capabilities in deception, planning, and conducting operations.

In the final analysis, Murray and Millett have produced a superlative, balanced operational history of World War II. Separate appendices addressing military operations, the conduct of war, weapons, and the primary literature of the conflict provide additional luster.

Was the Allied victory worth the cost? The authors indicate that it was, for as *A War to Be Won* reminds us, the conflict unleashed by Japan in 1937 and Germany in 1939 came close to destroying the centers of world civilization and imposing imperial regimes founded on racial superiority, slavery, and genocide. The enemies of democracy did not succeed because of the extraordinary efforts and sacrifices made by Allied soldiers, sailors, marines, and airmen to whom this book is dedicated.

JFQ

CHANGING THE GUARD IN LATIN AMERICA

A Review Essay by

FREDERICK M. NUNN

Over the past half century the United States has viewed Latin American militaries mainly in relation to its own national agenda and values. The emphasis must now change to a nonideological study of professional military institutions in transition. To share expertise and enhance cooperation Washington must appreciate these dynamic organizations on their own terms.

Systematic study of the political role of militaries in Latin America began during the 1950s. Policy-oriented writing was regional rather than national in scope and laced with Cold War issues. Of central interest was an inclination by officers to intervene in politics. Some observers regarded this military political activism as originating in Cold War policies formulated in Washington. Still others viewed it as emerging from class conflict or socioeconomic factors that presaged a capitalist-communist confrontation in the region, an idea that Edwin Lieuwen developed in *Arms and Politics in Latin America*, which probed controversies surrounding intervention by the military in domestic politics. This volume was followed by *Generals vs. Presidents: Neo-Militarism in Latin America*, which Lieuwen published four years later.

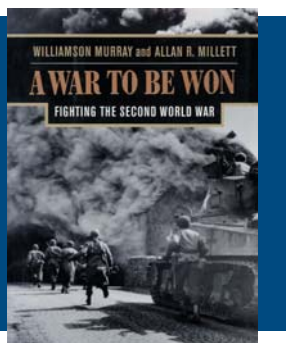
In *The Military and Society in Latin America*, John Johnson explored cultural and historical ingredients influencing domestic military activities. He found an activist military profession as one dimension of a process of change that would modernize the region. A bolder argument supporting sociocultural cause and effect was *Latin America: The Hegemonic Crisis and the Military Coup* by José Nun, which offered a class-conflict interpretation of military political activism stemming from its representation of bourgeois interests at the expense of the lower classes.

All these works stimulated interest in determining the cause of intervention: social origins, dialectics, U.S. influence, or an idiosyncratic strain of militarism? Such questions led students of military

Frederick M. Nunn is visiting professor of history and Latin American studies at the University of Arizona.

A War to be Won

was the subject of a recent JFQ book lecture by the authors which was held at the National Defense University on May 8, 2000, and televised by C-SPAN [see videotape 156997].



Arms and Politics in Latin America

by Edwin Lieuwen
New York: Praeger, 1960.

**Generals vs. Presidents:
Neo-Militarism in Latin America**

by Edwin Lieuwen
New York: Praeger, 1964.

**The Military and Society
in Latin America**

by John J. Johnson
Stanford: Stanford University Press, 1964.

**Latin America: The Hegemonic
Crisis and the Military Coup**

by José Nun
Berkeley: Institute of International
Studies, University of California, 1969.

**The Military in Latin American
Socio-Political Evolution:
Four Case Studies**

edited by Lyle N. McAlister
Washington: American Institutes
for Research, Center for Research
in Social Systems, 1970.

**Yesterday's Soldiers: European
Military Professionalism in South
America, 1890–1940**

by Frederick M. Nunn
Lincoln: University of Nebraska
Press, 1983.

**The Army and Politics in Argentina,
1928–1945: From Yrigoyen to
Perón; 1945–1962: From Perón to
Frondizi; and 1962–1973:
From Frondizi's Fall to the
Peronist Restoration**

by Robert A. Potash
Stanford: Stanford University Press,
1969, 1980, 1996.

**The Military in Politics:
Changing Patterns in Brazil**

by Alfred C. Stepan
Princeton: Princeton University Press,
1971.

(Note: Some of titles listed herein are out of print or
have been reissued in other editions.)

**The Politics of Military Rule in
Brazil, 1964–1985**

by Thomas E. Skidmore
New York: Oxford University Press, 1988.

**Chilean Politics, 1920–1931:
The Honorable Mission
of the Armed Forces**

by Frederick M. Nunn
Albuquerque: University of New Mexico
Press, 1976.

**The Military in Chilean History:
Essays on Civil-Military Relations,
1810–1973**

by Frederick M. Nunn
Albuquerque: University of New Mexico
Press, 1976.

**The Rise and Fall of the Peruvian
Military Radicals, 1968–1976**

by George D.E. Philip
London: The Athlone Press, 1978.

**Military Reformism and Social
Classes: The Peruvian Experience,
1968–1980**

by David Booth and Bernardo Sorj
New York: St. Martin's Press, 1983.

**The Armed Forces and Democracy
in Latin America**

by John S. Fitch
Baltimore: Johns Hopkins University
Press, 1988.

**The Time of the Generals: Latin
American Professional Militarism
in World Perspective**

by Frederick M. Nunn
Lincoln: University of Nebraska Press,
1992.

**The Constitution of Tyranny:
Regimes of Exception in Spanish
America**

by Brian Loveman
Pittsburgh: University of Pittsburgh Press,
1993.

**La Patria: Politics and the Armed
Forces in Latin America**

by Brian Loveman
Wilmington, Delaware: SR Books, 1999.

On close study, military intervention in domestic politics resembled participation in political processes of nations which were compensating for immature civilian institutions. That is, the armed forces were as much part of the sociopolitical world as apart from it. Their actions were like those of a profession with a corporate identity, which while ideally outside the realm of politics was in practice an integral component of it.

This research not only produced more focused case studies but drew on both evidence from the region and international scholarship on civil-military relations. *Yesterday's Soldiers: European Military Professionalism in South America, 1890–1940*, by this reviewer, relied on sources from Latin America and Europe—Argentina, Brazil, Chile, Peru, France, and Germany—to assess the long-term impact of European military missions and exchanges on regional thinking.

Robert Potash produced an authoritative trilogy between 1969 and 1996 entitled *The Army and Politics in Argentina*. He chronicled the history of army forays into and retreats from the arena of politics for the better part of the past century. Political propensities had their origins prior to the arrival of the United States as a hemispheric power and their consequences are thus of a historical nature. However unsavory, these actions were part of national historical and political processes.

The achievement of Alfred Stepan in *The Military in Politics: Changing Patterns in Brazil* was his dissection of various political stances of soldiers in the largest and most powerful country in the region. He showed that what emerged from the 1964 overthrow of civilian authority was an institution bent on resolving national problems based on a military ethos. Military leaders and their civilian allies alike did not look amiably on the form and content of their democratic system. Thus they held power until devolution in 1985.

A few years after civilians regained the reins of power, *The Politics of Military Rule in Brazil, 1964–1985*, by Thomas Skidmore, confirmed what many students of civil-military relations in the region had deduced. In his research on Brazil, the political nature of professionalism exacerbated militaristic tendencies to the point where militarism (a willingness and propensity to find solutions to national problems based on the military ethos) was inseparable from military professionalism

institutions in Latin America to rethink the approach to armed forces and political behavior. Rather than treat activism as a regional phenomenon, some efforts shifted to comparative research and case studies on soldiers within the national

sociocultural matrix. Their findings challenged and refined cause-and-effect relationships advanced by Lieuwen and Johnson. One study that revealed such variations was *The Military in Latin American Socio-Political Evolution: Four Case Studies*, edited by Lyle McAlister, on Argentina, Colombia, Mexico, and Peru.



Ministerial meeting in
Manaus, Brazil,
October 2000.

DOD (Helene C. Stikkel)

(the state or condition of being professional in the dictionary sense).

On the other coast of South America, Chile and Peru were also put under the microscope. *Chilean Politics, 1920–1931: The Honorable Mission of the Armed Forces* and *The Military in Chilean History: Essays on Civil-Military Relations, 1810–1973*, which this reviewer published in 1976, exposed the historical background of the uprising in 1973. Soldiers have played critical parts in the foundation and development of Chile in the 19th century—as well as repression of dissidence. In 1924 and 1925 the military moved against a faltering, irresponsible government. Led by army officers, a civil-military coalition forged a new constitution and recast the role of government, demonstrating in retrospect that the 1973 uprising was not as aberrant as it first appeared.

Peru is also a noteworthy case. *The Rise and Fall of the Peruvian Military*

Radicals, 1968–1976, by George Philip, and *Military Reformism and Social Classes: The Peruvian Experience, 1968–1980*, by David Booth and Bernardo Sorj, both address distinct characteristics of the 1968–80 experiment with military socialism. Overlapping the heyday of militarism in Latin America, the early years of the regime boasted dynamic efforts to solve cultural, economic, political, and social problems based on priorities established by soldiers. The professional military uniqueness of Peru was matched only by its militaristic typicality.

These works have led to an attempt to find a new synthesis based on multi-archival sources and multidisciplinary approaches. Almost three decades after Lieuwen's seminal work on military politics came *The Armed Forces and Democracy in Latin America* by John Fitch, followed by *The Time of the Generals: Latin American Professional Militarism in World Perspective* by Frederick Nunn and two volumes by Brian Loveman, *The*

Constitution of Tyranny: Regimes of Exception in Spanish America and La Patria: Politics and the Armed Forces in Latin America. These works deal with aspects of relations between military professionals and society. Each is also characterized by synthesis and recognizes the uniqueness and comparability of military institutions in the region and elsewhere and evinces interdisciplinary methodology. They explore both the origin of military activism and resurgence of democratic institutions and renewed efforts to reestablish civilian oversight of defense establishments and recast civil-military relations.

Today the pages of Latin American military journals contain essays devoted to the realities of the new world order: peacekeeping, internal roles and missions, relations with the civil sector, hemispheric cooperation, narcotics, terrorism, and the United States. In some respects the military within the region have better views of their counterparts to the North than the reverse, a condition facilitated by *Military Review Hispano-American*, the bimonthly Spanish-language edition of the journal of the U.S. Army Command and General Staff College. A Portuguese-language version also appears on a quarterly basis for Brazilian readers. Conversely, readers in the United States need greater access to military literature produced by counterparts in Latin America. Even the translation of selected articles published in the region can provide a window for readers in the Armed Forces without a command of Spanish or Portuguese. It would enhance the awareness of North Americans and add to common ground for regional military cooperation.

JFQ

Attention Air Force Personnel!

Joint Force Quarterly is no longer distributed directly by the Air Force to its units and activities. Subscriptions must be ordered on-line by contacting Air Force Publishing at <http://afpubs.hq.af.mil> and enter **JFQ** in > **Short Title Search** under > **Keyword Search** and then click > **GO!** Follow instructions on submitting AF Form 1846.



DISTRIBUTION: *JFQ* is distributed to the field and fleet through service channels. Individuals and organizations interested in receiving the journal on a regular basis should make their requirements known through command channels. Any corrections in shipping instructions for service distribution should be directed to the appropriate activity listed below.

■ **ARMY**—To order, write U.S. Army Publications Distribution Center, ATTN: Customer Service, 1655 Woodson Street, St. Louis, Missouri 63114-6181 (citing Misc. Publication 71-1); call (314) 263-7305 [extension 4]/DSN 693-7305 [extension 4]; or contact U.S. Army Publishing Agency Home Page on the Internet at www.usapa.army.mil and select: (1) *Publications Ordering and Subscription System*, (2) *Publications Ordering System* > (Modify 12-Series Subscriptions), (3) *Subscription Add/Change/Delete* > *Submit a Subscription (DA Form 12-9-R)*, and complete the order under (4) *Subscription Changes* by entering > *Account Number* and > *ZIP Code* followed by both *First 2 Digits* and *Last 4 Digits* of the Initial Distribution Number (IDN) > [05][0042] and then indicate desired number of copies > *Quantity*.

■ **NAVY**—Contact the Navy Inventory Control Point, Customer Service List Maintenance (Code 3343.09), 700 Robbins Avenue, Philadelphia, Pennsylvania 19111-5098; requests may be sent by Fax to (215) 697-5914 (include SNDL, UIC, and full address).

■ **MARINE CORPS**—For one-time distribution of an individual issue write to Marine Corps Logistics Base (Code 876), 814 Radford Boulevard, Albany, Georgia 31704-1128; request by Fax at (912) 439-5839/DSN 567-5839. To be placed on standard distribution contact Headquarters, U.S. Marine Corps (Code ARDE), Federal Building No. 2 (Room 1302), Navy Annex, Washington, D.C. 20380; request by Fax at (703) 614-2951/DSN 224-2951.

■ **AIR FORCE**—To order, contact Air Force Publishing on-line at <http://afpubs.hq.af.mil> and enter [JFQ] in > *Short Title Search* under > *Keyword Search* and then click > *GO!* for a list of current and back issues on hand and follow instructions on submitting AF Form 1846. Customer service is available from the Air Force Distribution Center at (410) 687-3330/DSN 584-4529/4729/4829 [OCONUS: 312-4529/4729/4829], by Fax at DSN 584-4629 [OCONUS: 312-4629], or via e-mail at afpdc-service@pentagon.af.mil. Overseas, contact PACAF Order Desk (Hickam AFB): call (808) 449-5509/DSN 449-5509 [OCONUS: 315-5509], Fax at (808) 449-8207/DSN 315-8207 [OCONUS: 315-8207], or via e-mail at 15cs.scspd@hickam.af.mil; USAF Service/Order Desk (Ramstein AB): call (011-49) 6371-47-2184/DSN 480-2184, Fax at (011 49) 6371-47-7481/DSN or via e-mail css.scspc@ramstein.af.mil.

■ **COAST GUARD**—Contact Headquarters, U.S. Coast Guard, ATTN: Defense Operations Division, 2100 2^d Street, S.W., Washington, D.C. 20593-0001.

In addition to service channels, bulk distribution is made directly to defense agencies, the Joint Staff, unified commands, service colleges, and other activities. Changes in shipping instructions should be communicated to the Editor (see schedule below).

SUBSCRIPTIONS: *JFQ* is available by subscription from the Government Printing Office. To order for one year, cite: *Joint Force Quarterly (JFQ)* on the order and mail with a check for \$25.00 (\$31.25 foreign) or provide a VISA or MasterCard account number with expiration date to the Superintendent of Documents, P.O. Box 371954, Pittsburgh, Pennsylvania 15250-7954, or Fax the order to: (202) 512-2233.

Individual copies may be purchased through GPO bookstores nationwide for \$12.75 each.

CONTRIBUTIONS: *JFQ* welcomes submissions from members of the Armed Forces as well as from both defense analysts and academic specialists from this country and abroad, including foreign military officers and civilians. There is no required length for contributions, but manuscripts of 3,000 to 5,000 words are appropriate. Other submissions, however, to include letters, commentary, and brief essays are invited. Reproductions of supporting material (such as maps and photos) should be submitted with manuscripts; do *not* send originals. Unsolicited book reviews are generally not accepted for publication.

All submissions to *JFQ* must be accompanied by a covering letter which states that the manuscript has not been previously published and is not being submitted simultaneously to any other journal. In addition, the letter must include the author's full name (including military grade, service/component, and assignment if applicable), a complete postal address (with Zip code), and a work telephone number. Neither facsimile nor e-mail manuscripts will be accepted as formal submissions.

All unsolicited manuscripts are reviewed, a process which may take two to three months. To facilitate review, provide two copies of the manuscript together with a brief summary. Place personal or biographical data on a separate sheet of paper and do not identify the author (or authors) in the body of the text. Follow any accepted style guide in preparing the manuscript, but endnotes rather than footnotes should always be used. Both the manuscript and endnotes should be typed in double-space with one-inch margins. All manuscripts should be paginated. If possible submit the manuscript on a disk together with the typescript version. While disks in various formats can be processed, WordPerfect is preferred (disks will not be returned unless requested).

JFQ reserves the right to edit contributions to meet space limitations and conform to the journal's style and format. Proofs of articles accepted for publication are not normally returned to authors for review.

Unless evidence of prior clearance is provided, all manuscripts selected for publication which are contributed by members of the U.S. Armed Forces or employees of the Federal Government are forwarded to the Office of the Assistant Secretary of Defense for Public Affairs to undergo security review. No honorarium or other form of payment is authorized for the publication of articles submitted by servicemembers or U.S. Government employees.

Information on the submission of contributions is available by contacting (202) 685-4220 / DSN 325-4220, Fax: (202) 685-4219 / DSN 325-4219, or writing to the Editor, *Joint Force Quarterly*, ATTN: NDU-NSS-JFQ, 300 Fifth Avenue (Bldg. 62), Fort Lesley J. McNair, Washington, D.C. 20319-5066.

JFQ

DISTRIBUTION SCHEDULE

A total of 35,000 copies of *Joint Force Quarterly* is distributed worldwide. Of this number, more than 18,500 copies are sent directly to the five services for break down and delivery to subordinate commands, units, bases, etc. Bulk shipments are made as follows:

	<i>copies</i>		<i>copies</i>		<i>copies</i>
Office of the Secretary of Defense	400	U.S. Joint Forces Command	150	PME Institutions	
Joint Staff and Joint Activities	700	U.S. Southern Command	150	U.S. Army War College	600
Services		U.S. Central Command	275	U.S. Army Command and General	
Army	4,000	U.S. Strategic Command	275	Staff College (including the School	
Navy	6,500	U.S. Space Command	150	of Advanced Military Studies)	1,525
Marine Corps	1,500	U.S. Special Operations Command	150	Naval War College (both resident and	
Air Force	6,500	U.S. Transportation Command	100	nonresident programs)	1,750
Coast Guard	125	Defense Agencies		Naval Postgraduate School	300
Unified Commands		Defense Information Systems Agency	125	Marine Corps War College and Marine	
U.S. European Command	275	Defense Intelligence Agency	150	Corps Command and Staff College	400
U.S. Pacific Command	275	Defense Logistics Agency	150	Air War College	450
U.S. Forces Korea	75	Defense Mapping Agency	25	Air Command and Staff College	
U.S. Forces Japan	50	Defense Threat Reduction Agency	25	(including the School of Advanced	
Alaskan Command	25	National Security Agency	25	Airpower Studies)	900

In addition to the above, approximately 3,500 copies of *JFQ* are distributed to general/flag rank officers and members of Congress; service doctrine centers; U.S. and foreign military attachés; and selected educational institutions, journals, and libraries in this country and abroad.





coming next . . .

the Persian Gulf War—10 years after
plus
theater missile defenses,
new instruments for engagement,
jointness in the Japanese self-defense forces,
and more in the Winter 2000–01 issue of JFQ



JFQ

J O I N T F O R C E Q U A R T E R L Y

Published for the
Chairman of the Joint Chiefs of Staff
by the Institute for National Strategic Studies
National Defense University
Washington, D.C.