

JFQ



**Reforming Joint
Doctrine**

Coalition Warfare



**Joint Warfare—
Views from the Top**

**United Nations
Peacekeeping**

The Limits of Jointness

**The Gulf
War
Revisited**

**Joint Air
Operations**



**Service Redundancy—
Waste or Capability?**



*93
Summer*

Inaugural Issue

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 1993		2. REPORT TYPE		3. DATES COVERED 00-00-1993 to 00-00-1993	
4. TITLE AND SUBTITLE Joint Force Quarterly. Number 1, Summer 1993				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 132	19a. NAME OF RESPONSIBLE PERSON
a. REPORT unclassified	b. ABSTRACT unclassified	c. THIS PAGE unclassified			

Warfare today is a thing of swift movement—of rapid concentrations. It requires the building up of enormous fire power against successive objectives with breathtaking speed. It is not a game for the unimaginative plodder.

. . . the truly great leader overcomes all difficulties, and campaigns and battles are nothing but a long series of difficulties to be overcome.

— General George C. Marshall
Fort Benning, Georgia
September 18, 1941

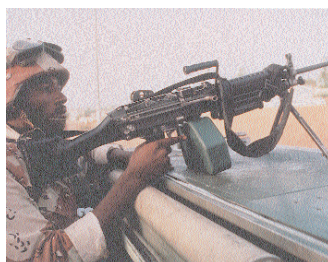
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ABOUT THE COVER

The cover shows USS Dwight D. Eisenhower, passing through the Suez Canal during Operation Desert Shield, a U.S. Navy photo by Frank A. Marquart. Photo credits for insets, from top to bottom, are Schulzinger and Lombard (for Lockheed), DOD, and the U.S. Army.

4 A Word from the Chairman
by Colin L. Powell

6 Introducing the Inaugural Issue
by the Editor-in-Chief

JFQ FORUM



7 The Services and Joint Warfare:
Four Views from the Top

8 Projecting Strategic Land Combat Power
by Gordon R. Sullivan

13 The Wave of the Future
by Frank B. Kelso II

17 Complementary Capabilities from the Sea
by Carl E. Mundy, Jr.

22 Ideas Count
by Merrill A. McPeak

25 What's Ahead for the Armed Forces?
by David E. Jeremiah

36 Service Redundancy: Waste or Hidden Capability?
by Stephen Peter Rosen

40 Reforming Joint Doctrine
by Robert A. Doughty

48 United Nations Peacekeeping: *Ends versus Means*
by William H. Lewis and John O.B. Sewall



58 Principles for Coalition Warfare

by Robert W. Riscassi



OUT OF JOINT

72 The Limits of Jointness

by Seth Cropsey



80 A New Mission for Atlantic Command

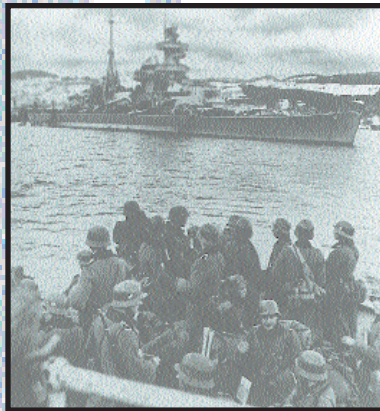
by Paul David Miller

88 Unity of Control: Joint Air Operations in the Gulf

by James A. Winnefeld and Dana J. Johnson

100 Operation Weserübung and the Origins of Joint Warfare

by Richard D. Hooker, Jr., and
Christopher Coglianese



THE JOINT WORLD

112 Professional Notes: Doctrine, Education, and Documentation

OFF THE SHELF

118 Revisiting the Gulf War: A Review Essay

by Harry G. Summers, Jr.

123 The Military Cost of Discrimination: A Review Essay

by Alan L. Gropman

125 On the Other Side of the Interwar Years: A Book Review

by Brian R. Sullivan

127 Books Noted

POSTSCRIPT

128 A Note To Readers and Future Contributors

Joint Force Quarterly

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Joint Force Quarterly is published 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 editors invite articles and other contributions on joint warfighting, interservice issues that support jointness, and topics of common interest to the Armed Forces. Please direct manuscripts, letters, and other communications to:

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National Defense University

Washington, D.C. 20319-6000

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Defense Switched Network: 335-1013

FAX: (202) 475-1012 / DSN 335-1012

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This publication has been approved by the Secretary of Defense.

Joint Force Quarterly

A PROFESSIONAL MILITARY JOURNAL

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Portrait of the Chairman
by SFC Peter G. Varisano, USA.

**we train as a team,
fight as a team,
and win as a team**

A Word from the Chairman

The world is a very different place today than it was when I assumed my duties as Chairman of the Joint Chiefs of Staff in October 1989. In the intervening years, walls have come down, empires have crumbled, new nations have been born, and more people have sought freedom than at any other period in history. Many of them have found it, some are still reaching, and others have a long way to go. But I believe the momentum that freedom and democracy have gained is an unstoppable force.

Much of that momentum was generated by the dedication and devotion to duty of millions of Americans—together with their steadfast allies—who refused to surrender to the scourge of communism and so, finally, brought about its defeat, both strategically and morally. Foremost among those proud Americans are the members of the U.S. Armed Forces. Their service has helped create the new era of hope and promise that we are now entering.

Their service also has made possible the kind of military that we have as a Nation. Today's Armed Forces are the finest in the world. Hard work, lessons learned from past mistakes, matchless training, and first-class weapons and equipment enable us to take the best and the brightest young Americans—volunteers all—and mold them into an exquisite fighting force that can be deployed at any time or place in the world, with blinding speed and awesome power.

There is another major factor that contributes to the high quality of our Armed Force—less tangible than training or weaponry but nonetheless crucial. We call it

jointness, a goal that we have been seeking since America took up arms in December 1941 at a time when warfare was clearly undergoing a dramatic change. Today we have achieved that goal; today all men and women in uniform, each service, and every one of our great civilian employees understand that we must fight as a team.

Our soldiers know that they are the best on the battlefield; our sailors know that they are the best at sea; our airmen know that they are the finest in the skies; our Marines know that no one better ever hit the beach. But every one of these men and women also knows that they play on a team. They are of the team and for the team; "one for all and all for one," as Alexandre Dumas put it in *The Three Musketeers*. We train as a team, fight as a team, and win as a team.

JFQ: Joint Force Quarterly—or simply *JFQ*—is the most recent addition to this effort. Its purpose is to spread the word about our team, to provide for a free give-and-take of ideas among a wide range of people from every corner of the military. We want the pages of *JFQ* to be filled with the latest word on joint issues—from warfighting to education, from training to logistics. We want the discussion of these joint issues to get a thorough airing, to stir debate and counter-argument, to stimulate the thinking of American men and women serving on land, at sea, and in the air. We want *JFQ* to be the voice of the joint warfighter.

Don't read the pages that follow if you are looking for the establishment point of view or the conventional wisdom. Pick up *JFQ* for controversy, debate, new ideas, and fresh insights—for the cool yet lively interplay among some of the finest minds committed to the profession of arms.

Read *JFQ*. Study it. Mark it up—underline and write in the margins. Get mad. Then contribute your own views. We want to hear from you. We need to hear from you. For it is only you and your buddies who can make *JFQ* one of the most thoroughly read and influential journals in our profession.

COLIN L. POWELL
Chairman
of the
Joint Chiefs of Staff

General Colin L. Powell, USA, is the twelfth Chairman of the Joint Chiefs of Staff. He was previously Commander in Chief, Forces Command, and also has served as Assistant to the President for National Security Affairs.

Introducing the Inaugural Issue

From Desert One to Desert Storm

In a society such as ours, overwhelmed with information but deeply dependent upon clear—I do not say *simple*—ideas, journals can play a critical role. The best of them synthesize facts in order to formulate useful ideas. *Joint Force Quarterly* aims to do precisely this. At the same time, its appearance marks a milestone in the history of the American military's progress from a force that first won a young nation its independence, then served as the successful defender of its fundamental values, and finally became what it is today—the most powerful protector of liberty that the world has ever known, whether reckoned relatively or absolutely.

This historic milestone not only marks an extraordinary political success. It bears witness to the development of an American military whose skills and equipment have arrived at a degree of excellence as unachievable as it was unimaginable just a decade ago. In the dozen years between Desert One and Desert Storm, our Armed Forces have reached a watershed in their operational quality. *JFQ* aims to chart and analyze that course, so that the understanding thus gained will enable us to build upon this remarkable achievement and assure its continuation. Here, then, is a forum where wisdom from the past can serve us in the future.

The journal's specific interest is in the ideas that will improve our ability to work together. Hence, it focuses on three related areas: joint and combined operations; interservice and multiservice interests that bear directly on jointness; and unique service concerns that influence the culture of the U.S. Armed Forces. The ultimate purpose is to ensure that our military remains able to deter or defeat any future enemy, should storm clouds again gather on the strategic horizon and hostile forces threaten our interests or those of our allies.

In his introductory remarks, the Chairman writes that such an enterprise demands a competition of ideas on the subjects where the interests of the services converge. General Powell reminds us that, just as there is no substitute in combat for trial by fire, so the best ideas can only emerge after they too have undergone the appropriate trial by debate. In the world of military thought—which needs to precede action in

the field—this competition of ideas should make for lively reading. The success of this or any journal invariably depends on such liveliness.

In the inaugural issue of *JFQ*, for example, Admiral David Jeremiah, Vice Chairman of the Joint Chiefs, observes that “We desperately need to streamline our defense acquisition system.” So strong an assertion from so senior and thoughtful an officer should be a starting point for debate on what kinds of changes need to be made in our approach to building weapons in a period of ambiguous threats and constrained budgets.

The articles by senior officers emphasize cooperation while retaining the distinctive skills of each service. But Seth Cropsey insists that such cooperation must not silence the proper debate about the future roles of the individual services, while Stephen Rosen uses historical examples to argue that structured competition between the services is vital to the health of the Armed Forces.

On the operational level, General Robert RisCassi, who commands U.N. and U.S. forces in Korea, writes that reliance on coalition warfare will increase in the future, and offers an intriguing argument about the universality of military doctrine that is certain to send a legion of military historians to their reference works—and then to their word processors—to approve or dispute his arguments.

Putting ideas into action, Admiral Paul David Miller, the commander of the U.S. Atlantic Command, offers a working plan to preserve military power as U.S. forces decrease in size. Controversial his plans may be; but as virtually every author in this issue recognizes, the comfort of the old, familiar ways is gone.

These are but a few of the articles from *JFQ*'s first issue. Readers will inevitably notice that a hefty number of authors wear several stars on their shoulders. They have been gracious enough to lend their stature to the launching of *Joint Force Quarterly*. Future contributors should not be intimidated by the rank of this distinguished group. This journal is dedicated to providing a forum for every officer—irrespective of rank or position—with interest in the issues raised by the jointness and unity of the services. Jointness is as much a bottom-up as it is a top-down enterprise. As the Chairman urged, I too hope that you will read *JFQ*, write letters in response to its contents, and contribute your own articles. Despite the high rank of the authors in this inaugural issue, “Don't let the stars get in your eyes.”

ALVIN H. BERNSTEIN
Editor-in-Chief

THE SERVICES AND JOINT WARFARE: Four Views from the Top

The Goldwater-Nichols DOD Reorganization Act elevated the notion of jointness to new heights. Operation Desert Storm clearly demonstrated the ability of the Armed Forces to operate together as a cohesive joint team. But as the services reorganize and reorient to meet the demands of an uncertain future, they must continually examine their contributions to the Nation's defense and ensure they are prepared for the challenges ahead. Future success in battle depends on maintaining a system of joint warfare that draws upon the unique capabilities of each service while effectively integrating them in order to realize their full combat potential. How the Army, Navy, Marine Corps, and Air Force are working to achieve that goal is the theme on which the service chiefs were asked to focus in this inaugural issue of *Joint Force Quarterly*.

Projecting Strategic Land Combat Power

By GORDON R. SULLIVAN

Twenty-nine thousand tanks, thirty-nine thousand infantry fighting vehicles, over four thousand tactical aircraft, seven hundred bombers, six carriers and guided missile aviation cruisers, one hundred and five principal surface combatants, one hundred and twenty ballistic and attack submarines, and thirteen hundred naval aircraft.¹



The relevance of those statistics—found in the last edition of *Soviet Military Power*—has altered dramatically. A wide variety of political, military, social, and economic events illustrates the changes in the global strategic situation over the last four years. The Army understands the scope and depth of these changes and their implications for the future of U.S. national security. It is taking advantage of, and responding to, international and domestic realities which condition the development and use of force. As an institution, the Army is innovating—in concert

with the other services—to ensure that our Nation's enduring interests remain secure well into the 21st century.

A Changing World

Soviet military capabilities shaped the Army's perspective on joint warfare throughout the Cold War. From 1945 to 1990 we faced a numerically superior, disciplined, offensively oriented political and military adversary. The tremendous quantity of Soviet equipment, coupled with Moscow's drive to achieve technological parity with the West, threatened our interests around the globe, with the primary focus on Central Europe. Euphemistically characterized as a "target-rich environment," massed-armor warfare preoccupied American military thought and action for much of the last forty-five years—two generations of military leaders. Infantry, tank, and artillery units along with battalions, brigades, and divisions rightly had their minds and hands occupied with the job of defeating superior numbers of similar equipment arrayed in a dense combat area. With the notable exception of tactical air support, thoroughly integrated on the World War II pattern established by Pete Quesada and George Patton,² joint operations and considerations were, in the minds of many Army commanders, consigned to echelons above corps.

The demise of the Soviet Union has presented challenges that the Army is overcoming, and opportunities that it is seizing.



Members of the 2^d Armored Division inside an infantry fighting vehicle.

U.S. Army photo by William U. Rosemund

International issues require a broader appreciation of the threat—from the unitary and relatively predictable adversary we knew in the Cold War, to the diverse, ambiguous, and dynamic threats that we confront today. Ethnic and religious conflict, weapons proliferation, thrusts for regional hegemony, irredentism, terrorism, and drug trafficking are the most prominent elements of this dangerous new world. To successfully meet the challenges which these trends indicate, we are retaining and developing capabilities to secure our national interests. We continue to base these capabilities on the sound foundation of the American people and leveraging U.S. technological advantages in training, developing, deploying, and employing the force.³

The Army also faces the challenges posed by a national agenda with a priority on domestic rebuilding of the physical and intellectual assets of the country. While the Army will shrink to its smallest end strength since just before World War II, and as the Nation devotes resources to other programs, the Army budget will approach that of the post-World War II service in percentage of gross domestic product. The challenge is to seize opportunities to apply our limited resources in a manner that best serves the country. In the past some observers may have portrayed a “circle the wagons” picture in which the Army attempts to preserve its capabilities at the expense of working with the other services. Today, the world situation and expectations of the American people will not tolerate such short-sightedness. The Army’s view of service to the Nation is broad and embraces the concept of joint operations as a cardinal tenet of defending the United States now and in the 21st century. Our recent experience bears this out.

The Joint Experience

The last four years have taught us two things. First, joint operations work and they work more efficiently than single-service operations. There is unmatched power in the synergistic capabilities of joint operations.

Second, future threats require that joint operations be the norm at every level of command. Relegating the expertise and ability to conduct joint operations to only “higher” levels is a recipe for missed opportunities, longer and more difficult operations, riskier outcomes, greater numbers of casualties, and increased expenditures of resources.

Joint capabilities provide decisive overmatch on every level of warfare from the strategic, where national objectives are determined, priorities assigned, and resources allocated, through the operational level, where campaigns are constructed to achieve national objectives, to the tactical, where engagements and battles cumulate in victory. The U.S. Army demonstrates an ability to dominate land combat. Working with the Air Force, Navy, and Marine Corps will ensure victory and success in any conflict environment.

Operations Just Cause and Desert Shield/Desert Storm are clear examples of the benefits of joint operations. Just Cause illustrated the immense power generated by a simultaneous application of unique, complementary service capabilities. By land, sea, and air the Armed Forces assaulted and secured 27 objectives between midnight and sunrise on the first day. That complex, synchronized application of combat power, projected from the continental United States, its coastal waters, and within the region, eliminated resistance by the Panamanian Defense Force. We neutralized assets that could have been used to continue the struggle—communications, ready forces, logistics, and reserves. Precise power projection and joint principles applied in a compressed timeframe illustrate the need for rapid response forces trained in joint operations. Forces participating in Just Cause led the way in expanding the joint perspective on warfare. Seven months later, America received another decisive return on its investment in forces that can operate together in any environment and against any adversary while elevating warfare to a level unmatched in the world today. Operations Desert Shield/Desert Storm required an imme-

the Army’s view of service to the Nation is broad and embraces the concept of joint operations as a cardinal tenet

General Gordon R. Sullivan is the thirty-second Chief of Staff, U.S. Army. An armor officer, he has commanded at the platoon through division levels, and was Vice Chief of Staff prior to assuming his current position.

disaster relief and overseas humanitarian operations have reinforced the necessity to work with civilian agencies

diate defense and a show of force which matured and evolved into a potent offensive capability. Throughout the fall and winter of 1990–91 the services conducted joint and combined training at all levels. The heavy force that defeated Iraq's Republican Guards was comprised of units that had stood watch in Central Europe for four decades, trained and ready to meet an armored thrust that never came. Within days of taking up positions in the desert these units were conducting joint and combined operations at battalion and brigade level. This cooperation, based on sound principles and doctrine, paid huge dividends and gave us a window into the future of warfare.

For example, during one phase of the VII Corps operation, a SAM–2 site in the vicinity of Basra activated its radar and began to paint coalition aircraft. Since the only asset in striking distance due to the pace of operations was an artillery brigade operating with the 1st Armored Division, VII Corps relied on an Air Force EC–130H, Airborne Battle Command and Control Center, to relay the fire mission to the artillery unit and clear the airspace. Within three hours of the SAM–2 site activating its radar two Army tactical missiles fired from a multiple-launch rocket system were on the way to destroy the target.⁴ Air Force operations continued without threat of SAM interruption, and VII Corps benefited from continued air strikes against Iraqi reserves and command and control targets.

Replicated across the battlefield, from varied service platforms operating on and above the desert floor and positions at sea, such actions decimated the Iraqi military, resolved the conflict on the ground in 100 hours, and kept our casualties to a minimum. Conduct of joint warfare at that level has become the unique province of the Armed Forces, and one that we are striving to maintain in order to overmatch any potential adversary.

The Future of Joint Operations

The strategic landscape that the Nation faces will require power projection forces

that are tailorable, more versatile, and more precise than even those that we employed in Southwest Asia or Panama. The range of employment scenarios has burgeoned recently, and we can see evidence of this trend in joint operations in Somalia, Bosnia-Herzegovina, Guantanamo, Southwest Asia, and domestically in disaster relief and the counternarcotics missions. Because such contingencies may not require application of force in the same magnitude or manner as Just Cause or Desert Storm, commanders of units of all types and sizes must work and succeed in the joint environment. The 212th Mobile Army Surgical Hospital in Zagreb and the 10th Mountain Division in Florida, and subsequently in Somalia, are prime examples.

Additionally, our recent domestic disaster relief and overseas humanitarian operations have reinforced the necessity to work with civilian agencies. Even before Operation Desert Storm was over, Army elements were coordinating reconstruction efforts with the host government and U.S. agencies in Kuwait. In Los Angeles, Florida, Louisiana, Hawaii, and Guam, Total Army units worked closely with private relief organizations and state and Federal agencies to restore order and assist civil authorities in restoring services to devastated neighborhoods.⁵ That pattern of support to civil authority continued in Somalia.

In the future the Army's forward presence and crisis response capabilities will be needed and integrated into every phase of operations. The breadth and scope of single-service capabilities militate against making a solitary transition from forward presence, through crisis response, to conflict resolution. The capabilities of the Army to dominate maneuver, conduct precision strikes, sustain land combat power, and protect the force are essential and necessary for the prosecution of successful campaigns, but only a combination of multiservice capabilities will ensure success.

The Army recognizes this need for forces trained and ready to operate with other services and ad hoc coalitions, at all unit and command levels. We are on the right path, both conceptually and materially, to achieve our goals of integration, synergy, and overwhelming effectiveness.

The Army has revised its doctrine to reflect changing circumstances that surround



General Sullivan in Somalia.

ground combat. Our doctrinal capstone, FM 100-5 (*Operations*), was published this spring. The concepts and tenets in this manual are the result of serious study of lessons learned and future possibilities, and the exchange of a range of ideas among military professionals, scholars, and policy analysts.

It will guide our efforts to reshape the Army for the world in which we will be operating.⁶

We are working closely with the Navy and Air Force on implementing the recommendations of the Mobility Requirements Study.⁷ The study requires the Army

to be able to close a three division force (two heavy and one light) to a theater 7,500 miles away in 30 days, and to close a five division corps with its associated components and support within 75 days. This is true power projection, beginning on the first day of a crisis, and it is not possible to accomplish these objectives without close cooperation from the other services.

Of course, getting to a crisis theater is not enough. We must be prepared to fight from day one in conjunction with other services, and the Army is prepared to do that, through a rigorous training program that builds on our mature Combat Training Centers. Forced entry and contingency operations combining heavy deployments and airborne insertions are the norm. Operations combining heavy, light, Air Force, and Marine units take place at Fort Irwin in California.

The Joint Readiness Training Center at Fort Chaffee, Arkansas, has a long record of innovation when integrating the services. Navy SEALs routinely operate in local rivers. The threat can be varied and includes refugees and terrorists as well as a world-class opposing force. Recently, joint operations demonstrated the ability of the 24th Infantry Division's ready company team and the 82^d Airborne Division to deploy rapidly and engage in combat operations within hours. This effort will continue when the Joint Readiness Training Center is moved to Fort Polk, Louisiana.

Recently, the Combat Maneuver Training Center at Hohenfels, Germany, trained a Royal Dutch Marine unit that was enroute to

replace a sister battalion on U.N. peacekeeping duty in Cambodia. The scenario used real-time intelligence reports from satellite links with Cambodia to structure daily situational training exercises. The technological capabilities exist to link command posts with subordinates performing a wide range of simultaneous missions—search, combat, check point, surveillance, crowd control, etc.—through real-time intelligence files drawn from central and remote data banks. This ability to process and exploit information is the next step in producing a truly integrated battlefield.

The thrust of Army exploitation of the microchip is to improve battlefield awareness through horizontal integration and insertion of digital technology. We have begun to link individual weapons systems (both fielded and future platforms) through automated communications channels to provide instantaneous updates on operational and logistical status and enemy information. This will provide commanders and their teams with the precise knowledge needed to wage warfare at the decisive level on which America expects to fight. Map displays and operational graphics can be updated to give subordinate units complete knowledge of the enemy situation and the commander's intent, allowing units to take advantage of fleeting enemy weaknesses and to bring decisive combat power to bear. Other services are exploiting similar capabilities. The next logical step is to take the groundwork laid by such systems as J-STARS and work toward a truly integrated battlefield. The Army looks forward to exploiting this advantage with the Navy, Marine Corps, and Air Force.

Additionally, within the context of joint operations, there is room for achieving economies of scale and consolidating functions. Some training and many logistics and support functions are already consolidated, and we are looking for ways to expand such programs. However, not all redundancy consists of unnecessary overlap. Centralization of some functions into single service capabilities can provide economies and efficiencies, but carried to an extreme can unravel proven jointness. America does not need a military establishment of eaches, wherein the services

become *customer-oriented* purveyors of narrow capabilities rather than combat-oriented organizations with a broad focus and an understanding of all the facets of war.

The U.S. Army has a proud record of working with the other services in joint operations. Indeed, almost every conflict in American military history is replete with examples of the services integrating their capabilities to defend our national interests. From the American Revolution, through

Scott's march on Mexico City, the Vicksburg campaign of Grant and Porter, the Spanish-American War, World Wars I and II, and the long list of conflicts that punctuated the Cold War and its aftermath, the services have had much more in common than that which separates them. Americans should be confident that the Army will be a full partner in joint operations in the future.

The next chapter in our history will record an even greater degree of integration, as we respond to a new range of threats with tailored, multiservice force packages both oriented on and trained for crisis response and power projection, and as we employ the power that comes from simultaneous application of unique, complementary capabilities. We will seize those opportunities provided by technology and the support of the American people to protect the enduring, global security interests of the Nation. **JFQ**



DOD photo

NOTES

¹ U.S. Department of Defense, *Soviet Military Power*, 9th edition (Washington: Government Printing Office, 1990). Figures compiled from theater of military operations (TVD) and major subordinate command weapons systems totals.

² Martin Blumenson, *Breakout and Pursuit*, in *The United States Army in World War II* (Washington: Office of the Chief of Military History, 1961), pp. 208, 231–40, 333–34. Also, Headquarters, Department of the Army, FM 100–5, *Operations*, 1986, pp. 25, 47–53, 161–72.

³ Secretary of Defense Les Aspin, *Confirmation Hearings*, Committee on Armed Services, United States Senate, Washington, January 7, 1993.

⁴ U.S. Army Training and Doctrine Command, "Louisiana Maneuvers: First Board of Directors Meeting," October 27, 1992 ["Jayhawk Thunder" sequence], videotape presentation produced by the Training and Doctrine Command, Fort Monroe, Virginia, 1992.

⁵ The Total Army response is described by the author in "Hurricane Andrew: An After-Action Report" which appeared in *Army Magazine*, vol. 43, no. 1 (January 1993).

⁶ For a discussion of the Army's doctrinal base, and how doctrine serves as the foundation for innovation in personnel recruitment and retention, training, leadership development, organizational design, and modernization requirements, see Paul H. Herbert, "Deciding What Has to be Done: General William E. DePuy and the 1976 Edition of FM 100–5, *Operations*," Combat Studies Institute, Leavenworth Papers no. 16 (Fort Leavenworth, Kans.: U.S. Army Command and General Staff College, 1988). The joint approach to warfare in Army doctrine flows directly from the Joint Staff doctrine found in Joint Pubs 1 and 3.0.

⁷ Joint Chiefs of Staff, "Mobility Requirements Study," vol. 1, Joint Staff Publication (1992). This study was mandated by Congress to determine airlift and sealift assets necessary to support the national military strategy.

The Wave of the Future

By FRANK B. KELSO II



U.S. Navy photo

... *From the Sea*

The Cold War is over, but in its wake we are left with an uncertain world. Although the risk of global war is greatly reduced, the United States and its allies still face threats. As we have just begun to realize, these new threats are often difficult to predict. In response to this challenge, our national security policy is shifting from deterrence of global conflict toward regional, littoral contingencies and conflicts, often in coalition with other nations.

With no credible, global naval threat, today's strategic environment has a very different meaning for our maritime forces. The need for separate, independent naval operations at sea for indirect support of the land war has been greatly reduced, and as a result our maritime operational focus has now

shifted to littoral warfare and direct support of ground operations.

Operation Desert Storm reemphasized the need for the Armed Forces to operate effectively together and to acquire equipment which is compatible. Because joint operations involving all the services provide the greatest range of capabilities for the smallest investment, the Navy and Marine Corps launched an extensive, year-long study of future naval roles and capabilities, in terms of their relevance to the 21st century and a joint warfare environment. The results of that study are known as "... From the Sea."

The Navy's new strategy represents a fundamental shift away from emphasis on open-ocean warfighting *on the sea* toward joint operations conducted *from the sea*. By exploiting naval access to littoral regions, military planners can realize the power projection strength of naval forces while complementary capabilities of other services punctuate their impact and effectiveness.

Admiral Frank B. Kelso II is the twenty-fourth Chief of Naval Operations. Previously he served as Supreme Allied Commander Atlantic; much of his early career was spent on board nuclear-powered submarines.

Naval operations in littoral regions transform the classic AirLand battle into a unified sea-air-land-space engagement, but dominance over an enemy in the littoral environment cannot be assumed. Likely adversaries enjoy the advantage of concentrating and layering defenses. Mines, diesel submarines, high-speed tactical aircraft, fast patrol boats, sea-skimming missiles, and tactical ballistic missiles launched from shore batteries are typical littoral threats. Such complex challenges demand specialized skills that only are provided by a completely integrated joint force.

Joint Forces

In the brief time since "...From the Sea" appeared efforts to implement this new strategic direction have accelerated and expanded to all levels in the sea services with special emphasis on the issues of joint integration and interoperability. The Navy and Marine Corps are aggressively redefining naval roles in joint exercises.

In 1992 U.S. Atlantic Command (LANTCOM) demonstrated improved integration of joint forces and naval doctrinal changes in Exercise Ocean Venture. For the first time

the Navy deployed a flexible and robust command and control facility ashore permitting the naval force commander to collocate with the joint

force commander and other component commanders.

Last year in Exercise Ellipse Bravo, U.S. European Command (EUCOM) tested the ability of the services to assemble a joint task force to conduct a rapid emergency evacuation operation. Established within 48 hours, a 22,000-strong Army, Navy, Marine Corps, and Air Force task force demonstrated effective continuity of command as its headquarters was relocated from land to sea.

During Exercise Tandem Thrust, mounted by U.S. Pacific Command (PACOM) in 1992, a 15,000-man joint force consisting of land, sea, and air forces concluded its training with amphibious landings and Army

airborne assaults. The joint task force staff embarked in the Third Fleet flagship to maintain overall control of the exercise as the Joint Force Air Component Commander (JFACC) coordinated all air operations remotely from the continental United States.

Model for Joint Interoperability

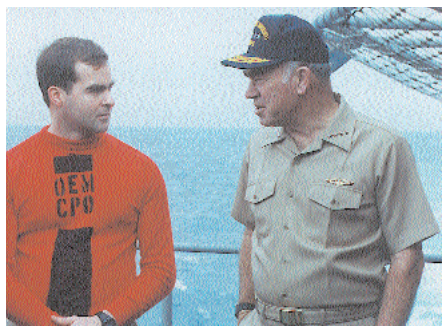
U.S. Central Command (CENTCOM) operations have attained new levels of joint understanding, cooperation, efficiency, and combat effectiveness. In the Persian Gulf an Air Force composite wing operates on a daily basis with its Navy and Marine Corps counterparts to enforce no-fly zones. Army, Marine Corps, and special operations forces exercise together routinely. Navy ships enforce U.N.-imposed sanctions with the assistance of maritime surveillance provided by Air Force Airborne Warning and Control System (AWACS) aircraft. The CENTCOM environment is ideal for developing joint concepts and conducting joint training. In a recent exercise also in the Persian Gulf, for example, an afloat JFACC successfully developed, planned, and executed a mini-air campaign including a simulated strike mission with over 70 Navy and Air Force aircraft.

In the Caribbean and Eastern Pacific, Navy-led counterdrug joint task forces offer another example of joint operations. They exploit naval air and open-ocean surveillance capabilities as well as command, control, communications and intelligence (C³I). Navy ships, maritime patrol aircraft, and airborne radar aircraft operate with assets from the other services and Federal agencies. A Coast Guard squadron commander and staff embark aboard the Navy task group commander's flagship to monitor and control surface activity. Coast Guard law enforcement detachments operate from Navy ships to board, search, and if necessary seize vessels smuggling narcotics.

Joint Communications

During the past decade significant progress has been made in standardizing procedures and procurement of interoperable systems for joint communications. Nonetheless problems still occur, especially in highly specialized communications systems. One example was the format and medium used to send Air Tasking Orders (ATOs) during Operation Desert Storm. They were incompatible with naval communica-

the Navy's new strategy represents a fundamental shift away from emphasis on open-ocean warfighting on the sea toward joint operations conducted from the sea



Admiral Kelso with the fleet.

tions systems and as a result carrier-based aircraft were dispatched daily to pick up one-hundred page documents from Riyadh for delivery to ships in the Persian Gulf and Red Sea. Converting the ATO into mission assignments was very time-consuming.

Finding the permanent solution to this problem became a joint, post-war priority project that is now well in hand. In recent joint exercises ships at sea have received and transmitted Desert Storm-sized ATOs electronically in less than five minutes. All deployed aircraft carriers have this capability while other carriers have been partially modified to allow complete installation in less than 24 hours. Procurement plans have been altered to ensure that all amphibious assault ships and aircraft carriers are permanently equipped with this vital capability.

Navy Organizational Changes

Since Operation Desert Storm the Navy has taken additional steps to improve its ability to work in the joint arena in operations, planning, procurement, and administration and to improve communications between the staff of the Chief of Naval Operations (OPNAV) and the Joint Staff and between the Navy Department and Department of Defense.

In July 1992, the OPNAV staff was reorganized to mirror the structure and functions of the Joint Staff. As part of this change, the new Deputy Chief of Naval Operations for Resources, Warfare Requirements, and Assessments established six joint mission assessment areas: joint strike, joint littoral, joint surveillance, joint space and electronic warfare/intelligence, strategic sealift and its protection, and strategic deterrence. Under this system, Navy procurement programs are scrutinized and evaluated against their specific contributions to joint warfighting. If they fail this test, they are not included in the Navy budget.

In March 1993 the Naval Doctrine Command was formally established. As the pri-

mary authority for developing both Navy and naval doctrine, it will provide a coordinated, integrated sea service voice in joint and combined doctrine. Priority will be given to doctrine development that addresses the new geostrategic environment and its changing threat, and to enhancing the integration of naval forces in joint and combined operations. This is fundamental to naval contributions to joint warfighting in the future.

In a significant departure from traditional single-service deployments, the Navy and Marine Corps are working closely with the Joint Staff to improve ways to organize, train, and deploy joint forces. The goal is to provide unified commanders with forces specifically tailored, trained, and deployed to satisfy regional operational requirements.

Interservice boards such as the Navy-Air Force-Marine Corps Board and the Army-Navy-Marine Corps Board have been established to encourage formal cooperation and increase efficiency among forces across a broad range of areas. These boards have succeeded in transforming several single-service air-to-ground weapons programs into one joint program and expanding interservice cooperation in land-based refueling for naval aircraft. Progress can also be noted in both the Joint Tactical Information Display System and the Global Positioning System acquisition programs.

Redirecting Spending

Funding represents the ultimate organizational indicator of priorities and a measurable sign of change. The redirection of spending has already been discussed, namely, in modifying systems and ships to accommodate joint staffs and operations and in expanding cooperation in joint acquisition programs. The Navy and Marine Corps have also instituted a deliberate organizational process to redirect funding priorities to enhance naval contributions to joint warfighting capabilities.

Furthermore, with the publication of "... From the Sea" in September 1992, the Department of the Navy dissected and examined its budget line-by-line against the guiding principles of our new strategic direction. This process examined how well the overall budget supported that new direction. As a result some investment plans were

redirected to strengthen joint littoral warfare including the following changes:

- ▼ increasing procurement of precision-guided munitions to support the joint land campaign;
- ▼ accelerating enhancements in joint command, control, and communications systems to support a JTF commander and his staff afloat; and
- ▼ renewing the commitment to satisfy the Marine Corps requirement for sufficient medium lift capability to permit rapid movement ashore in support of an amphibious ground campaign.

Overall, the Navy and Marine Corps redirected \$1.2 billion within their budgets to support the new naval strategy and joint warfighting operations.

Recognizing the value of well-equipped, highly mobile forces to meet various challenges, unified commanders regard sealift as a critical ingredient of warfighting success. As we reduce manpower and material overseas, strategic sealift will be more vital to providing required heavy equipment and sustainment to forces in all parts of the world. Consequently, we have raised the priority of sealift in procurement planning, conveying to Congress its importance to our Nation's defense capabilities.

In the past year Military Sealift Command ships proved their value in joint peacetime operations almost as dramatically as they did during the Gulf War. Navy ships carried relief supplies to Florida, Guam, the Baltic nations, and Russia for distribution by U.S. units ashore. Marine Prepositioning Squadron ships were the first to arrive in Somalia, and by January 14, 1993, nearly thirty were operating in direct support of Operation Restore Hope.

Our operating forces are on the cutting edge of joint warfighting. All naval staffs and shore support establishments are committed to the concept of jointness. The Naval Doctrine Command will ensure that our focus remains on finding ways to improve the efficiency of joint warfare. The Navy-Marine Corps team is committed to joint operations and the pursuit of innovative means for employing our forces in support of joint warfighting.

JFQ



Complementary Capabilities from the Sea

By CARL E. MUNDY, JR.



U.S. Marine Corps photo

The success of our Armed Forces in recent years is well documented. In addition to dealing swiftly and decisively with numerous crises and major contingencies throughout the globe, the services have demonstrated on various occasions their utility to the Nation in situations short of war. Our efforts have significantly contributed to the radical transformation of the world over the last four years, and to the improved strategic position of the United States.

Without doubt each service has played a unique and invaluable role in the victories that we have achieved. Moreover, there is no doubt that developments in joint warfare have been instrumental in our triumphs on the battlefield and success in promoting U.S. interests in assorted ways and under a variety of circumstances.

Since the enactment of the Goldwater-Nichols Department of Defense Reorganization Act of 1986 the services have taken joint warfare to a new level. The brilliant performance of U.S. forces during Desert Storm is a reflection of our ability to operate together as a cohesive joint team. But as we reorganize and reorient the Armed Forces to meet the demands of an uncertain future, we cannot afford to rest on our laurels. Today we have the rare opportunity to adapt and apply ourselves to a new security environment. To capitalize on this opportunity the services must continually examine their contributions to the Nation's defense and ensure they are prepared to meet the challenges that lie ahead. Future military success will also depend on maintaining a system of joint warfare that draws upon the unique strengths of each service, while providing the means for effectively integrating them to achieve the full combat potential of the Armed Forces.

Focusing on Capabilities

Each service—consistent with its role and assigned functions—contributes to what General Powell describes as a toolbox of capabilities. The combatant commanders in chief (CINCs) draw from this toolbox to meet requirements in their respective areas of responsibility. As we continue to make drastic cuts in the size of the Armed Forces, it is extremely important to retain a balance of carefully developed, complementary capabilities in that toolbox. While fiscal realities demand that we reduce redundancies, history warns us of the risks incurred when we allow gaps to exist in our capabilities. Successful joint warfare demands that we understand, maintain, and properly employ the unique capabilities of all the services.

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But achieving success in the face of future challenges will require more than just maintaining complementary capabilities. It also calls for integrating service capabilities and making efforts to achieve joint synergy on the battlefield. This demands continuing to develop and refine joint warfare to keep pace with changes in defense strategy, advances in technology, and other variables. It also means that prospective joint force commanders (JFCs) and their staffs must understand joint doctrine and have an appreciation of the capabilities that each service brings to the joint family of capabilities.

Joint warfare does not mean that each service will be equally represented each time a CINC conducts an operation. In selecting the right tools for the job the CINC considers the particulars of the mission and the conditions under which it must be accomplished. It is the responsibility of the services to identify packages of forces or

force modules from which the CINC can select the right mix of capabilities to satisfy his requirements. Some of the factors that influence the process of selecting the right tools for the job can be illustrated by comparing two recent operations. In 1989 the requirements and nature of Operation Just Cause in Panama made it predominantly an Army-Air Force show. It was a land-force operation in which the United States enjoyed ready access to airfield facilities and had a large number of Army forces in theater before the outbreak of hostilities. Conversely, when Operation Sea Angel was conducted in Bangladesh in 1991, no permanently based U.S. forces were situated nearby and the local infrastructure had been decimated. These conditions and other factors dictated that the operation be conducted by forces

that were self-sustained and primarily sea-based. Thus, it was largely a Navy-Marine Corps operation in which a Marine Air-Ground Task Force (MAGTF) formed the nucleus of the joint task force.

Joint warfare does mean that the capabilities of each service must be both interoperable and complementary. This must be the case on all levels of war: strategic, operational, and tactical. In addition to a common understanding of doctrinal matters, joint warfare requires that the services possess compatible communications equipment to exchange information and standardized consumables to facilitate service support. In the past decade, the Armed Forces have greatly improved the ability to fight together by making strides in these and other areas.

One can gain an appreciation for how far we have come by comparing the post mortem on Operation Urgent Fury with that of Operation Desert Storm. Much has been written about the poor coordination among the services in 1983 during Operation Urgent Fury in Grenada. After-action reports highlighted numerous problems including the inability of the services to communicate with each other, unclear command relationships, counterproductive interservice rivalries, and significant deficiencies in planning and coordinating supporting arms. While the mission was accomplished, it is generally agreed that we failed miserably in achieving unity of effort and were not as effective as we should have been.

In Desert Storm, which was conducted eight years after Urgent Fury, the overall story was much different. Although some deficiencies in jointness were identified, the services understood joint warfare and fought as a team. Command relationships were clearly understood and the major shortfalls identified during Urgent Fury were rectified. In the title V report to Congress, the Army, Navy, Marine Corps, and Air Force were described as having "demonstrated a quantum advance in joint interaction."

Today, as Armed Forces adapt to a new strategic landscape and severe budgetary constraints, it is important that we build upon the success of Desert Storm and other recent operations. We must engage in a continuous process of evaluation to identify and maintain the capabilities we will need to deal with future challenges. As we do we



Combat Camera Center photo by Perry Heimer

Col Charles Russell, USAF, Deployed Base Commander, explains air operations to the Commandant during a visit to Somalia.

the Marine Corps has recently conducted a no-holds barred reassessment of its role in the Nation's defense

must continue to focus on improving our ability to fully integrate those capabilities whenever the formation of a joint task force is required. This is the proper focus and the driving force behind the development of the capabilities which the Marine Corps currently provides to the CINCs.

Supporting National Military Strategy

Although the Nation is in the midst of drastically reducing the number of forces permanently based overseas, our national security strategy continues to demand that we remain proactive in shaping an international security environment that promotes U.S. interests and influence. Thus our national military strategy emphasizes the need for forward deployed forces to deter aggression, demonstrate commitment, foster regional stability, lend credibility to alliances, and when necessary enhance crisis response capabilities.

The Marine Corps, with the requirements of the national military strategy clearly in focus, and in close cooperation with the Navy, has recently conducted a no-holds barred reassessment of its role in the Nation's defense. This study validated the traditional Marine Corps role as a naval expeditionary force in readiness, and confirmed the continued relevance of the forward presence and crisis response capabilities that the Marine Corps provides to the CINCs. As a result of this internal audit and recent operational experience, we have also undertaken a number of initiatives to enhance our capabilities to support joint operations.

Forward Presence

The Marine Corps, as a key component of naval expeditionary forces, is unique in its ability to support the CINCs in fulfilling the requirements for forward presence in the littoral areas of the world. The characteristics of forward deployed Marines, embarked aboard naval ships, make them an invaluable asset for projecting influence. As a seabased force they are unrestricted by basing or overflight requirements, self-sustained, and extremely mobile.

To meet the day-to-day requirements of the CINCs for forward presence in regions vital to our national interests, the Marine Corps routinely deploys Marine Expedi-

tionary Units (MEUs). These 2,000 man Marine Air-Ground Task Forces (MAGTFs), embarked in amphibious ready groups of three to five ships, are extremely flexible and over the years have proven to be most useful. The specific size, organization, and equipment of these units have evolved over four decades through continuous development and use in a forward presence role; in short, the MEU is tailored to provide the CINC with the capabilities he is most likely to need.

While deployed, MEUs frequently conduct port visits, military-to-military contacts, and combined exercises. These activities complement diplomatic efforts throughout the globe, help to maintain our system of collective security, and often provide the foundation of friendship and trust necessary for building coalitions in time of crisis.

Crisis Response

A forward deployed MEU also provides the CINC with a force that directly links his forward presence and crisis response capabilities. As a combined arms force, the MEU provides the CINC with credible combat power which can be rapidly dispatched to an area in which a crisis is developing. The ability of these forces to linger on station in a crisis area for extended periods is a significant advantage for decisionmakers as they monitor the situation and determine when, how, or whether to respond. Often, the very presence of the MEU can prevent a crisis from escalating to a higher level of violence. If a situation calls for more than presence, MEUs can swiftly make the transition from projecting influence for deterrence to projecting combat power to halt aggression.

MEUs are capable of acting independently in many instances, and conducting a wide range of missions to include amphibious raids, humanitarian assistance operations, and the evacuation of noncombatants. In situations where a crisis cannot be suppressed and armed conflict erupts, the MEU provides the CINC with a force that can be employed to facilitate the introduction of a larger MAGTF or joint force. The flexibility of forward deployed MEUs was clearly demonstrated during Operation Sharp Edge in 1990. During that operation, elements of a MEU remained off the coast of war-torn Liberia for seven months as the situation was monitored. When develop-

ments pointed to American lives being in jeopardy, Marines were quickly deployed to provide security for the U.S. Embassy and, subsequently, to assist in the evacuation of over 2,000 noncombatants.

Operation Provide Comfort offers another example of how a forward deployed MEU can give CINCs the ability to quickly respond to crises in vital regions of the world. On April 9, 1991, the 24th MEU (Special Operations Capable) was midway through a scheduled six-month Mediterranean deployment when ordered to respond to a rapidly deteriorating situation in Northern Iraq. Hundreds of Kurdish refugees fleeing the forces of Saddam Hussein were dying of malnutrition, exposure, and disease each day; thousands had fled to neighboring Turkey, creating a further threat to regional stability. The 24th MEU, in the midst of a routine training exercise in Italy, arrived on the scene within four days. Because of its command and control capabilities, the MEU

served as the nucleus of a joint task force formed to resolve the growing crisis. In the next three months, the 24th MEU was a key component in a massive relief effort

for an estimated 500,000 beleaguered refugees. The tasks assigned to the MEU included providing security, delivering tons of supplies, establishing resettlement camps, and providing water, dental, and medical care to refugees.

The Stabilizing/Enabling Capability

To respond to larger crises or contingencies, the Nation requires a broad spectrum of military options. This requirement demands that the CINCs have the ability to rapidly and flexibly sequence the deployment and employment of a wide range of capabilities. The CINCs meet this requirement through the process of adaptive planning. Adaptive planning provides the CINCs with a menu of preplanned options with which to respond to a crisis or contingency. The Marine Corps, to support adaptive planning, has developed crisis action modules (CAMs), which provide the CINCs with a menu of Marine Corps capabilities to choose for a particular mission.

In addition to providing forward presence and crisis response options with MEUs, the Marine Corps provides CINCs with other flexible force options. They offer the CINC the ability to quickly transition from relatively small forces within forward-presence forces to heavier, more capable contingency forces needed to respond to a large crisis or major regional conflict. The true value of the CAMs is their ability to give the CINC a rapidly deployable, integrated, self-sustained, combined arms capability early in a crisis.

MAGTFs have great flexibility; they provide CINCs with a force that has sufficient combat power which can be used, as the situation dictates, to resolve a conflict and restore stability, or to enable the arrival of a larger joint force. If necessary, MAGTFs can conduct forcible entry from amphibious ships or be deployed together with maritime prepositioning ships. Although Marine forces can deploy by a single means, CAMs have been developed so that MAGTFs can integrate all mobility assets in both building and deploying forces. Thus a MAGTF can deploy by combining elements of strategic airlift, amphibious ships, and maritime prepositioning forces. This inherent deployment and employment flexibility, combined with other characteristics of a MAGTF, provide CINCs with unique capabilities for rapidly building up combat power in littoral crises or conflicts.

Operation Desert Shield is a classic example of force sequencing and the role Marines can play as an enabling force for follow-on joint forces. Five days after the President gave the order to deploy, a Marine expeditionary force began to arrive at airfields in Saudi Arabia to link up with its equipment loaded aboard a maritime prepositioning squadron. The force provided the commander in chief, U.S. Central Command, with his first significant mechanized forces with which to defend Saudi Arabia. The rapid deployment of this credible Marine air-ground force, which arrived with 30 days of sustainability, helped stabilize the situation and enabled the buildup of heavier forces.

The recent operation in Somalia, Restore Hope, is also illustrative of Marine Corps enabling capabilities. The initial force committed was a MEU; this unit was in the midst of a scheduled deployment and stood poised off the Somali coast for weeks as the National

**we are aggressively working
on our joint warfare capabilities
and thus our usefulness
to the CINCs**

Command Authorities weighed their options. When a decision was made to intervene, the force was immediately available. Despite the extremely limited infrastructure of Somalia, Marines were able to land, establish secure air and port facilities, and begin engineering work to enable more troops and equipment to join in the relief effort. Once again, Marines were able to do all this in a matter of days because they are sea-based, self-sustained, able to operate in an austere environment, and positioned and prepared to respond instantaneously to a crisis.

Relevant Capabilities for the Future

This is not to say that Marines are satisfied with the status quo. We recognize that today's capabilities exist only because our predecessors were innovative and forward thinking. No less an effort is needed to prepare for the future.

The conceptual underpinning for tomorrow is articulated in the Navy and the Marine Corps white paper entitled "... From The Sea." This document states that the future direction of the Navy and Marines is to focus on operating forward in the littoral areas of the world, and to provide naval expeditionary forces shaped for joint operations and tailored for the Nation's needs. For the Marine Corps, this entails building on the capabilities we have traditionally provided. We are aggressively working on a number of internal initiatives and participating in some multi-service ventures that will enhance our joint warfare capabilities and thus our usefulness to the CINCs:

- ▼ Appointment of a two-star Marine Corps general to the Navy staff to facilitate integration of Navy and Marine Corps planning and programming, enhance joint interoperability, and better support the unified commanders in chief and their naval component commanders.

- ▼ Implementation of a restructuring plan which includes allocation of additional personnel to the Marine Expeditionary Force's command element to fulfill the requirements of joint task force operations. This plan also will increase the communications capability of the Fleet Marine Force headquarters to enhance connectivity associated with component obligations.

- ▼ Establishment of the Naval Doctrine Command to ensure the smooth integration of the Navy and the Marine Corps into joint operations.

- ▼ Active participation in DOD modeling and simulation initiatives designed to enhance joint force training and exercises.

These and other steps will ensure that Marine Expeditionary Forces retain their unique capabilities in the years ahead and continue to complement the capabilities of the other services. Most importantly, Marine forces will continue to provide what the CINCs need to accomplish their missions.

Staying the Course

The Armed Forces have significantly improved their joint interoperability in the last decade. Combat effectiveness has greatly improved because of emphasis on initiatives such as compatible communications equipment and logistics requirements. We have also benefitted from the effort to make service doctrine consistent with joint doctrine. This has been accomplished without sacrificing the flexibility which joint force commanders require in order to employ their assigned forces in the manner best suited to accomplishing the mission.

Recent successes in developing joint warfare and, more critically, on the battlefield can be attributed to the ability to move forward and make needed, beneficial changes without losing focus on what is most important—our capabilities. As we proceed to make adjustments in joint warfare, the continued focus on maintaining the right balance of carefully developed, complementary capabilities will ensure our future success.

JFQ

Ideas Count

By MERRILL A. McPEAK



DOD photo

Jordanian and
U.S. aircraft.

Welcome to *Joint Force Quarterly*. I look forward to thinking about the ideas that will appear in these pages.

Ideas count. Someone once said that the Cold War was a contest of ideas, and in the end the idea of freedom won out. Armed conflicts are also often contests between ideas, between concepts of what will and will not work on the battlefield. The most memorable victories have featured the introduction, on one side or the other, of a new, better, winning idea.

Of course, we all understand that ideas alone are not enough. Early armored vehi-

cles offered both sides a potential war winner in World War I, but many of the best minds in Europe gave their time not to imagining how the internal combustion engine could be combined with a gun and armor plating, but to developing gas masks for horses. So, ideas must be iterated, argued, discussed, debated, experimented with, and finally put into practice.

We have sometimes been lucky in this regard. In the 1930s George Marshall chose to spend precious Army dollars on professional military education. Shortchanging other "must have" requirements, he kept the schools at Leavenworth and Maxwell alive and so laid the intellectual foundations for victory in World War II. It is in this spirit that I invite all comers to sharpen their pencils and their thoughts, and to use this journal to

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we ought to be asking ourselves, what are the core activities of the Armed Forces? what *must* we keep doing?

propose, develop, and debate military concepts, the inventory of ideas the Nation must have to win in the next century.

As we do this, let me suggest some discussion topics that seem to deserve special attention. The first involves the concept of

divestiture. We all understand that we are going through a period in which we must stop doing some things. We ought to be asking ourselves, what are

the core activities of the Armed Forces? What *must* we keep doing?

For instance, we might ask why we are in some businesses that more naturally seem to be civilian enterprises. Some of our activities are vestiges of an earlier time when no competent civilian alternative existed. I am thinking here of things like the CONUS commissary system or much of the domestic activity of the Corps of Engineers. Until recently, the Air Force ran a small contract cargo airline called LOGAIR. We started it in 1952 as a way to move time-critical parts among Air Force bases. It may have been a good idea at the time, but it lingered on long after its economic justification disappeared. Last year, we did away with LOGAIR. We now use commercial air courier services to do the same job. Performance has improved, costs are way down, and to those who worry about our ability to surge when needed, I suggest a look at how these same companies perform during the Christmas season.

There are surely many activities we can divest and at the same time improve performance. Some of us are now involved in a dialogue about how to drawdown the Nation's excess aviation depot repair capacity. Maybe the right question is whether we need government operated aviation depots (or government operated shipyards) at all. And what about, say, military communications systems? In other words, I would like to see a lot more discussion about whether and where we could rely on the civilian sector to a much greater extent to perform support functions now done in-house. One advantage of such an approach would be to free us to concentrate on the more strictly military aspects of our profession. That's our niche. Perhaps like many of the (mostly failed) in-

dustrial conglomerates, we need to shed the parts of our enterprise that have taken us away from our core business—warfighting. We need, like successful businesses, to “stick to our knitting.”

A second fruitful area for discussion is the division of labor within DOD, between the services and other elements of the department. In this regard, a recent trend has been to centralize common support activities under defense agencies. These agencies and associated field activities have become one of our very few growth sectors. They employ close to 200,000 people; together they are bigger than the Marine Corps. In prospect, the centralized approach always promises economies of scale. In retrospect, the economies almost always evaporate and we pay a high price when people lose a sense of mission identification.

In the Air Force, one of our quality thrusts has been in the exact opposite direction. We have been working hard to decentralize, to push power down, to give our people a stake in the outcome. This has worked well for us and I suggest it is time to review the bidding on the growth of defense agencies.

However, the system we now use to acquire new weapons may need more rather than less centralization. Some adjustment seems to be needed; no one I know argues that the system is working well now. For me, an important question is what acquisition functions must the services control and what functions might they give up. For what it is



DOD photo

anyone resisting change in the acquisition process must explain why we do not field operationally significant amounts of usable hardware

worth, my view is that the services should own both the *beginning* and the *end* of the acquisition process. At the beginning the services must define military requirements, and at the end they must control the operational test and evaluation process that determines whether requirements have been met. But much of what goes on in between could be managed differently than it is today, with the services giving up much of the clout they now enjoy. Anyone resisting change in the acquisition process must explain why we often spend

lots of money and lots of time on programs that do not field operationally significant amounts of usable hardware.

Finally, I would welcome more discussion of the division of roles and functions among the services. The Chairman recently completed a review of this sensitive subject, but I'm convinced that smaller defense budgets will soon force us back to the table for another look at the question of unnecessary duplication of capabilities. I am not referring here to the possession by the services of complementary capabilities, but to true overlap or illogical arrangement of air and space re-

lated combat capabilities. I believe, for example, that the Air Force should consolidate all U.S. military operations in space. It is also my view that the Air Force should own and operate integrated theater air and ballistic missile defenses. These are tough questions, about which honest people can disagree, but it is clear to me that what once appeared to be laudable redundancy will be seen more and more to be needless duplication as the budget heads south.

Some say that the roles and missions debate comes down to an issue of trust. I do not believe that is entirely, or even mostly, true. In the Goldwater-Nichols era the unified CINCs exercise the full range of command prerogatives—what we call “combatant command.” So the system used for force employment need not rely on trust alone. Still, there is something in the concern about trust, a nagging element of doubt (“If I don’t control it myself, will the other guy be there when I need him?”) that applies as much to theater missile defense or space support as it does to search and rescue or close air support. Thorough and rigorous debate in the pages of this journal can go a long way toward getting our thinking straight—and building the spirit of trust we will need for the future.

These are the kinds of questions I would ask.

Ideas do count. I welcome the arrival of this journal as a way to share ideas that will produce a better understanding of ourselves, our profession, and our path to future victory.

JFQ



DOD photo

General McPeak
visiting the field.



What's Ahead for the **Armed Forces**

By DAVID E. JEREMIAH

Late each December the supermarket tabloids run New Year's predictions of famous astrologers and psychics. These forecast celebrity marriages, divorces, and dalliances, alien encounters, disasters-to-be, and the latest message from Elvis. To my knowledge, no one ever goes back a year later to tally the accuracy

of the tabloid mavens, and probably for good reason. Foretelling the future can be a dicey enterprise.

This does not mean that the future is entirely opaque. While it may not be possible to predict specific events or outcomes, one can draw useful conclusions and take prudent actions based on major trends and alternative scenarios.

Summary

The security architecture of the Cold War and the doctrine of containment are fading away. But without a formal mechanism to redraw disputed international boundaries, we seem to be in for a prolonged period of regional conflict. Challenges will proliferate as the world population grows, ethnic and religious antagonisms are unleashed by the end of communism, and political and military institutions undergo change. Who will be our adversaries and how can the Armed Forces prepare for the warfare of the future? Moreover, how can we plan sensibly in the face of declining budgets and technological developments? What should be scrapped, what must be procured, and how can rivers of information be reduced to usable products and directed to where they are needed? Looking ahead like the great military visionaries of the past, and with the benefit of sound analysis, we can begin to discern trends that have import for our national interests and the joint capabilities which the services will need to defend them.

Since becoming Vice Chairman of the Joint Chiefs of Staff, I've been deeply interested in the tremendous change our world is undergoing. The national security paradigm of the past half-century, an architecture built on containment of communism and competition with the Soviet Union, has given way.

What will take its place? What are the implications for the Armed Forces? And what should we be doing now to prepare for future demands? Following are some thoughts on how our world is changing and what those changes portend for the future of the American military and our overall national security posture.

Elements of Change

Great wars leave turbulence in their wake. World War I left a civil war in Russia, a sullen Germany wracked by internal strife, and flotsam adrift in what had once been

Austria-Hungary and the Ottoman Empire. Similarly, the defeat of the Axis powers in World War II unleashed forces that changed the face of Europe, Asia, and Africa. The passing of the Cold War now has map-makers scrambling for pens and fresh ink, while territorial squabbles, civil wars, and humanitarian tragedies are popping up like poisonous mushrooms.

After earlier wars, nations commonly held grand conclaves to restore order. Delegates to the Versailles Peace Conference after World War I tinkered with international boundaries and devised new states, mandates, and protectorates. As World War II drew to a close, Allied leaders solemnly brokered territorial adjustments and otherwise laid the framework for a changed post-war world. They also agreed to create the United Nations, hoping its lofty councils would find peaceful, rational ways to resolve (or at least referee) international problems.

But when the Cold War finally shuddered to a halt, no epoch-making summit gathered to pore over maps, pencil in new boundaries, or formally induct new, odd-sounding states into the fraternity of nations. Would-be new members have

been left to establish an independent political identity by their own devices. Some, such as united Germany, Slovakia, and many new republics of the former Soviet Union, have done this through a more or less smooth political transition. Other aspirants such as Bosnia, Armenia, and Georgia found the path to statehood slippery with blood.

Many Americans hope that the quarrels and feuds around the world are merely a Cold War hangover. They assure themselves that things will "quiet down" once lingering Cold War toxins are finally metabolized. Sadly, that seems highly unlikely. The problems simmering in so many parts of the world show no signs of abating. On the contrary, we may be in for a prolonged period of conflict and crisis in the international arena. And the Armed Forces are in for some very dangerous years as they stand ready to protect our Nation's interests through these volatile times.

As it faces the future, our military is being buffeted by winds of change from three different compass points: changes in the international community, changes in the way our forces are organized and employed, and changes in the realm of technology. Each of these is gusting with such force that any one alone would make our future extremely demanding.

New World Disorder

The world is going through an incredible metamorphosis. Some changes are directly related to the end of the Cold War; others have no connection with the late East-West conflict. The sum total of these changes, whatever their source, is a world teeming with nascent crises. A new administration took office earlier this year determined to make domestic issues its first priority, but vexing international problems demand its attention with the persistence of a salesman with his foot in the door. What does this portend?

The end of the Cold War invalidated all the old strategic postulates of the past four decades. The most obvious changes rippled along the old East-West fault lines, where former antagonists have become friends and partners. The ease with which we negotiated the START II treaty with the Russians is a

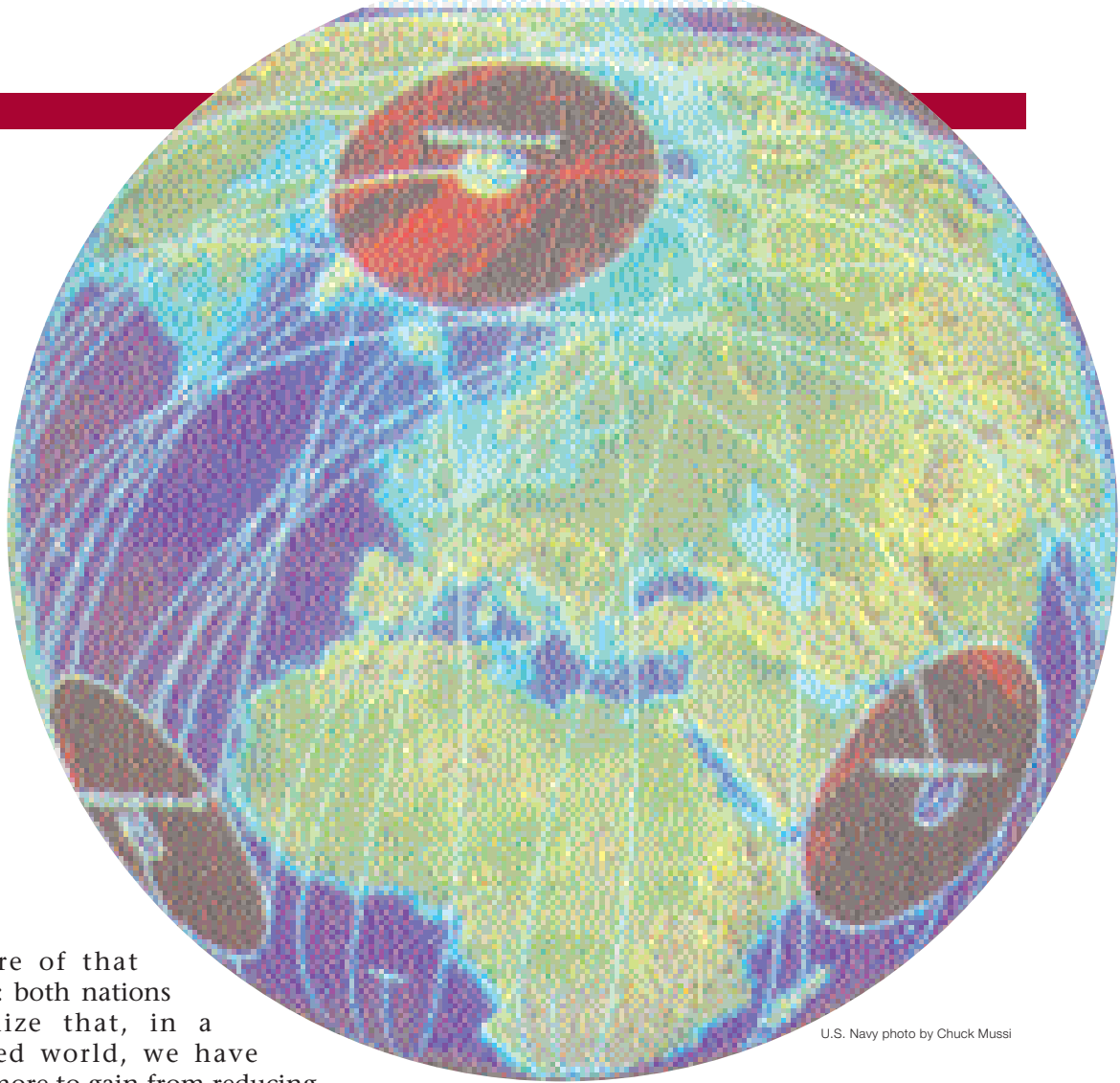


Joint Combat Camera Center photo by H.H. Deffner

A soldier standing guard outside the village of Belet Uen, Somalia, during Operation Restore Hope.

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A computer screen in the Navy Space Command Operations Center displaying satellite tracks and coverage areas.



U.S. Navy photo by Chuck Mussi

measure of that change: both nations recognize that, in a changed world, we have much more to gain from reducing stockpiles than from clinging to the overlarge nuclear arsenals that were once the tokens of superpower manhood.

The spectacular collapse of the Soviet Union and its empire raises hopes that the last Communist holdouts—namely, China, North Korea, and Cuba—will succumb as well. Looking at the likes of Fidel Castro and Kim Il Sung, one can scarcely avoid the conclusion that communism is increasingly an ideology of embittered

old men and that it may very well die out when they do. But the turmoil attending the dismantling of communism in the former Soviet Union warns us of the difficulty of going from a police-state dictatorship to democracy and from a state-run to a market economy. While the demise of communism in its few remaining strongholds would be a joyous triumph (especially for the people living in those benighted lands), it is not at all certain that this will happen without strife and bloodshed.

**we must know, decide,
and act faster than our
enemy at every turn**

The end of the Cold War has brought change in less obvious ways as well. It caused the bottom to fall out of the market for *strategic* real estate and leverage in the Third World. Nonaligned states can no longer panhandle the United States or the Soviet Union for aid, arms, and political patronage by playing one superpower against the other. On the other hand, the United Nations has finally been released from the rack that once painfully stretched it between Washington and Moscow. Still pale, trembling, and rubbing its wrists, it has begun to grapple with the substantive role first envisioned for it nearly fifty years ago—and to suffer new agonies from the real work of international problem solving.

The focus of our multilateral and bilateral security treaties is also shifting. Originally intended to contain Communist expansion, their value has outlasted the Soviet Union and the Warsaw Pact. In Europe, the

Middle East, Asia, and the Pacific, our security ties and forward presence are the cornerstones of regional stability. As we saw in the Persian Gulf, existing security arrangements form the hard nucleus around which wider partnerships can quickly coalesce during major crises. And in the future, regional alliances such as NATO may yet become executive agents for the United Nations, deputized to act on behalf of the entire international community to resolve neighborhood disputes.

For the United States itself, the end of the East-West conflict profoundly changed our entire strategic outlook. A few years ago we threw away the old strategy focused on the Soviet threat and replaced it with a new one. We calculated that regional crises were the most likely threats, so instead of a *global capability for global war* we now have a strategy aimed at a *global capability for regional crises*.

This new strategy recognizes that we no longer have a single great adversary. It acknowledges new realities in international affairs. It recognizes the practical limits to our own resources and relies on a smaller force structure. But it also recognizes that the United States still needs strong, capable military forces to defend its interests. And it recognizes that, even with the end of the Cold War, the world is still unstable and dangerous. This perception is extremely important because, independent of the changes arising from the end of the Cold War, there is a high probability we will see a general worsening of international conditions over the next twenty or thirty years.

A few years ago I commissioned a study that looks ahead to the year 2025. That study, Project 2025, found some very disturbing trends. Perhaps the most powerful trend is demography: the world population will balloon to nearly ten billion people over the next few decades, with most of that increase coming in lesser developed countries. For them, population growth is like a giant millstone crushing their hopes for economic, social, and political progress. Without an international effort to get population growth under control, perhaps one-quarter of the Earth's population will be hungry every day in 2025. Many governments will

be chronically unable to meet their people's most basic needs. We may have already seen this future in Somalia. Even among fairly well-to-do nations, we can expect fierce competition for natural resources, including energy, unpolluted water, and perhaps even fresh air.

There is great potential for huge migrations as people flee conflict or search for better economic conditions. In many areas, these new pressures will rub salt in festering ethnic, religious, or political wounds. Right now Europe has more refugees and displaced persons than at any time since the end of World War II, with more than three million generated by the fighting in the Balkans alone. Germany's problems with refugees and foreign residents—plus the chillingly familiar antagonisms they have aroused—constitute the most explosive domestic issue there since the end of the Third Reich. Stir into this soup the proliferation of modern armaments, including ballistic missiles and weapons of mass destruction, and the result is a real witch's brew.

All this adds up to a strong likelihood of international crisis and conflict. But recent events remind us that, in a world village increasingly linked by modern communications, even *intra*-national problems can sometimes rouse the international community to collective action, either in anger or in sympathy.

More collective action is likely in the future. Traditionally, no matter how outrageous or despicable their conduct, tyrants from Idi Amin and Pol Pot to Saddam Hussein had little to fear so long as they confined their cruelty to their own territory. Their immunity sprang from the idea that national sovereignty supersedes any complaint about a nation's internal behavior, an axiom particularly dear to thugs and despots. Out of respect for this rule, the family of nations has repeatedly averted its eyes from even the most monstrous atrocities.

This inertia is disappearing as the international community slowly recognizes a moral imperative to step in to halt genocidal crimes even when they are committed under the claim of national sovereignty. But getting from the theoretical acceptance of this idea to



DOD photo

A GDU-27 prototype laser guided bomb being dropped from an A-117 stealth fighter during weapons separation testing.

instead of a global capability for global war we have a global capability for regional crises

the practical how's, why's, and wherefore's is another matter. So far, the United Nations has not found a formula that would allow last-resort intervention while at the same time safeguarding against abuse of this power. (And abuse is not an unrealistic worry. The U.N. General Assembly is not that far removed from the days when it gleefully endorsed almost any anti-Western or anti-Israeli screed, the more venomous the better.)

In times to come, the international community may close the loophole that today allows tyrants to abuse their own people as they please. I do not advocate a diminution of national sovereignty, nor would I want to incite international lynch mobs. But genocidal crimes such as those committed by the Khmer Rouge in Cambodia, by Saddam Hussein against Iraq's Kurds and Shi'as, and by Bosnian Serbs—who have made “ethnic cleansing” a synonym for wholesale rape and massacre—should not be tolerated. The right to national sovereignty ought not to be absolute in cases of genocide any more than child abuse carried

out in a private home should be beyond the reach of criminal law. Perhaps the community of nations will find a way to address this need. If so, this will become another new element in the international security environment.

Amid these changes, there is one important constant that remains true in spite of the end of the Cold War, and in spite of all the fretful problems on the horizon: the unique leadership role of the United States in world affairs. We are not just the world's only superpower; we are also a leader in promoting

human rights, democracy, free enterprise, and the rule of law in international affairs. Other nations trust and respect us not just because we are powerful, but because we represent humanity's moral conscience. We do not always do this perfectly, but on the whole we do it well enough and often enough that we have a unique stature in the international community. General Sir Peter de la Billière, who commanded British forces during the Persian Gulf War, expressed this very clearly when he said recently that “the one stabilizing influence in the world today is the power and the common sense of America.”

Consider Somalia. When I was there last fall, Somalia looked like hell's waiting room. But despite a lot of media exposure and international hand wringing, nothing much happened to help the relief agencies until the United States stepped forward. Then other nations followed our lead, and today Somalia has been saved from starvation and banditry by a remarkable international effort. For better or worse, no other country, not even the United Nations, can mobilize international energies the way the United States can. We cannot abdicate that responsibility now just because we have other things on our plate.

We cannot be the world's policeman—but we are obliged to be its most civic-minded citizen. To carry out this role we will need well-trained, well-armed, and highly mobile forces. But these forces may be configured differently than in years past and find themselves performing tasks other than the traditional missions of “deter and defend.”

The Future of American Forces

A few years ago we designed a new structure for the Armed Forces. Our principal concern in doing this was to tailor them to the demands of a post-Cold War world of regional crises rather than global conflict. This has already meant large cuts in forces and programs, especially those (strategic and tactical nuclear weapons, forward-deployed forces in Europe, attack submarines, and so forth) that were geared chiefly toward a showdown with the Soviet Union. Today Defense Secretary Les Aspin is overseeing a “bottom-up” review to identify where more streamlining or restructuring can be done. The final result will be smaller, lighter, more



Joint Combat Camera Center photo

A unit of the 10th Mountain Division coordinating with Canadian forces in Somalia.

flexible, and more lethal forces than ever. More of these forces will be based in the United States. We are making large investments in strategic mobility—the C-17 aircraft and fast sealift—that will strengthen our ability to hurry forces and their supporting logistics to distant trouble spots.

An important part of this downsizing and realignment is a stronger-than-ever commitment to joint operations. No matter where we fight in the future, and no matter what the circumstances, we will fight as a joint team. The Armed Forces of the United States will never again poke as individual fingers; rather they will always strike as a closed fist. As we learned in Vietnam, when you go into combat, you go after a clearly defined objective and you go to win. We will gang up with every joint resource at our disposal whenever summoned to battle.

The transition to a smaller force tailored for regional crises is going very well, but it could still be lured onto the rocks unless we are careful. Siren voices are already calling for faster cuts, for narrowing current broad-based capabilities, or for sacrificing day-to-day readiness to retain structure or programs.

We are already cutting our forces as quickly as we can without compromising readiness. The importance of caution was burned into our memory after World War II, when our demobilization looked like a mass jail break. Just five months after Japan's surrender, Admiral Chester Nimitz complained that the United States itself had "done what no enemy could do, and that is reduce its Navy almost to impotency. . . . [Today] your Navy has not the strength in ships and personnel to carry on a major military operation." The Army suffered a similar fate. At war's end, it had six million men under arms; by March 1948, that number had shriveled to barely 530,000, most of whom were new conscripts. General Omar Bradley wrote that as a result the Army "could not fight its way out of a paper bag." He was very nearly right, as the opening of the Korean war sadly

demonstrated. We need to resist attempts to speed up our cuts lest we wind up once again with hollow forces unready for combat.

Our forces were meat-axed after World War II because our government naively thought atomic weapons and strategic bombing made other elements of military power obsolete. Secretary of Defense James Forrestal eventually complained to Congress that possession of the atomic bomb had "engendered [a] . . . mistaken sense of security and complacency" in the country. It took the debacle of Task Force Smith in the first days of the Korean War to shake us out of this complacency and to remind us of the need for broad-based, balanced forces. Every military situation is different, and each requires a force specially tailored to its unique conditions. The forces we sent to Somalia, for example, are unlike those that fought their way into Kuwait and Iraq. America's future is best served by a force mix that does not place too many eggs in any one basket, but which instead draws on the synergy of balanced, flexible joint forces.

Another proposal suggests we replace active forces with *cheaper* Reserve component ones. To fulfill our new strategy, we need strong, tough, capable forces that can go quickly—within days or even hours—to the scene of a smoldering crisis. For this to be done by Reserve units, they would have to maintain a level of day-to-day readiness identical to that of active forces. Such a high standard of readiness costs about the same whether in the Reserve, the Guard, or active forces. Reserve combat forces with the readiness necessary for tomorrow's problems would have to be active units in all but name. A better choice is for us to maintain active fire brigades backed up by appropriate elements of the Reserve components, especially in the areas of combat support and combat service support.

This will require a downsizing and reshuffling of our Reserve components comparable to that taking place in the active forces. We greatly expanded our Reserve and National Guard forces in the 1980s to counterbalance the Warsaw Pact's huge numerical superiority in ground troops. Today it makes no sense to keep that enlarged Cold War-era force. Consequently, we have laid out cuts that will align our Reserve components to new strategic needs—cuts that will



Joint Combat Camera Center photo by Janel Schroeder

U.S. and Spanish aircraft used in support of Operation Restore Hope in Somalia line the runway at Moron Air Base in Spain.

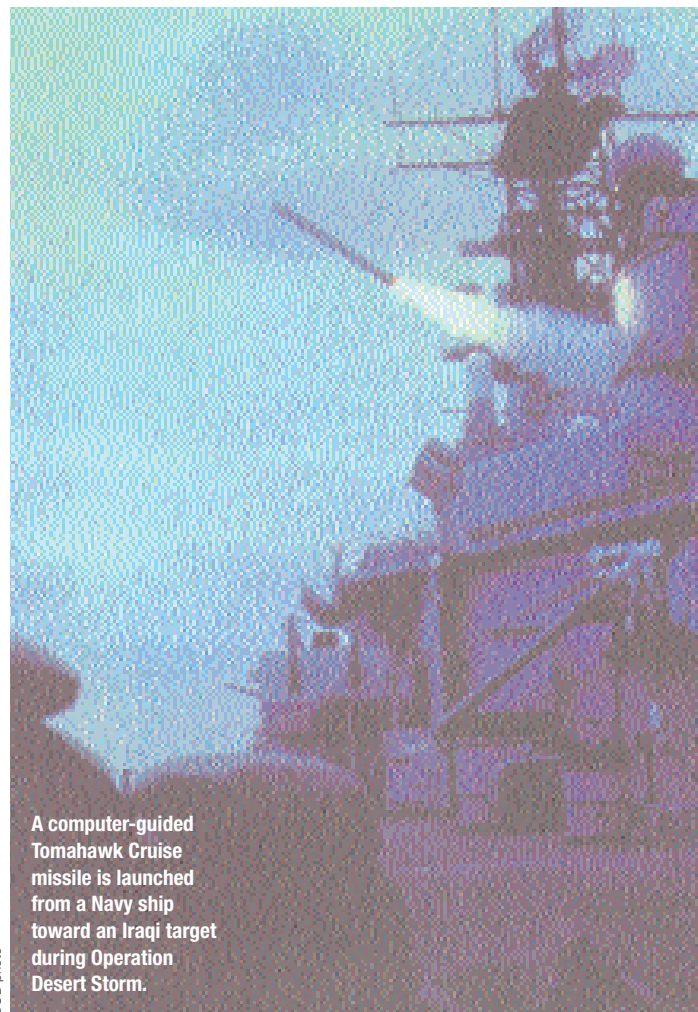
still leave them larger than before their expansion in the last decade. But most importantly, this will leave the Armed Forces *overall* in a stronger, more robust, more capable posture than could be achieved by schemes that would skew us away from a balanced structure.

The third temptation is to create false savings by plundering our operations and maintenance accounts. The superb forces we have today—qualitatively our best ever—would be betrayed by such a policy. Combat readiness is more than the sum of ships, planes, and divisions. It demands soldiers, sailors, marines, and airmen who are well trained and well led. Readiness cannot be achieved or sustained on the cheap. But since *readiness* is hard to quantify, sometimes our operations and maintenance accounts are viewed as piggy banks we can break into for spare change. The absolute importance of good training and sound maintenance shows up only on battlefield ledgers, where the red ink entries are written in blood.

In addition to the challenges posed by downsizing and restructuring, our forces will also have to adapt to changing missions. We have already seen a substantial expansion of their roles in just the past few years, everything from counterdrug operations to relief efforts in Iraq, Russia, Somalia, and elsewhere.

There is nothing inherently wrong with such departures from traditional roles provided we remember that the first purpose of military forces is to fight, not sniff out drugs or deliver food baskets. The reason we are good at other things is because, relative to other law enforcement or relief agencies, we are big, have ample trained manpower and capable leaders, and can call on marvelous resources—including a logistical system that surpasses the wildest dreams of any civilian agency. But all these advantages are, in one way or another, byproducts of combat readiness.

The future may widen the gap between the role of military *force* in the old sense and the modern utility of military *forces*. Those of us in uniform have been trained to see the two as being almost inextricably intertwined, as Clausewitz and Mahan contend. But today and in the future our forces may be assigned missions that have little or nothing to do with coercive military force in the



A computer-guided Tomahawk Cruise missile is launched from a Navy ship toward an Iraqi target during Operation Desert Storm.

DOD photo

traditional sense—like Operation Restore Hope in Somalia.

This does not mean the old roles are going away. We reminded Saddam Hussein of that two years ago. We used overt military power to force his withdrawal from Kuwait, and later we successfully used the threat of military force to create a safe haven for Kurds in northern Iraq.

But there are also situations in which military force alone can do very little. Yugoslavia is a good example. We all wish the carnage would stop; but injecting U.S. ground forces into Bosnia without a workable peace agreement among all parties would be no more successful than in Beirut ten years ago. The killing would go on, the horror would continue, and Americans would be among the dead. A noble desire to “do something” is not an adequate basis for risking our service men and women. There are limits to what

force can do, and we need to remember that our military power is not the only—or often even the best—way to promote peace and stability abroad.

By themselves these two big trends—continuing changes in the international community and restructuring our forces to address those changes—would be amply challenging. But they are not the only agents of change on the horizon. Right now we are surfing just below the crest of a fabulous revolution in technology, and that crest is about to crash down on us.

The Challenges of New Technology

Superior weaponry has been a characteristic of the U.S. Armed Forces for a long time and will remain so. But to fully exploit dazzling new opportunities, we need to streamline our procurement system. We also need to pay attention to how we adapt new technologies to military use, and to how we will command and control our future forces.

Like the tabloid astrologers, we cannot predict for certain which new technologies will prove most useful. But we can make out some ways they will reshape our forces, and because of this R&D is already shifting. We are moving away from systems that cannot be easily adapted to exploit new technologies that do not have a high degree of strategic or tactical mobility, or that are so highly

specialized they can only be used against a narrow threat or in a unique environment. We do not want systems that lack low-observable or stealth technologies. We intend to get away from systems

that need large, vulnerable logistical tails. And we may very well move away from expensive, highly sophisticated platforms in favor of cheaper *trucks* or *barges* based on commercial vehicles but crammed with state-of-the-art long-range weapons, sensors, and communications gear.

This does not mean we are about to sound the death knell for the major capital systems of our services—the main battle tank, the manned aircraft, and the large surface combatant. These will have their place in the Armed Forces of the future, although—and this is important—that place

may not be the central position they have held for the past half century or more. It is not yet time to kill all the sacred cows, but they should be put into a very selective breeding program.

We cannot be too beholden to any outdated or obsolete system because technological change *makes our day-to-day grip on technological superiority all the more fragile*. Our position is similar to that of the Royal Navy a century ago when the British introduced a new class of large, fast, heavily armed warship. Overnight, the dreadnought (essentially the first modern battleship) made every other type of surface combatant obsolete. The irony for the British was that this made the rest of the Royal Navy, the strongest navy in the world, obsolete as well. The British had to start over like everybody else, and this meant competitors could take a short cut. Nations like Germany, which had never dreamed of challenging the Royal Navy before, could become formidable sea powers simply by building fleets of dreadnoughts.

Today we are in an analogous position. Although we are by far the strongest military power in the world, our superiority no longer depends on outproducing our enemies as we did when we were “The Arsenal of Democracy” in World War II, nor even on superior design in aircraft, ships, and tanks like we had during the Cold War. Increasingly, our superiority depends on having the latest microchip, the latest superminiature sensor, or the most advanced information-processing software. But right now, we have an acquisition system that is not designed to assure our superiority in those areas.

Our current acquisition system is a product of the Cold War. It was designed to give us large numbers of advanced systems as rapidly as possible. This was costly, but it served us well when we faced great national danger. Over time, however, that acquisition system also became risk-averse. We got so concerned about scandals that we loaded it down with checks and audits. These helped us avoid procurement scandals but at the price of driving up costs and impeding rapid technological progress. As a result, we have lost our technological agility.

**no matter where we fight,
no matter what the
circumstances, we will fight
as a joint team**

We desperately need to streamline our defense acquisition system. We need a *broad front* R&D strategy so we will not be surprised by breakthroughs in areas where our technology lags behind. We also need to compress the time from concept to final product so the acquisition cycle can keep up with state-of-the-art technology. And we need to do all this within the constraints of future defense spending. To get there from here, we need to strip away some of the legislative and regulatory barnacles that encrust the acquisition

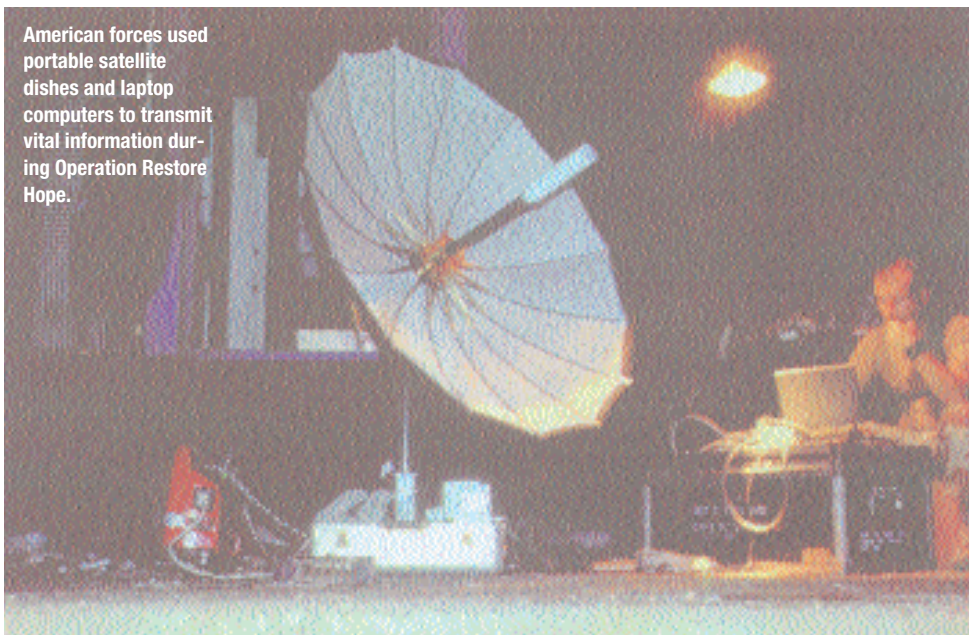
dustrial base while holding down overall acquisition costs. Instead of insisting on a uniform force structure made up, say, of a single type of air superiority aircraft, we may sequence new acquisitions through the force. While overall this would produce a heterogeneous force, we could draw from it the right mixture of sophistication and mass appropriate to any particular crisis. The result may be more programs like the F-117 rather than the F-16, with our most highly advanced systems deployed in only a few selected units.

Technological superiority is not just a measure of hardware; it is also a measure of organizational adaptability. One aspect of this might be called *learning curve dominance*. It refers to the ability to develop the tactics, organizations, training programs, and warfighting doctrines to exploit new technology effectively. A good example is the Germans at the beginning of World War II. They had fewer tanks than the British or French, and the tanks they had were technically inferior. But because they had new tactics and organizations which allowed them to use their technology more effectively, the German *Blitzkrieg* crushed the French and British

armies in a matter of weeks. We should heed such lessons and aggressively seek the new applications that get the most out of our new systems.

With longer range, greater precision, and horizontal integration of real-time intelligence and targeting, future weapons will be able to strike enemy forces at great distances. In mid- or high-intensity combat, it may not always be necessary to physically occupy key terrain on the ground, vital airspace, or critical chokepoints at sea in order to control them. While wars will still be won only when soldiers occupy the enemy's territory, it may not be necessary in every case to "close with" the enemy in order to destroy him. We may even reach a point at which fire and maneuver become essentially the same thing under some circumstances. Such elements as

American forces used portable satellite dishes and laptop computers to transmit vital information during Operation Restore Hope.



Joint Combat Camera Center photo

cycle. We need to exploit shortcuts such as hardware-in-the-loop testing and computer-aided design, manufacturing, and logistical support. We may need to reverse the historical relationship between defense and commercial technologies. In the past, commercial applications were often the spin-off byproducts of defense R&D; in the future, we will probably rely more on adapting the latest commercial technologies for military use—a change that promises to yield new military applications faster, cheaper, and better than the old Cold War process.

We also need to open our minds to new ideas about how we can separate technological progress from costly full-scale deployment. Our new regional-crisis strategy frees us from the need to keep large, homogeneously equipped forces. Instead, we can now tolerate more unique units as a way to quickly integrate new technology and keep a warm in-



U.S. Navy photo by Jeff Wood

**Missile launcher
on the deck of
USS McClusky.**

traditional unit organization, tactics, and modes of thinking may not be appropriate to such a future. We need to find out what is appropriate and acquire it before our adversaries do. Otherwise, it will be like hitching a Corvette behind a draft horse: we will not be using our new hardware in a way that truly exploits its capabilities.

The future also demands superior command, control, communications, computers and intelligence (C⁴I). Good weapons, advanced tactics, and flexible, efficient organizations will give us a superb military instrument. But we need to know where to point

that instrument and how to control it. This is where C⁴I comes in.

The end of the Cold War presents us with a whole new set of C⁴I problems. When the Soviets were our primary worry, we needed expensive systems to meet specialized needs. We bought whole networks of hardened, redundant, focused systems to give us strategic warning or to enable us to fight a global war against a nuclear adversary. These assets have not become irrelevant; but in shifting from a global strategy for global war to a global strategy for regional crises, we now have a new menu of C⁴I requirements.

Strategic warning now takes on new meaning. The theater, the adversary, even the nature of the problem—whether it is a military conflict or a humanitarian crisis—can change rapidly and may be much tougher to sort out than in the days of the old East-West rivalry. Many of our current systems are not designed for that kind of work. For example, satellites cannot tell whether a crowd is going to a soccer match or a civil war—admittedly sometimes the same thing in many parts of the world.

To act quickly and effectively in future regional crises (and especially with our smaller force structure, more of which will be based in the United States), we need a global C⁴I capability that can alert us very early to a potential problem, focus on a trouble spot as events develop, surge in capacity when needed, and respond to the peculiar operational needs of the joint or combined task force commander.

No one else does this as well as we can. Our experiences in Grenada, Panama, and the Persian Gulf taught us a lot, and the advances we have made in just the past two years are eye-watering. But technology is spawning a new problem: an information explosion that threatens to choke our C⁴I systems with more data than we can analyze. We need to make sure that our future efforts give us not only more, but also better, more usable information when and where we most need it.

We also must understand that such systems fundamentally change the way we command and control forces. Our traditional methods have emphasized the flow of infor-

mation along vertical paths: information up, orders and instructions down. But increasingly we have architectures in which information flows laterally as well. As a result, knowledge is more pervasive and control functions more decentralized. We have not yet come to grips with what that means organizationally, but we need to soon.

We also need to work on end-to-end integration of our C⁴I systems. We must be able to know, decide, and act faster than our enemy at every turn. The data our reconnaissance systems gather must be transmitted in real time to command centers, where targeting decisions can be made in a matter of moments. Then we need to send targeting instructions to loitering cruise missiles or other weapons that hit their targets with specially tailored munitions packages—possibly with terminal guidance from overhead systems. And all this must happen rapidly, since future combat may resemble a game of electronic cat and mouse between the enemy's *hiders* and our *finders*. (Project 2025 gives a sobering assessment of so-called *pop up* warfare and its implications for U.S. security.)

We need to harness this exciting new technology to our emerging requirements. Superior military power in the future will depend on superior C⁴I. Since our adversaries may have access to some of the same sophisticated weapons technologies we do, our ultimate trump card will be our ability to know, decide, and act more quickly than they can.

Some Final Thoughts

It will not be easy for us to tackle these challenges in the years ahead. Many see our declining defense budgets as just another obstacle, one that makes the others insurmountable. I disagree with this view. In fact, I think the next few decades will be some of the most exciting and successful our Armed Forces have ever experienced.

Historically, many of our most important transformations have come during periods of constrained defense spending. In the

A Marine Corps F-4 fighter launching a missile.

U.S. Navy photo



1930s we developed a modern, capable carrier force that later turned the tide against the Japanese in the Pacific. In 1945, General Hap Arnold made a controversial decision to push research and development of guided missiles when many in the Air Force howled that this would make manned aircraft obsolete. Despite this resistance and the slim budgets of the late '40s and '50s, Arnold's vision eventually became reality in our ICBM forces. After Vietnam left the Nation with a foul taste for military investments, General Creighton Abrams started the Army on a spiritual and doctrinal renewal that paid off spectacularly in the deserts of Iraq and Kuwait. In every case, the keys to success have been a vision of the future and the determination to make it become reality.

In this respect the U.S. Armed Forces have always been lucky, not just because they produced visionaries like Hap Arnold, Creighton Abrams, George Marshall, and Arleigh Burke, but because so many service men and women at every level joined them in making their visions come to life. Times of change have a way of placing a premium not on narrow, specialized knowledge, but on breadth of understanding and clear thinking. For this, our military education system is the best in the world. We produce officers who, while well trained in their technical specialties, can also calmly gaze into the eye of the tiger when it comes to problems of international politics, grand strategy, force modernization and restructuring, or the complex consequences of future technology.

I place my faith in them. They are in for some exciting times.

JFQ

Summary

With the Cold War now history the Armed Forces could face the kind of stagnation major corporations have suffered in an uncompetitive marketplace. Although redundant roles and missions, and the interservice rivalry they encourage, may seem wasteful to taxpayers and Congress in search of their peace dividend, competition among the services has often improved our military capabilities. When the Army and the Navy had a similar strategic mission, the Army built a long-range fighter for continental air defense while the Navy developed carrier air. When the Army and the Marine Corps had analogous infantry roles, the Marines perfected amphibious warfare. The defense establishment should not turn a blind eye to the warp in which creative competition among the services can encourage the development of new capabilities in even a period of fiscal constraint. Consideration should also be given to creating a few competing, theater-oriented commands which may offer a variety of joint capabilities to choose from in the future.

SERVICE REDUNDANCY:

WASTE OR HIDDEN CAPABILITY?

By STEPHEN PETER ROSEN

Efforts underway to restructure the Armed Forces should provide for healthy competition among the services to stimulate technological innovation in an era when the Nation no longer faces a foreign threat that is its military equal. Interservice rivalry is frequently thought of as costly and wasteful, as an irrational duplication of functions resulting from the services attempting to protect or expand bureaucratic turf at the expense of efficiency. Yet interservice competition has its creative aspects. Every organization tends to stagnate when it becomes the only game in town or when competition is rigged, from the big three auto makers to IBM and the Postal Service. Without competitive pressure, the need to respond quickly to changing circumstances or opportunities is reduced.

Properly structured service competition does not waste money and actually promotes higher levels of efficiency and innovation.

Creative competition can exist if a common strategic mission is clearly established, common criteria for success are identified and understood, and no one service is allowed to rig the game by establishing a little empire within which it is autonomous and invulnerable and thus able to achieve parochial goals (otherwise known as service log-rolling).

"The Last Thing Needed Is Interservice Rivalry"

As the defense budget declined absolutely in response to decreases in major threats to the territory of the United States, the first, least divisive, and most obvious response was to reduce the services in a roughly proportional manner. Balancing the force structure with lower end strengths provided the Nation with the full range of capabilities that had contained the global Soviet threat and regional military aggression. This

process of proportional downsizing yielded the base force.

At the same time, Congress mandated the creation of a joint culture in place of individual service cultures by emphasizing a more centralized Joint Staff, training, acquisition, and so forth. Pressures to reduce defense spending below the levels that can sustain the base force have already produced recommendations to eliminate overlapping functions and redundancies to find the money to keep the base force intact. The genuine need to promote jointness and to cope with declining budgets may combine to produce a military where there is one, and only one, capability for each identifiable function: intelligence, tactical aviation, ground combat, power projection, and so on.

As the Congress daily hammers on the services to economize and rationalize, it will become easy to lose sight of the fact that redundancy—which has a decidedly negative ring in the ears of most Americans—can also be thought of as competition, which strikes a far more positive note.

An analogy from the business world may be useful. A company that faces hard times can argue there is production overcapacity or redundancy in its sector and try to solve the problem by eliminating the overcapacity: getting rid of its competitors by tariff protection, quotas, or mergers. Unfortunately, once companies have a market sector to themselves, they often revert to slothful ways. Companies that respond to hard times by squarely facing up to their competition do much better, provided they can survive in the short run.

“What’s True for Business Isn’t True for the Military”

In the marketplace, where many firms do the same thing, we can buy from the supplier we like best and let the weaker ones go broke. The Nation, however, cannot afford multiple defense establishments, and we certainly do not want to see the military equivalent of going broke—that is, losing a war. Besides, the services must work together in wartime, not compete. The Japanese navy

and air force each had more than fifty kinds of radios and

several types of fighter aircraft in World War II, and both forces suffered from squandered resources and inability to communicate among the services. Which leads us to ask: what point is there in service competition anyway?

A brief look at American military history shows that interservice rivalry spurred innovation in several important cases by forcing a service to do something better or faster, or by leading to the creation of a critical military capability.

In the 1920s many members of Congress wanted to take aviation away from the Army and Navy and put all aircraft into a single air arm. Why should two services



DOD photo

compete in developing fighters and bombers? The main mission facing the Armed Forces at that time was protecting the continental United States from attack. Why not give the job to one service and avoid waste? This did not occur for various reasons, and as a result each service was spurred to improve its aviation branch, fully aware that the other service was eager to take over aviation for continental defense. Both the Army and Navy had the same strategic mission, but they developed alternative ways of pursuing it. The Army developed the P-38 long-range fighter for continental air defense and B-17 bomber to attack enemy invasion fleets and foreign air bases within range of the United States. The Navy developed carrier aviation to defend against threats to the United States and the Panama Canal. Each of these redundant air forces had its characteristics, and each was extremely useful in

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World War II. If aviation had been rationalized in the interwar years of the 1920s and 1930s, one or the other of these essential ingredients for victory would have been lost.

Marines were employed as regular infantry during World War I in exactly the same ways as Army infantrymen. In the 1920s the Marine Corps had such unglamorous, strategically peripheral jobs as providing military guards

and fighting rebels overseas. This redundant force, however, identified a capability that was needed but that the Army made little effort to develop: amphibious assault. By 1936 the Marine Corps had developed a "Tentative Manual for Amphibious Warfare" that was not only the basis for operations in the Pacific during World War II, but also became the Army manual for amphibious landings in Europe. Had the Marines been absorbed into the Army, the invention of amphibious assault would not have come about until World War II broke out—inevitably at considerable strategic and human cost.

Immediately after World War II, the chief scientist in charge of the development of military technology, Vannevar Bush, reviewed all guided missile programs then underway. He discovered what he thought was incredible waste and redundancy of programs and tried to cut them back. He was unsuccessful. Ten years later, the Assistant Secretary of Defense for Research and Development attempted to do the same thing by placing all missile programs under the Air Force. Again, it was not done. Every history of the development of intermediate range ballistic missiles (IRBMs) and intercontinental ballistic missiles (ICBMs) notes the extremely rapid and successful development of those systems was related to the existence of competition. The Air Force knew that if it failed in the Atlas or Minuteman programs, the Army would happily take the money for its IRBM programs. The Navy knew that if it did not do its best with the Polaris program, it would lose any role in the primary strategic mission of that generation to the Air

Force. Partly as a result of this competition, the first generation of strategic ballistic missiles was fielded in a fraction of the time that it now takes for the introduction of radically new military technology.

"Now Everything Is More Expensive and Complex"

Is the notion of creative competition valid in today's economic climate? Weapons systems have increased in cost and complexity faster than the U.S. GNP, and we buy and use fewer arms than fifty or sixty years ago. Redundancy of systems and capabilities is therefore more expensive. Yet it is also helpful to recall that we afforded redundant Air Forces and a redundant Marine Corps during the 1930s when defense spending as a whole was, at most, 1.5 percent of GNP, or only half the figure of even the more Draconian five-year projections today. If the utility of creative competition is understood, we may well opt for it within the fiscal constraints that are emerging. In addition, the idea of redundant force structures is consistent with the prototypical research and development strategy advocated by the Department of Defense in the past as well as by the new Secretary of Defense. The point is that today the United States needs fewer forces in being and a wider menu of potential military capabilities from which to choose, precisely because we do not know what the threat will be or how it will fight.

"How Do You Get Creative Competition?"

An examination of the historical examples of good and bad interservice rivalry reveals that Japan's experience was bad because the army's strategic mission before Pearl Harbor—defeating China and the Soviet Union—was entirely different from that of the navy—defeating the British and American fleets. Not until June 1941 did the army and navy agree that the United States was the principal enemy. It was a wonder they could work together at all. In the case of

the United States needs fewer forces in being and a wider menu of potential military capabilities from which to choose



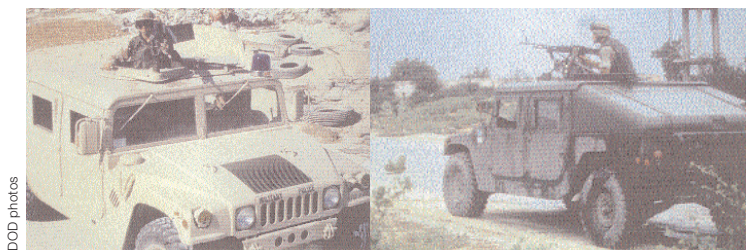
Lockheed photo by Schulzinger and Lombard

Technological innovation: the F-117 cockpit features a video monitor with infrared imagery from onboard sensors, full color moving-maps, and a 4-D flight control system.

competition in the U.S. military over aviation capabilities, there was at least some agreement about the main task; so that while there was competition, it was not about what to do but rather how to do it.

This agreement on a strategic mission was even clearer in the 1950s when the objective was understood by all to be putting megatons on Soviet targets. Agreement on the strategic mission is essential because it ensures that all the services will work in the same direction, and that each will develop a capability that should help achieve what the Nation needs in wartime. It also makes it dif-

Army and Marine Corps patrols in Humvees with roof-mounted M-60s.



DOD photos

ficult for a service to identify its own military niche and say, "What the other services do is fine but it isn't relevant to us—let them do what they want, but let us do what we want." Agreement on mission makes it possible for both the Commander in Chief or the Chairman, Joint Chiefs of Staff, to supervise by saying to the services in effect, "You are each trying to do X, and one of you seems to be doing it much better—show me why I am wrong."

Establishing criteria for success in accomplishing a mission enables the Joint Staff to track service progress on a routine basis. Creative competition among the services in peacetime can't be tracked the way it would be in war, by seeing who wins the battles most easily. Competition in peacetime must be structured and appropriate standards set for the services to meet. And competition cannot be completely opened, exist for its own sake, and be funded indefinitely. Establishing hard, quantitative bottom lines is an extremely useful way for keeping competition honest and focused.

"Can We Foster Creative Competition Today?"

One notional idea is to identify a strategic mission that each of the services agrees

upon: for example, projecting a strategically significant amount of power from the continental United States to the periphery of Asia. Instead of the present arrangement of theater-oriented commands, two or three "Strategic Expeditionary Corps" or SECs could be created. Each would be a joint command and have one-half or one-third of the Army and Marine Corps divisions and Air Force wings that Congress decides to fund, a joint training center, and its own operations and maintenance budget. Each SEC would be told how much strategic airlift and sealift it could call upon and given the same planning scenarios. Each would then be told to come up with the concept of operations it thought best, to be measured along dimensions identified by the Chairman, Joint Chiefs of Staff. Each could identify preferred research and development and procurement priorities for the short- and

long-term. The Chairman could then judge the concept of operations, war plans, training activities, and exercises developed by each SEC and see what different technological opportunities they identified for funding.

This differs from the current system of unified commands where each command is the only supplier of military services in its functional or regional domain. Not only do commands not face competition, they are restricted to their own turf until such time, for instance, that Atlantic forces are needed in the Pacific, or the other way around. SECs, in contrast, would not only compete among themselves but they would be geographically fungible.

The notional approach of Strategic Expeditionary Corps satisfies the need for competition while also pursuing jointness at force levels below that envisaged in the base force. There are certainly better ways to accomplish this same goal, and professional officers will be more apt to come up with them than an academic. But we should never lose sight of the fact that a little competition never hurt anyone. After all, it was the principle that won the Cold War. **JFQ**

REFORMING Joint Doctrine

By ROBERT A. DOUGHTY

Summary

Professional Military Education at both intermediate and senior levels now places greater emphasis on joint and combined warfare, especially since the establishment of the National Defense University and enactment of the Goldwater-Nichols DOD Reorganization Act. Yet it is command authority and doctrine—not just education—that enable the services to operate together effectively. This is why the appearance of *Joint Warfare of the U.S. Armed Forces* was a watershed. A Center for Joint Excellence to promote doctrinal development as well as a Joint Advanced Warfare School to further education would significantly contribute to the creation of a joint culture. These and other efforts should be accompanied by actively encouraging more military historians to study and write about joint operations. Nevertheless, while jointness must permeate the curricula of the intermediate and senior service colleges, it should not do so at the expense of ignoring instruction on individual service perspectives which will remain fundamental to understanding joint warfare.



DOD photo by R.D. Ware

This article is reprinted from *Parameters*, vol. 22, no. 3 (Autumn 1992).

The publication of the new manual on joint doctrine, Joint Pub 1, *Joint Warfare of the U.S. Armed Forces*,¹ dated November 1991, signals the opening of a new era in American military history. Though other manuals have been published in "test" form, this is the first fully approved manual that deals with joint warfare from such an authoritative position and is the first in what is sure to be a long line of joint doctrinal documents. As the new era begins, the issue is not whether joint doctrine is important; the issue is determining what institutions and procedures for formulating effective joint doctrine are required and when they will be established. The purpose of this article is to suggest steps to speed the formulation of joint doctrine in the future and ensure its effectiveness.

In many ways the situation today is similar to the situation at the end of the 19th century when the U.S. Army began writing official field manuals.² Until the publishing of official manuals began, the Army depended on individuals to complete methodological treatises about different aspects of military operations. For example, Brigadier General Silas Casey's *Infantry Tactics*³ was adopted in 1863 by the Union Army for use by regulars, volunteers, and militia.⁴ It was with the publication of the 1891 *Infantry Drill Regulations*,⁵ however, that a more systematic approach to writing field manuals and formulating doctrine began. Over the next decade the Army's interest in doctrine increased, and in 1905 it followed most other major armies in the Western world by publishing its first *Field Service Regulations*.⁶ This ancestor of the current FM 100-5, *Operations*, signaled the Army's newly found faith in centrally formulated doctrine and played a key role in what has been called "the Army's Renaissance"⁷ before World War I. As the decades of the 20th century passed, the Army's emphasis on doctrine and its institutions charged with developing doctrine expanded considerably, leading eventually to the establishment of the Training and Doctrine Command in July 1973.

Though the past does not always provide a blueprint for the future, the development of joint doctrine will probably accelerate in the years to come, much as the development of Army doctrine increased in the 20th century. The possibility of a great expansion in the role and importance of joint doctrine may be surprising to some, for during most of the last half century the U.S. Armed Forces have placed relatively little emphasis on joint doctrine. Instead, they have focused their efforts on developing a system of joint schooling to improve the ability of the services to work together. These efforts began with the establishment of the Army-Navy Staff College on June 1, 1943 and the National War College on July 1, 1946.⁸ Among the missions of the National War College was preparing "selected personnel of the Armed Forces and the Department of State for the exercise of joint high-level policy, command and staff functions, and for the performance of strategic planning duties in their respective departments."⁹ The creation of other schools, such as the Armed Forces Staff College on August 13, 1946 at Norfolk, Virginia,¹⁰ provided new opportunities for education in joint matters. And the establishment of the National Defense University on January 16, 1976 as an umbrella headquarters over the joint schools provided new means for maintaining "excellence in military education."¹¹

Despite significant changes in the joint schooling system in recent decades, it has become apparent that more than education is required to guarantee that the services work together effectively. Command authority and doctrine, not merely education, cause military forces to function together. Education is simply the mechanism for ensuring the ideas are understood and implemented. To this end, the passage of the landmark Goldwater-Nichols legislation in October 1986 enhanced the power of the Chairman at the expense of the corporate Joint Chiefs of Staff and thereby altered many relationships in the joint arena that had existed for more than three decades. The legislation imposed upon the Chairman responsibility for establishing policies for joint doctrine, training, and education and gave him sufficient authority over the services to ensure his policies would be followed.¹²

One of the earliest changes emerging from the new authority of the Chairman of

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the requirement to write joint doctrine was superimposed over existing institutions that previously had placed little emphasis on joint doctrine

the Joint Chiefs was the establishment of a comprehensive process to discover and address in a systematic way voids in joint doctrine and training. This analysis suggested that something other than JCS Pub 1, *Dictionary of Military and Associated Terms*,¹³ and JCS Pub 2, *Unified Action Armed Forces*,¹⁴ was required to furnish the U.S. Armed Forces adequate joint doctrine. As a consequence, the Joint Staff and the services began writing more than 75 new joint publications.

Among these was Joint Pub 1, *Joint Warfare of the U.S. Armed Forces*, which was intended to articulate an overall philosophy for the other publications.

Joint Pub 1 provides a comprehensive discussion of doctrine, defining the term as follows:

*Military doctrine presents fundamental principles that guide the employment of forces. Doctrine is authoritative but not directive. It provides the distilled insights and wisdom gained from our collective experience with warfare. However, doctrine cannot replace clear thinking or alter a commander's obligation to determine the proper course of action under the circumstances prevailing at the time of decision.*¹⁵

The absence of information about processes and techniques has caused some critics to deride Joint Pub 1 as being little more than pabulum. Nonetheless, if one reflects on the experience of the Army and improvements in the doctrinal arena since the publication of the landmark 1891 *Infantry Drill Regulations*, the potential for change becomes obvious. That is, by guiding the employment of the U.S. Armed Forces, joint doctrine will play a large role in Professional Military Education and in the development of new organizations and equipment, and it may soon affect the entire American defense establishment in a fundamental way. In other words, the great value of Joint Pub 1 is not in what it says but in what it signals about developments in the future.

The current system to formulate doctrine within the joint community differs substantially from that used by the Army, particularly since the establishment of the Training and Doctrine Command. In the flurry of activity after 1986 that accompa-

nied the writing of about 75 new joint doctrinal documents, the Joint Staff "subcontracted" the writing of documents among the services, the Joint Staff, and the unified and specified commands. Except for the establishment of a Joint Doctrine Branch within the Operational Plans and Interoperability Directorate (J-7) on the Joint Staff and the creation of the Joint Doctrine Center at Norfolk, the requirement to write joint doctrine was superimposed over existing institutions that previously had placed little emphasis on joint doctrine. Though the quality of the joint doctrinal publications is yet to be determined, the variety of authors, the press of deadlines, and the complexities of coordination suggest that revisions in the production process may be necessary.

As steps are taken to improve the formulation of joint doctrine, a more coherent and complete system must be established. Within this system, a major component should be a "Center of Excellence" for joint doctrine. Though such a Center may eventually evolve into something resembling the Army's Training and Doctrine Command, the first step is the marshalling of responsibility and the clarifying of procedures and relationships. Instead of responsibility being shared or fragmented, the Center should have responsibility for evaluating and writing doctrine; researching and writing historical studies on doctrine; conducting simulations to test doctrinal concepts; and conducting exercises to ensure common understanding and application of doctrine. In an ideal world the Center would be located at Norfolk, where it could take advantage of existing institutions in the Joint Doctrine Center and the Armed Forces Staff College and could establish day-to-day links with service doctrinal offices of the Army at Fort Monroe, the Air Force at Langley Air Force Base, the Navy in Norfolk and Virginia Beach, and the Marine Corps at Norfolk and Quantico. Existing service activities in these locations—such as the Army's Training and Doctrine Command at Fort Monroe—would greatly facilitate and simplify the coordination that is essential in the development of joint doctrine.



Armed Forces Staff
College students
playing a theater-level
war game.

As the process for formulating doctrine evolves, some documents can continue to be subcontracted to the services, but a significant portion of the joint publications, particularly the capstone ones, must be written within the Joint Staff or the Center of Excellence. This will ensure their adherence to common themes and will minimize the effects of a fragmented system. In the Army's experience, for example, FM 100-5 should not be written by the branches at Fort Benning, Fort Knox, or Fort Sill; the Combined Arms Center at Fort Leavenworth and the Training and Doctrine Command at Fort Monroe have demonstrated a better capacity for rising above parochial concerns and writing doctrine that applies to broader segments of the Army.

The Joint Doctrine Center at the Norfolk Naval Air Station may ultimately be the best place for writing joint doctrine, but it clearly does not have that capacity today. Created in April 1987, the Joint Doctrine Center currently focuses on evaluating rather than writing joint doctrine. It analyzes documents

that are written by the services and joint commands and ensures that they adhere to common formats and are distributed properly. An important step in improving the formulation of doctrine is enlarging the focus and resources of the Joint Doctrine Center and slowly expanding its mission to evaluating, revising, and writing new doctrine. Such a change will make the Joint Doctrine Center a vital component of the Center of Excellence at Norfolk.

Simulations and exercises should also be important components within the Center of Excellence. The Wargaming and Simulation Center, which was established in May 1982 under the National Defense University,¹⁶ could make significant contributions to the development of doctrine if it were linked more directly to a Center of Excellence at Norfolk. The Army has long recognized the importance of simulations to the doctrinal process, with Arthur Wagner, Eben Swift, and others playing key roles in their expanded use at the end of the 19th century.¹⁷ With the

Marshall Hall—the joint academic center of the National Defense University at Fort Lesley J. McNair. NDU is comprised of two senior-level, Professional Military Education institutions—the Industrial College of the Armed Forces and National War College—and the Armed Forces Staff College, which offers both Phase I and II of the Program for Joint Professional Military Education.

completion of the Army War College's wargaming facility at Carlisle Barracks (the Center for Strategic Leadership), the joint community will have the opportunity to use interactive war games among the Center of Excellence at Norfolk, the Army War College, the Naval War College, and the Air War College to gain important insights and information for those who write joint doctrine—as well as for those who “test” strategic concepts. Additionally, the linking of the Joint Warfare Center in Florida to the Center of Excellence would facilitate the development of useful doctrine. The Joint Warfare Center currently supports exercises conducted by the combatant commands, and its assuming a

larger role in the exercising of doctrinal procedures should be nothing more than an expansion of its current activities. Just as exercises within NATO enable extremely diverse units to speak the same operational language and meet common standards, exercises could become an important instrument within the joint community to ensure common understanding and application of doctrine.

As the development of joint doctrine matures, the role of Joint Professional Military Education must be acknowledged and emphasized. In particular, its study must remain embedded in all service colleges without detracting from preparing officers for duties in their own service. One of the important insights furnished by the 1987 Dougherty



Board on Senior Military Education was that the success of joint operations depends on officers in joint commands having solid expertise in the methods and organizations of their own service. The program that was established to prepare individuals as Joint Specialty Officers (in accord with the Goldwater-Nichols legislation and the Chairman's "Military Education Policy Document"¹⁸) requires officers to receive Phase I of their Professional Military Education from an accredited service school and Phase II from the Armed Forces Staff College in Norfolk. At the end of Phase I, individuals are expected to know basic information about joint organizations, command relationships, etc., and then

in Phase II are expected to apply the understanding they acquired in Phase I. This logical and relatively efficient system enables the services to educate their officers in their basic service-specific skills and responsibilities before they enter Phases I and II of the Joint Specialty Officer program. It also guarantees that all intermediate service schools are deeply involved in the study and teaching of joint issues and that the application phase is clearly under the control of the joint community. There are many useful aspects of the new Phase I and Phase II program, but two of the most valuable outcomes are ensuring that no intermediate service school can ignore the requirement to teach Joint Professional Military Education (JPME) and that no officers are shortchanged in the development of expertise in their own service.

Despite the significant improvements that have already been made, steps can be taken to improve the quality of JPME. One of the most important would be the establishment of a joint school similar to the U.S. Army's School for Advanced Military Studies (SAMS).¹⁹ Such a school could be called the "Joint Advanced Warfare School" (JAWS), could become part of the Armed Forces Staff College at Norfolk, and could furnish many of the benefits to all the services that SAMS provides for the Army. Most especially, faculty and students in the school could develop special expertise in the theory and practice of joint operations, and students could be prepared and slated for positions as war planners in joint commands. The establishment of JAWS would provide the joint community greater expertise than the services in the theory and practice of joint operations. And its focus on warfighting and its level of sophistication would make it a dramatically different course than the one offered at the Armed Forces Staff College before the Goldwater-Nichols legislation.

Officers who attend JAWS should be individuals studying to be Joint Specialty Officers. A portion of those officers who have finished Phase I at an intermediate service school and who are scheduled to attend Phase II—perhaps 25 to 50 a year—could be selected for the more rigorous course of study at JAWS. Because of its small size and purpose, JAWS would not replace Phase I and Phase II instruction for the great majority of Joint Specialty Officers. With a length

**one of the few areas
neglected by the 1986
Goldwater-Nichols
legislation was the
history community**

of about six months, the course at JAWS could include Phase II in a modified format, intensive historical studies, analyses of the operational level of war, and extensive practical exercises. The course could also include an introduction to national policy and strategy as they affect joint operations. As with the Army's SAMS, the faculty could be a combination of individuals permanently assigned to the Armed Forces Staff College and a handful of exceptionally outstanding officers from all services who would serve as fel-

lows at JAWS in lieu of attending the National War College. Assuming that JAWS attains the success of the Army's SAMS, some of those who attend or teach at JAWS could develop joint warfighting skills to their highest levels and could become the pre-

mier war planners in joint commands.

Another improvement in the formulation of joint doctrine could come from associating the Joint Doctrine Center more closely with the Armed Forces Staff College. Such an arrangement would make the latest thoughts on doctrinal issues available to officer students and facilitate the development of joint doctrine through a more comprehensive and demanding system than currently exists. One of the key lessons of the Army's experience is that the writing of doctrine cannot be completely separated from the teaching of doctrine; a symbiotic relationship must exist between the two.²⁰ Tightening the links between the Joint Doctrine Center and the Armed Forces Staff College—particularly if JAWS were also established—would give Norfolk unrivaled expertise in joint operations and make it the focal point for understanding and teaching joint doctrine.

Another component of the doctrinal process that is often overlooked pertains to the availability of historical literature on joint operations. Ironically, one of the few areas neglected by the 1986 Goldwater-Nichols legislation was the history community. In comparison to the wealth of material now available about military operations by the services, very little information is available on the history of joint operations. Worse, little effort is currently being expended to increase the amount of available literature. The histor-

ical literature that has been written by historians on the Joint Staff pertains to the functioning of the Joint Staff, not to joint operations or campaigns. Histories about the conduct of campaigns and operations have remained the province of the services. Thus, little is available to provide the "distilled insights and wisdom" that are extolled in Joint Pub 1's definition of doctrine.

If shortcomings in available literature are to be overcome, significant steps must be taken to create a more extensive community of joint historians. The first step is the expansion of the Joint Staff Historical Office. The present office has only five people and should be increased significantly. This enlarged joint history office could complete a series of "purple" histories of joint and combined operations, as well as special studies of important joint historical issues. The next step would be the modest expansion of the history offices in the unified and specified commands. Individuals in these offices should collect and preserve documents, conduct interviews, and write command histories. Steps also could be taken to have historical detachments accompany joint task forces on contingency missions such as Urgent Fury, Sea Angel, or Provide Comfort. These detachments could be tailored according to the JTF's mission, and, though composed of representatives from all the services, could parallel the organization of the Army's Military History Detachments. The detachments should collect documents, conduct interviews, and write reports that would contribute significantly to the completion of joint histories.

As part of the expansion of the joint history community, a center must be created and given responsibility for conducting historical research on joint campaigns and operations. One possible name for such an institute could be the "Joint Campaign Studies Institute." As stated in Joint Pub 1, *Joint Warfare of the U.S. Armed Forces*, "Campaigns of the U.S. Armed Forces are joint; they serve as the *unifying focus* for our conduct of warfare."²¹ In a similar sense, historical studies of joint campaigns could provide much useful information for the formulation of joint doctrine. If a Joint Campaign Studies Institute were established, it should be part

of the Armed Forces Staff College and should be modeled after the Army's Combat Studies Institute at Fort Leavenworth. Steps would have to be taken, however, to ensure that it remains focused on the publication of historical literature and does not become completely absorbed by the demands of daily classroom presentations.

In sum, the development of appropriate joint doctrine in the future could become more efficient and effective with the establishment of a system with a Center of Excellence at Norfolk as its head. Without a coherent system with precise responsibilities and relationships, the efforts of those who develop joint doctrine will never be as successful as they should be. As the emphasis on joint doctrine increases and a more coherent system emerges, the Center of Excellence at Norfolk should initially have links to the Joint Doctrine Center, the Armed Forces Staff College (including the Joint Advanced Warfighting School), the Joint Warfighting Center, the Wargaming and Simulation Center, and the Joint Campaign Studies Institute. Over time, the Center of Excellence should evolve from its status as monitor and coordinator of joint doctrinal formulation to having paramount responsibility. Ultimately, the Center should become a Joint Command, probably on the analogy of the National Defense University.

Although much work remains to be done to establish a proper system for formulating excellent joint doctrine, the appearance of Joint Pub 1, *Joint Warfare of the U.S. Armed Forces*, clearly signals an acceleration in its development. As with the publication of the Army's 1891 *Infantry Drill Regulations*, the appearance of Joint Pub 1 does not guarantee the importance of joint doctrine will increase dramatically in the near future. Nonetheless, the first step has been taken, and the direction, number, and pace of the next steps must be determined. The path may be long, but the goal is clear. Those who formulate joint doctrine must work with the best possible chance of success. **JFQ**

NOTES

¹ Joint Chiefs of Staff, *Joint Warfare of the U.S. Armed Forces*, Joint Pub 1 (Washington: National Defense University Press, 1991).

² For a history of the field manual, see Virgil Ney, *Evolution of the United States Army Field Manual, Valley Forge to Vietnam* (Fort Belvoir, Va.: Combat Operations Research Group, 1966).

³ Silas Casey, *Infantry Tactics for the Instruction of the Soldier, A Company Line of Skirmishers, Battalion, Brigade or Corps d'Armée* (New York: D. Van Nostrand, 1862).

⁴ William A. Ganoe, *The History of the United States Army* (New York: D. Appleton-Century Company, 1942), p. 285.

⁵ U.S. War Department, *Infantry Drill Regulations, United States Army* (Washington: Government Printing Office, 1891).

⁶ U.S. War Department, *Field Service Regulations, United States Army* (Washington: Government Printing Office, 1905).

⁷ Ganoe, *The History of the United States Army*, p. 448; Maurice Matloff, ed., *American Military History* (Washington: Government Printing Office, 1969), pp. 348, 351.

⁸ Joint Chiefs of Staff, Joint Secretariat, Historical Division, Special Historical Study, "The Joint Chiefs of Staff and the Joint Education System, 1943-1986" (Washington: typescript, 1988), p. 2.

⁹ *Ibid.*, p. 8.

¹⁰ *Ibid.*, p. 11.

¹¹ *Ibid.*, pp. 42-43.

¹² *Ibid.*, p. 56.

¹³ Joint Chiefs of Staff, *Dictionary of Military and Associated Terms*, JCS Pub 1 (Washington: Government Printing Office, 1987).

¹⁴ Joint Chiefs of Staff, *Unified Action Armed Forces (UNAAF)*, JCS Pub 2 (Washington: Government Printing Office, 1986).

¹⁵ Joint Pub 1, p. 5.

¹⁶ Joint Chiefs of Staff, "The Joint Chiefs of Staff and the Joint Education System," p. 48.

¹⁷ Boyd L. Dastrup, *The U.S. Army Command and General Staff College: A Centennial History* (Manhattan, Kans.: Sunflower University Press, 1982), p. 35.

¹⁸ Office of the Chairman, Joint Chiefs of Staff, CM 344-90, "Military Education Policy Document," May 1, 1990 (Washington: typescript, 1990), passim.

¹⁹ See Ike Skelton, "JPME: Are We There Yet?," *Military Review*, vol. 72, no. 5 (May 1992), pp. 2-9.

²⁰ For a more complete discussion of the relationship between education and doctrine, see Robert A. Doughty, "The Command and General Staff College in Transition, 1946-1976," Special Study Project, Department of Strategy, U.S. Army Command and General Staff College, May 1976, pp. 109-23.

²¹ Joint Pub 1, p. 45.



United Nations Peacekeeping: *Ends versus Means*

By WILLIAM H. CLAYTON and JOHN O. B. SEWALL

A liaison officer coordinating air support for U.S. and Canadian troops in Somalia.

Summary

The end of the Cold War has seen the United Nations assume a more active role in resolving regional conflicts. In the last four years alone U.N. forces have mounted over a dozen military operations, more than in the previous four decades. Many of today's operations are greater in scope and complexity than in the past, and their nature is changing from *peacekeeping* to *peace-enforcing*. As a result the Secretary-General recommends expanding U.N. military capabilities. While Washington officially pledged support for a stronger and more forceful United Nations, the resources to achieve that objective are not available. The most immediate requirement is for a command and control structure for properly employing multinational forces. Moreover, there is a view that divergent U.N. and U.S. military cultures could inhibit American participation in future peacekeeping missions under U.N. control. Even if our military contributions to future combined operations are small, such missions will continue to pose a significant challenge to the way the U.S. Armed Forces currently plan and train for coalition warfare.

The United Nations has become a significant factor for the United States in developing a coherent strategic focus to guide its foreign policy during the balance of the 1990s. The collapse of the Soviet Union and the Warsaw Treaty Organization has been succeeded by a widening array of conflict situations and crises which are beyond the ability of any single nation to resolve. Thus the United Nations is now the primary vehicle for conflict resolution, with the Security Council—under its senior executive agent, the Secretary-General—searching for allies to share the burden of promoting peace. The United States has pledged support for “a more robust, more muscular” United Nations.¹ The issue as yet unresolved is the nature and the extent of the American support that is required and, perhaps crucially, whether divergent U.S. and U.N. military cultures will be impediments to developing common doctrine and command and control arrangements for mounting joint and combined operations in the future as part of a multinational force.

Background

The inability of the U.N. Security Council to play an effective role in maintaining peace and security after the start of the Cold War led the United Nations to turn to peacekeeping in default. This was a “golden age” for the organization during which it avoided superpower rivalry and influence by relying mainly on smaller nations for military contributions to peacekeeping operations. The conduct of such missions evolved over four decades although the word *peacekeeping* does not appear in the U.N. Charter. In the initial phase international observer missions were established to monitor cease-fires (1948–56). This was followed by the introduction of the first modern peacekeeping force, the U.N. Emergency Force in Egypt (1956), to separate the military forces of Egypt and Israel. Then, in 1960, a multinational force was sent to the former Belgian Congo to perform an internal pacification role. The unsettled state of East-West relations inhibited instituting peacekeeping initiatives between 1967 and 1973. The 1973

Arab-Israeli war resulted in the deployment of a peacekeeping

or buffer force to the Sinai and an observer group to the Golan Heights. Later, in 1978, another U.N. buffer force was established in southern Lebanon.

The general mission of U.N. field operations was clearly defined: to supervise demarcation lines or cease-fire agreements, separate military forces upon agreement of the warring parties, and (in limited cases) foster an environment in which the population could return to normal pursuits. Missions were organized only with the consent of the contending parties (including agreement on the national origin of participating military units). For their part U.N. units were expected to avoid the appearance of partiality, carry light (nonthreatening) weaponry, and restrict the use of force to the maximum extent possible. In brief, these military units were expected to serve as an instrument of U.N. diplomacy, be militarily nonprovocative, and withdraw if the host nation so indicated.

The end of the Cold War produced an even more challenging international security environment characterized by the unleashing of divisive forces once held in check by superpower rivalry and by the transformation of international politics from bipolar to multilateral relations. This led to a dramatic increase in pressure for international organizations to engage in preventive diplomacy to resolve conflicts at an incipient stage or to forcibly intervene when conflict threatens peace and security. Complicating this expanded mandate is the eruption of intrastate conflicts that, in turn, displace populations and create humanitarian concerns. Such conflicts also may cause breakdowns in governmental authority or, *in extremis*, lead to harsh repression of restive ethnic minorities, including refusal to permit the distribution of emergency foodstuffs and medical supplies.

The impact of these developments on U.N. operations is immense. In terms of demand the organization launched 13 peacekeeping operations since 1988–89, roughly equal to all the missions conducted in the previous four decades. The scale and scope of current operations have necessitated deploying over 54,000 military personnel—more than half the strength of the forces that make up the U.N. membership’s existing military establishments—at an estimated \$3 billion for 1992. Second, these operations

Joint Combat Camera Center photo

Both William H. Lewis and John O.B. Sewall are senior fellows in the Institute for National Strategic Studies, National Defense University, where they analyze regional security issues.

exceed the traditional bounds of peacekeeping and include:

- ▼ supporting victims of war, including provision of safe havens;
- ▼ supervising transfers of power and establishing effective institutions of government;
- ▼ organizing and monitoring elections;
- ▼ creating secure environments to ensure the safe delivery of relief supplies.

Peacekeeping and humanitarian assistance have become inextricably linked—as seen in Somalia—and now require the integration of military and humanitarian planning to meet contingencies.²

An added burden not yet fully addressed by the U.N. membership relates to responsibility for reestablishing security and order in failed states, particularly when human rights violations are blatant and regional stability is threatened. The demise of viable governing institutions in Liberia, Somalia, and Haiti provide striking examples. Many Third World governments—most notably the members of the Group of 77 which today numbers over 120 countries—resent what they believe are threats to their national sovereignty.

China, one of the five permanent members of the Security Council, has expressed reservations about Western intervention under U.N. auspices in situations where humanitarian considerations dictate action without the approval of the host governments. Secretary-General Boutros-Ghali favors the humanitarian position. In his June 1992 report to the Security Council, *An Agenda for Peace*, the Secretary-General observed that “the time of absolute and exclusive sovereignty . . . has passed; its theory was never matched by reality” and then urged “a balance between the needs of good internal governance and the requirements of an ever more interdependent world.”³



DOD photo by Perry Heimer

Norwegian U.N. peacekeeping forces break down pallets of American rations (MREs) being unloaded from a U.S. Air Force C-141 in Zagreb, Croatia.

Defining Roles and Missions

Rising demands for the United Nations to play the part of global crisis manager have generated a plethora of proposals to enhance the organization's military capabilities. This development was foreshadowed in a post-Desert Storm observation by then Secretary-General Perez de Cuellar that the war, while “made legitimate by the Security Council, was not a U.N. victory” because victory could be claimed only if hostilities were “controlled and directed” from the United Nations. Boutros-Ghali pursued this issue by recommending that:

- ▼ the Security Council assume more peacekeeping burdens rather than authorizing member states to take action on its behalf;
- ▼ agreements be made as foreseen in article 43 of the Charter for member states to make military forces, assistance, and facilities available to the Security Council;
- ▼ the Security Council guarantee the permanent availability of such peacekeeping forces (and negotiate with member states—assisted by the hitherto moribund Military Staff Committee—to create such forces);
- ▼ peace-enforcement forces be on-call and more heavily armed than peacekeeping units, be made up of volunteers, and be extensively trained within their national commands;
- ▼ peacekeeping and peace-enforcement forces be placed under the command of the Secretary-General.⁴

The distinction between peacekeeping and peace-enforcement reposes in chapters VI and VII of the Charter whose framers saw the United Nations as an organization required to offer assurances of comprehensive collective security. To meet that need two functions were regarded as imperative: the procedures for the “pacific settlement of disputes” found in chapter VI (*peacekeeping*) and the ability to counter “threats to the peace, breaches of the peace, and acts of aggression” in chapter VII (*peace-enforcement*). In the so-called golden age of the United Nations most disputes and conflict situations were dealt with through chapter VI procedures. Chapter VII was invoked to redress the Iraqi invasion of Kuwait in 1990, and the Korean “police action” is generally considered to be an example of a chapter VII enforcement action. The challenge to the U.N. leadership today is bridging the gap militarily when addressing threats to international order and stability that fall between the

chapters (sometimes called *chapter VI and 1/2 requirements*). The accompanying table seeks to avoid semantical confusion over these terms by providing generally acceptable definitions.

U.N. Terminology

peacemaking—generally means using mediation, conciliation, arbitration, or diplomatic initiatives to peacefully resolve a conflict

peacekeeping—traditionally involves using military personnel as monitors/observers under restricted rules of engagement once a cease-fire has been negotiated

peace-enforcing—using military force to complete a cessation of hostilities or to terminate acts of aggression by a member state

peace-building—rebuilding institutions and infrastructure within a country to create conditions conducive to peace, as used by Secretary-General Boutros-Ghali in his *An Agenda for Peace*

protective engagement—using military measures, essentially defensive, to provide safe havens or a secure environment for humanitarian operations (such actions tend to fall between chapters VI and VII of the U.N. Charter)

The recommendations found in *An Agenda for Peace* present the U.S. military with major questions regarding roles and missions in future multilateral peacekeeping actions. For example, in what kind of situations should the United States become involved in peacekeeping? In the event of a decision to participate in peacekeeping operations, what doctrine exists to instruct and inform forces? Under what circumstances should members of the Armed Forces be directly commanded by officers outside our national chain of command? Should peacekeeping be integrated as a subset of traditional missions and capabilities? Where should the budgetary authority for peace-

keeping be lodged: in defense appropriations or the Foreign Assistance Act? Should the United States support strengthening U.N. planning and operational capabilities? Should the United States seek to energize the U.N. Military Staff Committee? If so, with what mandate and whose participation?

While not fully endorsing Boutros-Ghali's proposals, President Bush, in an address to the U.N. General Assembly on September 21, 1992, recommended that the Security Council consider them on an urgent basis. In outlining his position the President indicated the United States will:

▼ support efforts to strengthen the ability of the United Nations to prevent, contain, and resolve conflict;

▼ support the North Atlantic Treaty Organization (NATO), the Conference on Security and Cooperation in Europe (CSCE), the Western European Union (WEU), the Commonwealth of Independent States (CIS), and other competent regional organizations to develop peacekeeping capabilities—enhanced U.N. capabilities being a “necessary complement to these regional efforts”;

▼ member states, however, must retain the final decision on the use of troops they make available for peacekeeping operations;

▼ train its forces for “the full range of peacekeeping and humanitarian relief” which will be coordinated with the United Nations;

▼ inform the United Nations on the availability of its unique military resource capabilities and encourage other nations to provide information on logistics, equipment, and training which can be made available to enhance readiness and interoperability;

▼ “promote multilateral peacekeeping . . . training exercises, simulations, and leadership development,” and make facilities available for such purposes.

President Clinton associated himself with the Bush position during his inaugural address by stating: “When our vital interests are challenged or the will or conscience of the international community are defied, we will act—with peaceful diplomacy wherever possible, with force when necessary.”⁵ Left unanswered are questions about the means of establishing a body of knowledge on joint and combined peacekeeping within the U.N. Security Council and its principal executive agent, the Secretary-General and his Secretariat.

Basic Points of Divergence

The United Nations is the world's primary legitimizing agent in matters of peacekeeping. Resolutions by the Security Council provide the framework for diplomatic initiatives (or preventive diplomacy), humanitarian intervention, and military action within the framework of chapter VII. Clearly U.S. and U.N. interests in maintaining international peace and security appear inextricably linked, but their respective histories, bureaucratic culture, and decisionmaking procedures suggest otherwise. Indeed, unless the obstacles are satisfactorily negotiated in the near future, they seem to be on a collision course due to misunderstanding. As Ambassador James Goodby has observed: “Collective security military operations require constant exchanges of views among the governments trying to deal with complex situations.”⁶ Moreover, the effectiveness of collective security operations will be

the United Nations is the world's primary legitimizing agent in matters of peacekeeping

On-Going Peacekeeping Missions

- Established before 1988
- Fielded since 1988



United Nations photo

Note: The term *troops* in the lexicon of U.N. peacekeeping refers to infantry, logistics, engineering, aviation, medical, movement control, naval, and staff personnel. A total of 448 Americans—341 troops and 107 observers—were serving in 5 of the 13 on-going United Nations peacekeeping operations listed here on March 31, 1993.

Source: Strength figures courtesy of the Office of the Military Advisor, Department of Peacekeeping Operations, U.N. Headquarters.

ONUSAL 1991—United Nations Observer Mission in El Salvador—established in 1991 to supervise a cease-fire between the Salvadoran government and the FMLN guerrillas, monitor human rights, and establish a police force (strength: 286 civilian police, 7 troops, and 94 military observers).

MINURSO 1991—United Nations Mission for the Referendum in Western Sahara—established in 1991 to supervise a cease-fire and a referendum to determine independence or integration into Morocco (strength: 110 troops and 224 military observers, including 30 American observers).

UNIPROFOR 1992—United Nations Protection Force—established in 1992 to foster security in three protected areas of Croatia in order to facilitate a peace settlement (strength: 621 civilian police, 22,534 troops, and 394 military observers, including 339 American troops).

U.N. personnel in Somalia have been using advanced communications equipment.

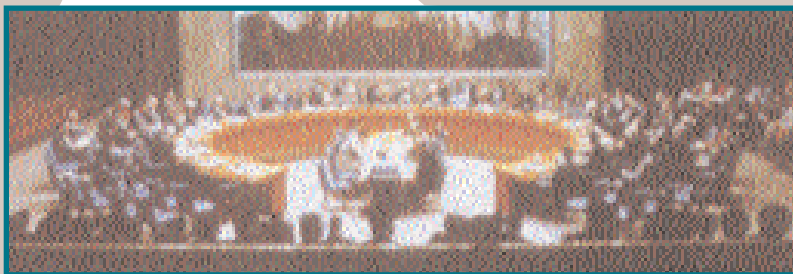


Joint Combat Camera Center photo

Unloading a Navy cargo ship under the watchful eyes of U.N. troops.



DOD photo



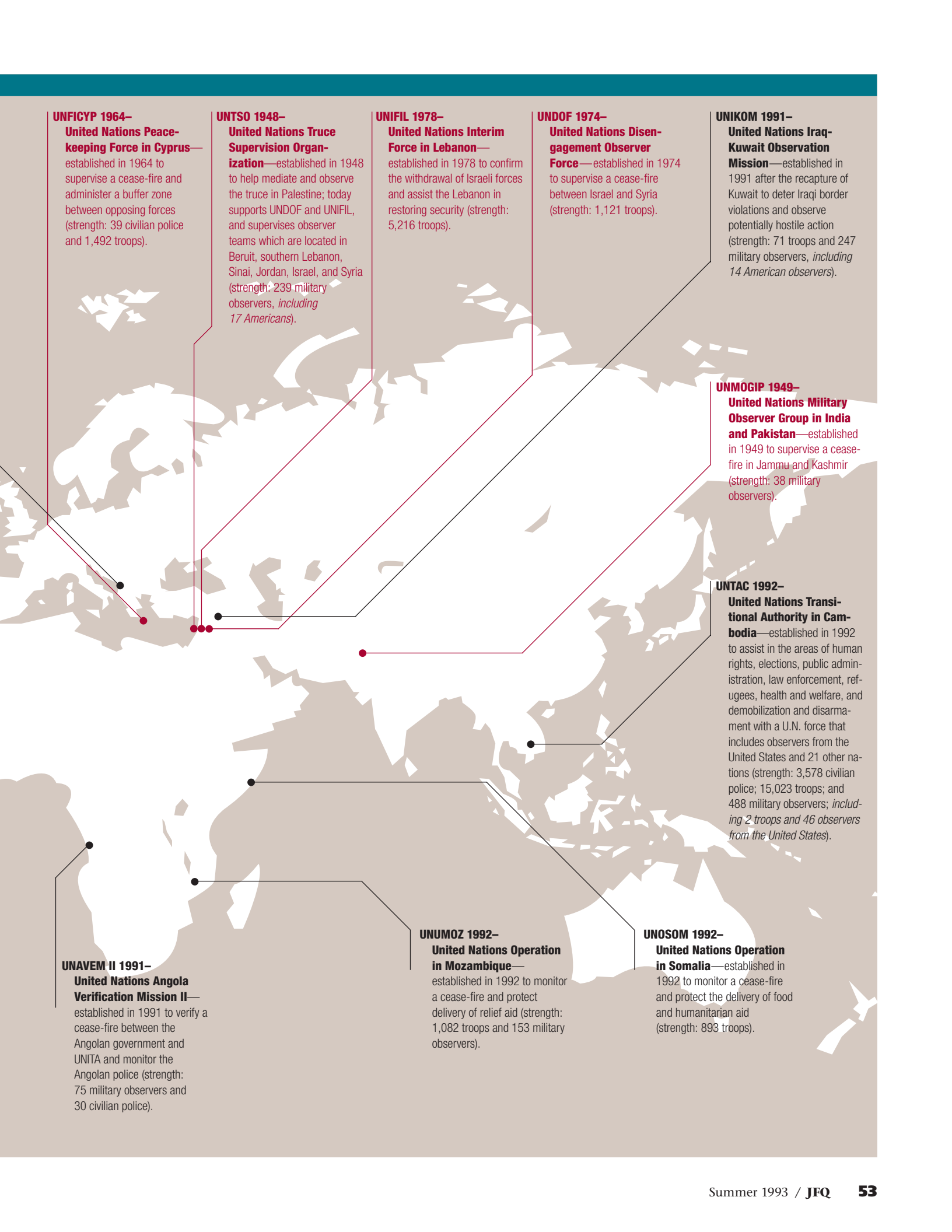
United Nations photo

United Nations Security Council meeting.

Marines in Mogadishu counter warring factions during Operation Restore Hope.



Joint Combat Camera Center photo



UNFICYP 1964—United Nations Peace-keeping Force in Cyprus—established in 1964 to supervise a cease-fire and administer a buffer zone between opposing forces (strength: 39 civilian police and 1,492 troops).

UNTSO 1948—United Nations Truce Supervision Organization—established in 1948 to help mediate and observe the truce in Palestine; today supports UNDOF and UNIFIL, and supervises observer teams which are located in Beirut, southern Lebanon, Sinai, Jordan, Israel, and Syria (strength: 239 military observers, *including 17 Americans*).

UNIFIL 1978—United Nations Interim Force in Lebanon—established in 1978 to confirm the withdrawal of Israeli forces and assist the Lebanon in restoring security (strength: 5,216 troops).

UNDOF 1974—United Nations Disengagement Observer Force—established in 1974 to supervise a cease-fire between Israel and Syria (strength: 1,121 troops).

UNIKOM 1991—United Nations Iraq-Kuwait Observation Mission—established in 1991 after the recapture of Kuwait to deter Iraqi border violations and observe potentially hostile action (strength: 71 troops and 247 military observers, *including 14 American observers*).

UNMOGIP 1949—United Nations Military Observer Group in India and Pakistan—established in 1949 to supervise a cease-fire in Jammu and Kashmir (strength: 38 military observers).

UNTAC 1992—United Nations Transitional Authority in Cambodia—established in 1992 to assist in the areas of human rights, elections, public administration, law enforcement, refugees, health and welfare, and demobilization and disarmament with a U.N. force that includes observers from the United States and 21 other nations (strength: 3,578 civilian police; 15,023 troops; and 488 military observers; *including 2 troops and 46 observers from the United States*).

UNAVEM II 1991—United Nations Angola Verification Mission II—established in 1991 to verify a cease-fire between the Angolan government and UNITA and monitor the Angolan police (strength: 75 military observers and 30 civilian police).

UNUMOZ 1992—United Nations Operation in Mozambique—established in 1992 to monitor a cease-fire and protect delivery of relief aid (strength: 1,082 troops and 153 military observers).

UNOSOM 1992—United Nations Operation in Somalia—established in 1992 to monitor a cease-fire and protect the delivery of food and humanitarian aid (strength: 893 troops).

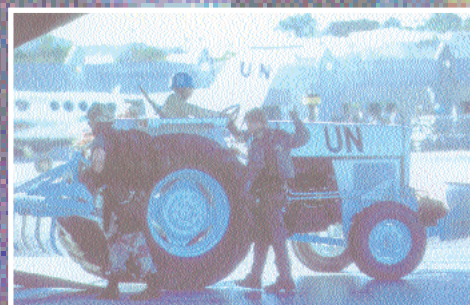


A U.S. Air Force crew placing the emblem of the U.N. High Commissioner for Refugees on their cargo plane.

U.N. forces load an Air Force C-130 in Djibouti for the flight to Somalia.



Pakistani troops in "blue helmets" deploying to Somalia in 1992.



DOD photo by Men Lynchard

Joint Combat Camera Center photo

determined by the mandate of the Charter, political will, available resources, and perceived legitimacy. Recent U.S.-U.N. interaction reveals that neither a commonality of views nor coordinated action exists across the full range of peacekeeping operations. In consequence we are also far removed from establishing a joint perspective on the essentials for a full-bore collective security system under the auspices of the United Nations.

The approach of U.N. Headquarters to the challenges of the post-Cold War era appears to be coherent and reasonably well balanced. Indeed, few member states could object to the general precepts and guidelines set forth in *An Agenda for Peace*, the report of the Secretary-General. It is sensible on the whole, but the devil is in the details. In particular Boutros-Ghali and the Secretariat have yet to come fully to terms with several vexing problems which, if not resolved, would inhibit U.S. military support for peacekeeping (in the broadest sense) operations. Salient among them are issues involving organization, doctrine, command and control, logistics, and rules of engagement.

Shape and Functions of the Military Secretariat. The U.N. Headquarters system is still not up to expanded peacekeeping requirements of increased complexity and scope. Hitherto the Secretariat has met emerging requirements with ad hoc approaches, not infrequently failing to meet challenges on a timely, cost-effective basis. The pattern has been jerrybuilt and does not meet the need for clearly defined mandates covering field personnel, concepts of operations, logistical plans, and multi-year resource requirement planning. The U.N. leadership must establish a single chain of command linking the political (crisis-prevention) side of its operations with the management and logistical-support side. Concomitantly, the Secretariat's military staff should be enlarged substantially, with special components established for crisis early warning, plans and operations, logistics and communications—none of which exist at present.

Fashioning a Doctrinal Foundation. Traditionally peacekeeping worked well, and casualties were kept down because peacekeepers were accepted as neutrals whose stated purpose was to assist in muting conflicts and mediating between the conflicted parties. Chapter VI 1/2 and peace enforcement

operations require more heavily armed forces and different operational doctrine. Within the framework of traditional peacekeeping operations successes came in the form of ceasefires and negotiated settlements of disputes, whereas the circumstances in both Bosnia and Somalia are more ambiguous. The danger in the latter cases arises from breakdowns in Security Council consensus, disagreements among lead countries providing troops and the Headquarters Secretariat, and muddled or mismatched aims among the major actors involved in organizing field operations.

Divided Responsibilities in the Field. A separate civilian chain of command is the bane of all military field commanders. Under traditional U.N. practice the field unit's commander is subordinate to a Special Representative who reports directly to Headquarters and has a predilection to emphasize nonmilitary subjects. A separate chain also includes the Chief Administrative Officer of the mission who reports directly to the field Department of Administration and Management at U.N. Headquarters. He has the potential to influence military operations adversely since he has decisionmaking authority over budgetary and logistical matters. Tension between military field commanders and their civilian counterparts will inevitably crystallize since the decisions taken at Headquarters in New York are not predicated exclusively on political-military considerations. Consensus in New York involves decision by committee, diplomatic negotiations, and desiderata not necessarily relevant to the actual state of affairs in the field. These factors frequently override the practical requirements of military field commanders.

Logistical Mixes and Matches. The standard guidelines for national units assigned to peacekeeping emphasize that troops should arrive fully equipped and prepared to conduct field operations over several months without requiring U.N. resupply. Several nations—notably the Nordics, Canadians, and Irish—who have a lengthy history of training and preparation for such operations are readily prepared to meet this imperative. However, some Third World contributors, anxious to participate, must look to the United Nations for matériel support prior to unit arrival. The result has been a mix of equipment, poor interoperability, and

escalating funding requirements (given limited U.S. pre-stockage). These problems are compounded by civilian requirements that tend to piggyback on those of the military. Although standardization is beyond the capability of the existing U.N. system, the major powers might wish to consider creating set-aside stocks (in areas such as communications, transportation, and engineering) in excess of their national needs that can be placed at the disposal of the United Nations. The objective would be to ensure interoperability of equipment under conditions where severe security threats confront U.N. forces.

Realistic Rules of Engagement. Communal conflict has altered the nature of peacekeeping assignments conducted under U.N. auspices. Operations conducted today involve police support, civil administration, civic action, and humanitarian relief, all of which necessitate military support. In intrastate warfare traditional rules of engagement may not suffice. In certain situations U.N. forces deployed to protect the distribution of relief supplies could well become hostages or victims resulting in heavy casualties. As witnessed in Somalia, the initial U.N. contingent inserted at Mogadishu airport in mid-1992 became hostage to the clan chieftains and local thugs—yet U.N. Headquarters refused to alter the rules of engagement. The U.N. forces in Bosnia operate under similar constraints, occasionally with tragic consequences. Flexibility for field commanders would be desirable, but the bureaucratic culture in New York constrains greater delegation or freedom of action to field commanders regardless of how perilous the situation.

Given these constraints some observers conclude that U.S. forces are ill-suited to conduct general peacekeeping operations—short of Korea-like chapter VII threats to the peace—for several reasons. The nature of U.N. coalition roles and missions are at variance with American military character, doctrine, traditions, and the concepts of both decisive force and victory. For example, a recent U.S. statement on “Joint Operational Concepts” establishes doctrine which is antithetical to U.N. Headquarters concepts and guidelines.⁷ Issued under the signature of General Colin Powell, the Chairman of the Joint Chiefs of Staff, it sets forth clear guidelines for joint operations of the U.S. Armed

Forces, including the need to “shock, disrupt, and defeat opponents.” The emphasis is placed on integrating and synchronizing operations to ensure total and complete application of military force. And, to ensure success, commanders are admonished that “there are few distinct boundaries between the levels of war.” They must “set the terms for battle” so that “the threat is not able to resurrect itself.”⁸ To establish control over the adversary’s “center of gravity,” they are enjoined to emphasize lethality, tempo, decisiveness, and operational depth in plan-

ning to shock, demoralize, and disrupt opponents and thereby gain decisive advantage early. Such thinking is far removed from the doctrine, rules of engagement, and

operating procedures currently imbued in the bureaucracy of U.N. Headquarters.

The Command and Control Dilemma

For over forty years the United States has taken the lead in applying chapter VII military sanctions under U.N. authorization. Operations Desert Shield/Desert Storm in 1990–91 constituted only the second such American initiative, one which provided a U.N. license for the use of force without restricting the manner in which the U.S.-led coalition was to “secure Iraq’s immediate and unconditional withdrawal of its forces from Kuwait.” While required to provide periodic reports to U.N. Headquarters, the coalition was allowed unfettered planning and operational freedom to use “all necessary means” essential for success. The coalition fully met its mandate although at some cost. As Ambassador Pickering has observed: “Broadly licensing a few countries to use force in the Council’s name enables detractors to argue that the action is the project of a few governments unrepresentative of the world community.”⁹ Within the precincts of the United Nations, a number of member states want assurances that in future peacekeeping and peace-enforcement operations complete command and control will repose with U.N. Headquarters rather than with a designated lead country. Clearly, Boutros-Ghali’s June 1992 report was intended to satisfy this desire.

The primary dilemma for members that want centrality of U.N. control over future undertakings is the lack of a Headquarters organization to operate beyond existing ad hoc arrangements. Indeed, the *ad hoc* approach is resulting in system overload since additional military expertise is not available for peacekeeping management. To date, efforts to increase the professionalism and strengthen the Headquarters staff have been to no avail, and U.N. members themselves disagree on the size and use of military advisory staff.

Recently, several member nations have recommended that the Military Staff Committee be revived to provide military expertise to the Security Council and Secretary-General. Both the U.S. and several West European governments have greeted this proposal with reserve. Moreover, the traditional troop-contributing countries have not favored the proposal for fear they will be excluded from decisionmaking processes if the Military Staff Committee remains dominated by the Security Council “permanent five” as it is at present.

Whatever the final decision taken by the membership, it would be prudent to assume that the Security Council will be loathe in the future to accord full delegation of command and control to the United States as in Operations Desert Shield/Desert Storm. Full consideration will have to be given in due course to the role of the Military Staff Committee. Article 46 of the Charter calls for the Security Council to develop plans for applying force with the assistance of the Military Staff Committee; article 47 details the Committee’s terms of reference including advice to the Council on readiness, planning and general matters of command, and strategic direction of forces. There are some significant traps to be addressed in this context as Ambassador Pickering has noted:

No state whose troops are engaged in hostilities is likely to allow their direction by a group to which it does not belong or whose members have necessarily also contributed troops. [There] . . . is also the need to ensure that committed troops are not subject to life-threatening surprises by change in the political parameters governing their use, or by a breach in security or by other factors arising from activities which might be implied by the words “strategic direction.” Thirdly, unless the reference to strategic command is

U.N. forces deployed to protect relief supplies could well become hostages or victims

*interpreted in some static sense, the technology of modern warfare probably makes it obsolete: it requires flexible, decentralized decisionmaking and instantaneous communication—neither is well suited to decision by U.N. committee.*¹⁰

In cases of chapter VII peace-enforcement where the United States is the coalition leader with full operational control, the regional unified commander will either be the overall commander or establish a Joint Task Force. Such operations, however, have been and will remain exceptions. More frequently, individual U.S. observers or small-sized units will be integrated into U.N. peacekeeping commands (with U.N. logistical support) and the role of the U.S. unified commander may be more circumscribed. In the past the United States has assigned military observers to a number of peacekeeping missions but not large military units.¹¹ The experience of Operation Desert Storm in terms of chapter VII operations is that until multinational forces are deployed to one place and command and control is established, they will lack cohesion and effectiveness. On the other hand, when a substantial force is deployed with international agreement, U.S. command and control may be neither required nor warranted depending on the size of the force contributed. Experience in the NATO integrated military command and the Multinational Force and Observers (MFO) in the Sinai after the conclusion of the 1979 Egyptian-Israeli Peace Treaty should have established the fact that American troops can operate under a multinational command unencumbered by military or political constraints. Although the MFO is only one step away from a U.N. command, there is an apparent reluctance to place U.S. forces under foreign command.

Today, military planners have a most challenging assignment. Not only must they identify future adversaries but also surmise who will be our friends and coalition partners. If we confront a capable adversary—with or without direct U.N. involvement—any arrangement will require unity of command and control. Either a fragmented or multiple chain of command, predicated on loose coordination among national units, would be self-defeating because operational decisions must not be cobbled together by committees once conflict breaks out. Hence, the basic challenge for U.S. strategic plan-

ners involves interoperability in ad hoc coalitions that comprise forces with little or no history of operating together. Such arrangements are likely to resemble international versions of a sheriff's posse. But operational effectiveness can be directly enhanced and in-theater preconflict training minimized by periodic command-post exercises (CPXs) for potential coalition leaders and using the concept of lead-nation responsibility for certain equipment and functional support areas such as command, control, communications, and intelligence (C³I). This concept, suggested by President Bush in his speech to the General Assembly, will undoubtedly contribute to shaping the debate in the coming months. **JFQ**

NOTES

¹ "In Somalia, Now It's the U.N.'s Turn," *The New York Times*, February 1, 1993, p. 18.

² Ambassador Chan Heng Chee, "The U.N.: From Peacekeeping to Peacemaking?" Adelphi Paper no. 265 (London: The International Institute for Strategic Studies, 1991), pp. 30–40.

³ Gerald B. Helman and Steven R. Ratner, "Saving Failed States," *Foreign Policy*, no. 89 (Winter 1992/1993), pp. 3–20.

⁴ Boutros Boutros-Ghali, *An Agenda for Peace*, a report to the United Nations Security Council (New York: United Nations, June 17, 1992).

⁵ David Newson, "Use of Force to Settle Global Disputes Has Its Limits," *The Christian Science Monitor*, January 27, 1993, p. 19.

⁶ James E. Goodby (with Daniel O'Connor), "Collective Security after the Cold War" (Washington: United States Institute for Peace, March 1993).

⁷ U.S. Department of Defense, Joint Chiefs of Staff, "A Doctrinal Statement of Joint Operational Concepts," November 23, 1992.

⁸ *Ibid.*, p. 1.

⁹ Thomas R. Pickering, "The U.N. Contribution to Future International Security" in *The Security Roles of the United Nations*, edited by William H. Lewis (Washington: National Defense University Press, 1993).

¹⁰ *Ibid.*, p. 11.

¹¹ U.S. military units participating in peacekeeping operations are under the operational control of the peacekeeping commander. However, the U.S. commander retains operational command over his subordinates and all attached units.

Summary

Past experience and military potentialities destine the United States to lead a disproportionate share of future multilateral coalitions, a challenge that is compounded by the need for doctrine to conduct joint operations in a combined environment. Four tenets go far toward achieving success in a coalition war: *agility* which calls for maintaining balance and force in shifting situations while striking in fleeting windows of opportunity, *initiative* which means dominating the terms of battle and thus depriving the enemy of that same option, *depth* which considers every dimension of war and envelops the entire spectrum of events across time and space, and *synchronization* which applies combat power both at the optimum moment and in the right place while controlling a myriad of simultaneous actions. But no commonly accepted doctrine for coalition warfare exists today. Any multinational operation will require planning by all the participants, interoperability, shared risks and burdens, emphasis on commonalties, and diffused credit for success.

This article is being published simultaneously in *Military Review*, vol. 73, no. 6 (June 1993).



PRINCIPLES FOR COALITION WARFARE

By ROBERT W. RISCASSI

Since the beginning of this century, there has been a strong common thread in the involvement of American forces in combat. Almost every time military forces have deployed from the United States it has been as a member of—most often to lead—coalition operations. Rarely have we committed, nor do we intend to commit forces unilaterally. Our remaining forward positioned forces are routinely engaged in coalition operations during peace and are committed to do so in war. The

global interests and responsibilities of our Nation inevitably dictate that far more often than not our forces will be engaged in alliance and coalition activities. This article addresses fundamental tenets that underpin our efforts to create a doctrine for joint operations in a combined environment.

When we say we no longer intend to be the world's policeman, it does not mean we are going to disengage. It means we want more policemen to share in the responsibilities, risks, and costs of settling the world's most vexing problems—intrinsically, we are articulating a condition for wider and more active participation in coalition operations. Even though we consider this a responsible proposition on its merits alone, the redistribution of global wealth and economic power makes it also essential. In 1945, the American

economy produced around half of the world's Gross National Product. Today, it comprises less than a quarter. In any event, coalition operations are generally key to legitimizing the use of force. Yet, both as a function of our historical experience as a leader of coalition operations and the continuing fact that America brings the most military power to the table, we should also recognize that American military leaders will almost always be called upon to lead multilateral coalitions in which we are participants. The fundamental question

becomes one of "how?"

Notwithstanding our reoccurring historical experience, we have at times been remarkably ill-prepared for coalition operations. In truth, we have not had, nor do we yet possess, a commonly agreed doctrine for forming or fighting as part of

military coalitions. Some may argue it is not necessary to have such a foundation; but, under its absence, we will have to address each new coalition on an ad hoc basis. Also in its absence, we have no comprehensive doctrinal base to create the means or tools to improve our ability to participate in, or lead, coalition operations. There is a clear and omnipresent reason to create such a doctrinal consensus. Five of our regional commanders in chief (CINCs) are coalition or alliance commanders, as is one of our specified CINCs.

There is no cookbook approach to coalition warfare. Every coalition will be different in purpose, character, composition, and scope. But there are some basic commonalities that confront any coalition commander. Obviously, the most valid basis we have to form a doctrine is our own historical experience. Yet, for the most part, our historic perspectives tend to analyze

the leaders who led victorious coalitions, as if the secrets of success lay in personalities more than methods. A doctrinal foundation must be based on methods.

Interestingly, and as a testament to their value, we have yet to experience an incidence where a prepared military coalition in which we are engaged has been attacked. In those cases—Western Europe and South Korea—where the coalition had the will, time, and resources to prepare for alliance warfare, the effects were never tested in battle. Thus, we cannot be certain their preparations were sound. It may have been that the tranquility they imposed undercut their ability to achieve essential concessions from nations whose priorities were more nationalistic than threat-oriented. Every other case we scrutinize involved ad hoc coalitions merged hurriedly in crisis or conflict. For obvious reasons, they also may not represent the model upon which we should create a doctrine. Between the two, however, there is ample experience to build a doctrine.

We know that joint operations, in and of themselves, represent significantly greater complexity than single-service operations. The Joint Staff is trying to create the doctrinal architecture to glue joint forces together in warfare. In a coalition, the difficulties of joint operations are still prevalent, but with the added dimensions and complexity of two or

notwithstanding historical experience, we have been remarkably ill-prepared for coalition operations

more national armed forces, all of which bring their separate orientations and proclivities to the practice of warfare. Often the apparent intractability of problems has been so awesome that any attempts at achieving unity have been limited to the strategic and operational levels. Battlefield responsibilities have been divided nationally based on the capabilities each nation brings to the coalition. Each national force is given discrete sectors and missions. A single leader is appointed to unify coalition efforts and—based on the numbers of national forces involved—decentralizes operations through national chains of command, which become multi-hatted. This is a patchwork approach. Seams are recognized but stitched together by strategic and



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operational agreement. Sometimes the seams are tight; sometimes they are loose.

If we look back at World War I, World War II, Vietnam, or even the Gulf War, we see variations on this structure and also the problems that resulted. In multiple cases, campaigns were disjointed by ruptures in timing, unity of purpose, or tactical disagreement. Often commanders found themselves in positions where mutual support was essential.

Yet, procedures were nonexistent or inadequate and had to be jury-rigged on the spot. Cross use of assets—combat, combat support (CS), and combat service support (CSS)—was limited or foregone because of incompatibility. In some cases, vast technological

differences between forces caused either multiple tiering of the battlefield or over-reliance on the most capable units continuously to perform the most difficult missions. Differences in national doctrines, languages, and cultures often meant breaches in understanding, inability to communicate on the battlefield, fratricide, and disorganization. In short, effective operations were hindered by multiple sources of friction.

What are the elements essential to conducting joint operations in a combined environment? In other words, what have we learned and how do we intend to apply it the next time American forces are asked to lead a multinational coalition in combat?

Doctrine

The first point is that a coalition must share a common doctrine to take advantage of commonalities. Doctrine is more than simply how we intend to fight. It is also the technical language with which we communicate commander's intent, battlefield missions, control measures, combined arms and joint procedures, and command relationships. Doctrine is not contained simply at one level of war—strategic, operational, or tactical—it embodies all. Campaign execution demands that these levels of war become inextricably linked. To achieve the full synergistic effects

of joint combat power, the warfighting doctrine must be common to all arms. In the absence of a commonly understood doctrine, it becomes extraordinarily difficult to plan or execute military operations.

Yet, approaching a commonly agreed doctrine can be politically frustrating. Past U.S. attempts in Europe and Korea to enjoin allies to embrace AirLand battle were met with arguments that it is a distinctly American doctrine whose execution is technology-dependent—therefore suspected as a Trojan Horse for “buy American” campaigns—or that it is terrain-dependent and suitable only in Europe. Notwithstanding suspicions, having a commonly understood doctrine is essential to mutual understanding in battle.

The following four tenets—agility, initiative, depth, and synchronization—are the most firm basis for organizing and conducting coalition operations. They are not characteristically American attributes, nor are they limited to any single service. They are cross-national intellectual tenets which, when physically applied, cause success in modern war. Their application may be impacted by the technology available, but the tenets are essentially mental, rather than

a coalition must share a common doctrine to take advantage of commonalities

physical. They are a reflection of how technology has evolved modern battle, and may grow obsolete over time as the nature of war continues to mutate. As both mental states of mind and emphasized characteristics in battle, they allow us to bridge the intellectual gap between “principles of war” and practical execution. More particularly, when closely examined, these tenets strike at the heart of the most difficult, yet crucial aspects of joint and coalition operations.

Agility is compared to that quality found in great boxers who sustain an intuitive grasp of their position and motion in the ring—as well as their opponent's—and maintain the balance and force to move and strike as opportunity permits. In an environment that is constantly shifting, where the unexpected is to be expected, agility is essential. Battle is a contest where vulnerabilities and opportunities open and close continuously; victory goes most often to the commander and force



U.S. Navy photo by Gary D. Denman

The U.S. Coast Guard cutter *Chase* and the Russian Maritime Border Guard frigate *Orel* in the port of Vladivostok.

with the balance and insight to strike or shift within these windows. Agility derives from a keen sense of what is happening in battle, the poise to transition rapidly from one situation to the next, and a physical and mental ability to always have more options than the enemy. It was powerfully displayed by General Walker and his coalition command in the battle for the Pusan perimeter. Relying on interior lines, Republic of Korea (ROK)/U.S.

forces continuously repositioned and reconfigured reserves to parry enemy thrusts, shifted forces along the outer perimeter to reduce or accept vulnerabilities, and concentrated and counterconcentrated combat power more rapidly than North Korean commanders. It

was a liquid defense that succeeded because it retained its balance to address the unexpected. Often, North Korean thrusts were repelled within a hair's breadth of a decisive breakthrough. Eliminating any seams between American and South Korean forces was vital to sustaining agility. All sources of combat power were pooled, boundaries and command relations were shifted as the situation required, and there was an absolute merging of joint and binational efforts. The agility of a multinational force proved superior to that of a homogenous enemy force.

Initiative, again, is a state of mind as well as an action-reaction cycle. At its core, it is dictating the terms of battle to an opponent, thus obviating the opponent's ability to exercise initiative. Thus, it is a highly contested quality whose balance swings on surprise, deception, speed of action, ingenuity, and asymmetric comprehension. Initiative requires flexibility in thought and action, an ability to act and react faster than an opponent, and a derived priority among subordinates at all levels regarding the linkage of their actions to the ultimate intent, more so than the scheme of higher commanders. It has been made all the more critical by the rampant pace or tempo of modern battle. No plan, no matter how detailed, can foresee every contingency, development, vulnerability, or opportunity that will arise in battle. In fact, the more detailed and inhibiting the plan, it may have the reverse

effect of limiting or restraining initiative. It was the quality exuded by Admiral Chester Nimitz and his commanders at Midway as they turned the tide of Japanese offensives through tactical and operational initiative. As Nimitz's forces closed with the more powerful Japanese fleets, they continuously sought to induce vulnerabilities in their opponent, until they were able to execute a decisive thrust that caught the Japanese fleets off-balance. Tactically, the decisive air attacks that won the battle were not a pre-planned operation; they were a timely response applied when the enemy fleet was located and deemed vulnerable to and within reach of an air attack. At the operational level, Nimitz exceeded his instructions to remain defensive and protect his precious carriers. But he did so because he understood the higher intent and was able to link both the risks and benefits of his actions to the larger campaign design. The impact was a strategic turning point in the Pacific campaign. Had Nimitz adhered to the letter of his instructions, it is unlikely he would have delivered this blow and the course of the Pacific campaign would have been different.

Depth requires both mental conceptualization and physical reach. It is applied as a reference to time, space, and resources. It recognizes that modern battle has eliminated linearity—and linear thought. War is a continuum of events and activities in space and time. Both the increased tempo of battle—whether through faster, more mobile ground forces, higher sortie generation rates for aircraft, or the evolution of fleets no longer tied to homeports—and the increased ranges, accuracies, and lethalties of weapons systems have compressed time and space. In all dimensions of war, the current and future battles must be interrelated. Like a chess player who views the board as a single, interrelated plane of action—and each move as a prelude to a series of further moves—the modern commander must extend his hand in time and space to create future vulnerabilities and opportunities, and reduce future enemy options. Coalition commanders at Normandy applied this tenet decisively. Recognizing the vulnerability of Allied landing forces to Field



U.S. Army photo by Al Chang

Soldiers of the 25th Infantry Division (Light) train for deployment to the Middle East to take part in Operation Desert Storm.

Marshal Erwin Rommel's ability to counter-concentrate heavy armor forces on the Cotentin peninsula, they forged and executed a deep interdiction campaign to slow the movement of German armored columns and prevent them from arriving at the battlefield before the coalition was able to establish defensible beachheads. Simultaneous with the initiation of the air campaign, French resistance and Allied special operations units

executed a daring operation, targeting the concentration apparatus of German forces and further inhibiting the flow of German reinforcements from reaching the beachhead in time. The application of air-power was a unified effort combining air forces of several nations, and the interdiction umbrella covered all of the national ground forces participating in the invasion. The invasion succeeded because coalition commanders applied nonlinear thought to their operations, striking in depth in both the air and ground dimensions with the full palette of Allied capabilities.

Synchronization is perhaps the most difficult tenet to apply in coalition operations. It is a term often related to the inner workings of a watch. In that context, it is the calibrated movement of hundreds or thousands of different pieces moving in tandem and operating cooperatively to produce the desired effect. In war, the desired effect is simply combat power at the time and place of the commander's choosing. It is key to achieving unity and efficiency in action. Yet, in a coalition there are great inhibitors to effecting synchronization. Differences in language, technology, doctrine, and training act to deter efficiency and increase the potential for friction. These problems are not overcome simply through planning, although thorough planning is a key factor. Synchronization must also be fluidly applied as conditions change and the unexpected occurs. It relies on common procedures, a shared understanding of the language of battle, and smooth linkages between the disparate national entities in a coalition, at all levels. The success of General Douglas MacArthur's masterful Inchon landing and breakout of the Pusan pocket in the Korean War was an example of synchronization. He planned these

two operations as coordinated hammerblows to crumble the North Korean offensive and turn what appeared to be a risky operation into one of history's most memorable routs. The full series of operations—air, sea, ground, and amphibious—were carefully synchronized to achieve maximum shock and surprise. Because of the risks, the timing had to be precise, with each operation intended to create conditions for the success of the next operation. Coordination between services and national forces was exacting and thorough. Once the series of operations began, they operated in tandem to crush the North Korean offensive. The landing forces at Inchon moved deftly inland, cutting the North Korean lines of supply and operation, isolating and overextending the North Korean forces to the south, and setting the conditions for an audaciously executed breakout, which then converged northward. Air operations were executed to harass and interdict the withdrawal of North Korean columns. It was a tightly synchronized series of operations, involving the forces of several nations in a series of the most difficult, yet successful, joint operations in the history of warfare.

The principles of war also offer a way to intellectually massage the elements of an operation to understand its risks and strengths. Almost every nation's military relies on a list of principles; for the most part they are derivatives of one another. As a whole, the principles focus commanders and staffs in their effort to decide whether a course of action is prudent and to understand its risks. When viewed in context with the tenets, combined commanders have a solid intellectual foundation for action. Just as important, commonly accepted military principles serve as a point of reference when organizing the coalition and establishing command relations.

The tenets and principles are vital means to think about war, but these thoughts must be structured. The layering of military art into strategic, operational, and tactical levels is valid and for the most part universal. Although the layers are difficult to separate, they provide the intellectual linkage between campaigns, operations, battles, and engagements in a manner that ensures continuity of effort, as well as to describe the contributions



U.S. Navy photo by D.W. Holmes

British troops and units from other coalition countries gather for review by King Fahd of Saudi Arabia during Operation Desert Storm.

He planned these

of various echelons to the overall effort. Moreover, as a coalition winds its way through these levels in planning, it forces the coalition's leaders to confer on every aspect of military efforts.

Campaign

Agreement on strategy is the foundation for coalition action. It is derived from policy agreements between participating nations and must be sharp enough to shape the direction of an implementing campaign, yet broad enough to capture the efforts of the various national forces. The development of an effective military strategy is difficult even when military action is unilateral; it is far more trying in a coalition. Strategy is designed to accomplish political

objectives. Because of its proximity to policy, it will be the point of reference for gaining consensus between military and political leaders. Consequently, it is also most likely to be the center of controversy in both political and military spheres. Rarely do nations enter a coalition with identical views on ends to be achieved. As a coalition increases in numbers of member nations, conflicting objectives and additional political constraints are added to the pot. The coalition commander must walk a taut line between accommodating and compromising, yet preserve the ability to achieve military decision. At the same time, it is important to remember the old dictum that in coalitions the will is strongest when the perception of threat is greatest. Over time, as conditions change, so may the will and objectives of participating nations.

Coalition strategic formulation is difficult also because of the sheer mass involved in the effort. Strategy involves the melding and coordination of nearly every element of multinational power to accomplish military objectives. It may require insights into different national industrial capabilities, mobilization processes, transportation capabilities, and interagency contributions, in addition to military capabilities. It must bind all these together with precision and care. It operates on the tan-

gent edge of international relations and diplomacy and must seek congruency with these forms. It addresses issues as weighty as the endstate to be achieved and as mundane as the rules of engagement to be applied at each stage of operations. In coalition operations, strategy is the level of war where international politics and bodies are coalesced into a unified approach.

The ability to design an effective military campaign will be a calculus of the military strategy. At the operational level, disagreements that occur generally are among military professionals. But, there are of course political ramifications and considerations. The campaign must be paced or phased by the availability of combat power as it is generated from multiple national sources. The campaign plan also provides the base for defining and recommending national contributions. Unless this is done and provided to the various national authorities, the combined commander will end up with a force composition that is not rationalized toward operational requirements. The campaign plan has the integrating effect of serving as both the driver for force requirements and the timeclock for generating those assets.

The campaign plan is the tableau for synchronizing all elements of combat power. It provides combined commanders with the vital understanding to link operations, battles, and engagements to the coalition's strategic objectives. It is the orchestral arrangement of these various activities in a rational path to achieve the endstate envisioned in the strategy. It must address a variety of choices concerning the approach to warfare—offensive or defensive, terrain- or force-oriented, direct or indirect approach—and in so doing, becomes the enabling process for actually applying force.

Tactical operations should be designed to create a seamless battlefield where friction is minimized and the four tenets can be applied freely. This requires cooperation from all participating nations. It is at this level of war where the combined inhibitors to efficient operations could have their most degrading impact. At higher levels of war, success is mostly a function of planning and apportioning forces and resources to various missions. At the tactical level of



U.S. Army photo

An M-1 Abrams main battle tank moves across the Egyptian desert during Exercise Bright Star '89.

the campaign must be paced or phased by the availability of combat power as it is generated from multiple national sources

war, forces must actually engage together in battle and function synergistically to defeat an enemy. All of the differences in training, equipment, language, and culture congeal to hinder the application of combat power. Events move rapidly and have a cascading effect. It is for these reasons that many coalitions have sought to conduct tactical operations, battles, and engagements within national boundaries. However, this ap-

proach cedes an advantage to enemy commanders who may target precarious seams. It accepts a vulnerability that could be costly and reduces collective combat power by incrementally separating the parts from the whole.

General Dwight Eisenhower's experience as European Theater of Operations commander in World War II amplified the difficulties that can arise at all three levels of war. Although the Combined Joint Chiefs of Staff met and agreed early in the war to pursue a strategy to defeat Germany first and Japan second, and to apply a direct approach against Germany through an early cross-Channel invasion into Europe, this is not what occurred. By late 1943, the United States had more soldiers, ships, airplanes, and landing craft in the Pacific than in the Atlantic. The British pressured for an indirect approach against Germany and convinced the American President to attempt an invasion up the boot of Italy before a cross-channel invasion into France could be launched. This further delayed the eventual date of the cross-channel invasion to the summer of 1944. Once the invasion occurred, Eisenhower faced continuing disagreements between his American and British commanders over whether the campaign should be on a broad front or concentrated on a single axis. He maintained his broad front approach, but acquiesced on one occasion to Field Marshal Sir Bernard Montgomery's insistence on concentration of resources in an attempt to achieve decision along the Flanders avenue into Germany. The result, Operation Market Garden, led to tactical quarrels between American commanders, who viewed the operation as too ambitious for the terrain, and Montgomery, who argued that temerity needed to be put aside. Market Garden failed, but not due to

lack of support by any coalition force. When it failed, Eisenhower returned to the broad front approach and it succeeded. The cross-channel invasion was later than initially anticipated, but did occur and was decisive. Germany was defeated first and Japan second. In short, neither nation got exactly what it wanted and the agreed strategy was not executed with any sense of discipline, but the objectives were obtained.

The use of centers of gravity, phasing or sequencing, main and supporting efforts, culminating points, setting conditions, and the other mental tools we use to organize and orient operations should be employed in planning and operations at every level. They are not uniquely American. They are neoclassical extrapolations drawn from military theorists worldwide. By using these tools, the commander merges the theory and practical application of the military art. Each of these mental tools is a critical point for creating broader understanding of the underpinnings of how force is to be applied, and for what purpose. When used for mental reference, they enable subordinate commands to move beyond robotic execution. They liberate subordinates to apply ingenuity, innovation, or situational adaptability to each event because they understand "true north" rather than simply the compass vector provided in the scheme of maneuver.

Planning

A common planning process is essential. The degree to which allied commanders and staffs understand and are able to participate in planning impacts on the time required to plan and the sharing of knowledge of every component of operations. We rely on the Intelligence Preparation of the Battlefield (IPB) as the underlying process to gain commonly understood perceptions of the threat and its organizations and capabilities, terrain, and other environmental factors that may impact on operations and courses of action available to enemy commanders. Without this foundation, applied as a collective and trickle down process that occurs from the strategic through tactical levels, it is difficult if not impossible to shape uniform perceptions of the threat or agree upon the coalition's courses of action.

DOD photo by Terry C. Mitchell



Australian troops arrive at a makeshift landing zone on a Marine CH-53 Sea Stallion to provide security for relief supplies being lifted into Somalia.

A key distinction is that the IPB must be a joint process. It must analyze every medium of the battle—air, sea, and ground—over time. In fact, every service has its own variation of the IPB process. Naval commanders look to sea lines of communications and enemy bases as the terrain or mobility routes pertinent to combat operations. They consider the enemy fleet's organization, capabilities, doctrine, and objectives and then design operations to deny these objectives. Air commanders analyze enemy air capabilities, bases, and courses of action before forming a vision of their own operational requirements. What has been lacking is a joint and combined IPB process that views the enemy commander's multidimensional operations as an entity. In a combined theater involving joint forces, such an intellectual template is the only holistic means to design joint operations.

There is an additional value to the IPB process. We emphasize the importance of getting inside the decision cycle of the enemy commander. Unless we do so, we cede the initiative of battle; a recipe for defeat. Instinctively, this means that all our processes—planning and execution—must be swifter than the enemy's. The cycle of detect, decide, target, and execute becomes all the more difficult when multinational forces are entered in the equation. As a general rule, the more organizations, joint and coalition, that must be integrated in an operation, the longer it takes to integrate or synchronize actions. The IPB process, which is continuous, is the best means to accomplish this. It creates a degree of predictability which is essential to get and stay ahead of enemy decision cycles.

From this point of departure, the coalition moves through the remainder of the planning process—statement of commander's intent, estimate of the situation, wargaming and formulation of the concept of maneuver, and the remaining sections and annexes of the coalition operation plan (OPLAN). The American structures for the OPLAN, operations orders, and fragmentary orders are the templates for order formulation and communication because they are reasonably complementary with most national systems and incorporate all the elements of the planning process itself.

Integration

Implementing a common planning process is only a small, albeit important, part of bringing unity to coalition operations. The execution of these plans involves far more complex problems. Each nation will bring its own forces and capabilities to the coalition. Integrating these forces for action depends upon many variables. There may be, and usually are, vast differences in the organizations, capabilities, and cultures of military forces. As a general rule, differences are most severe in ground forces. Air and naval forces, because they must operate in international mediums, are equipped with communications gear and common protocols and procedures to provide for organized space management. All of the "vessels" that operate in the air or sea can be readily classified for their strengths and weaknesses to perform the various missions of air and naval warfare. Ground forces come in all shapes and sizes, and their equipment may be entirely dissimilar and incompatible. Technological differentials, particularly in this era of revolutionary change, can be vast. Therefore, fundamental commonalties become even more important.

At the theater level, integration results from functional design. There can be only one Air Component Commander (ACC), Ground Component Commander, Naval Component Commander, Special Operations Forces (SOF), and/or operational Marine Headquarters. Having two or more of any of these functional headquarters invites calamity. Yet, imposing functional integration requires more than creating headquarters. The interrelationships and synergies between functional commands stumble in the face of many of the same delicate issues that our own joint forces find difficult to resolve. The command relationship between ground-based air defenses and air forces, the apportionment of responsibilities and roles in deep operations and the relationship of multidimensional forces such as marines or



U.S. Army photo by Al Chang

U.S. Army infantrymen cross the Bug Han Gang River during Exercise Team Spirit, a combined South Korean/U.S. training exercise.

naval air or attack helicopters to various component commanders must be addressed. But the magnitude and complexity escalate because each national force has its own convictions on these issues. Moreover, coalitions may confront the obstacle of nations maintaining strings on various forces, or insisting upon stovepipe management of various elements. Concessions to any nation on any of these issues create precedents that others may insist upon. It may not be possible to derail all these inhibitors, but proliferation invites unmanageability.

It is helpful to analyze and integrate joint and combined functionality using the battlefield operating systems and the dynamics of close, deep, and rear operations.

These provide the bases to organize efforts, find the critical nodes where multinational integration must occur and ensure balance and mutual support in battle. But, for the purposes of joint warfare, the Army's definition of these areas is too narrow. For naval power, an additional point of analysis is surface, subsurface, special operations, and air. For air power, the various abilities of national forces to perform traditional air missions must be analyzed. These include close air support (CAS), battlefield air interdiction (BAI), strategic bombing, long-range interdiction, special operations, and counterair. For SOF, it is the means to perform the various functions of reconnaissance, military strikes, and integrating with the other combat arms.

As national force strengths and vulnerabilities across each of these functions are assessed, achieving balance will require a sharing and mixing of assets to increase synergy. Deep operations cannot be inhibited by national boundaries. Nor should any force be left without the ability to apply the tenet of depth. Because of international differentials in the ability to see and strike deep, the coalition must arrange its capabilities and command structures to extend this capability across the entire front of operations. The ability to see and strike deep to desired effect

is a function of flexibility. Fleeting targets of opportunity must be struck, however, by whoever is available to exploit the opportunity. Moreover, enemy dispositions and operations in his rear will be interchangeable across the front of operations; deep operations must always be viewed as an operational requirement because of the enemy's flexibility to shift and move forces not in contact. Just as there can be no blank spaces in linear operations, there can be none throughout the depth of the battlefield. But, deep operations beyond the control of maneuver commanders must be under control of a single coordinating headquarters. This is even more critical in coalition than unilateral operations. To do otherwise invites duplication, fratricide, and incoherence.

On the other hand, close operations may be divided into national sectors. But there are risks and inefficiencies in this approach. It could critically hinder the ability to mass combat power across national boundaries. Even if this approach is applied, it must be recognized that it does not alleviate the coalition's need to instill the agility to integrate forces in the close battle. Reserve formations, air power, and other sources of combat power must have the capability to

U.S. Navy photo by Dwight E. Martin



F/A-18C Hornets and Mirage 2000s flying together during Exercise Dasix Lafayette, a combined U.S./French exercise in the Mediterranean Sea.

relinquishing national command and control of forces is an act of trust and confidence unequalled in relations between nations

be applied across the front of operations. Rear operations must be intermixed but tightly centralized. National lines of communication, main supply, and mobility routes will be in a disorganized competition for priority unless strong central control is imposed. It is unwise to decentralize rear area responsibilities. To do so undermines the need for integrated air defenses, organized responses to rear ground threats, and the organized security of the host population and nation.

Command and Control

The ability to integrate rests largely on one principle. Unity of command is the most fundamental principle of warfare, the

single most difficult principle to gain in combined warfare. It is a dependent of many influences and considerations. Because of the severity and consequences of war, relinquishing national command and control of forces is an act of trust and confidence that is unequalled in relations between nations. It is a passing of human and material resources to another nation's citizens. In a coalition it is achieved by constructing command arrangements and task

organizing forces to ensure that responsibilities match contributions and efforts. Command relationships between national commanders should be carefully considered to ensure that authority matches responsibilities. It is cardinal that compromises not

be permitted to outweigh warfighting requirements. If political frictions inhibit proper assignment of authority, responsibilities and operational design must be altered to ensure unity of command.

Theater headquarters—the theater command and each of the component commands—should be both joint and combined in configuration and manning. Regardless of the nationality of the commander, the staff must represent the cross section of units under command. This practice of combining staffs must be followed to whatever depth of echelon that units are combined in formation. At the theater level, it may be essential to form combined joint targeting boards to manage the integrated targeting process for deep operations. Placing this under the ACC is often most effective, since the ACC will in all likelihood provide the majority of assets. The same form of tool may be necessary at each cascading level where joint and combined capabilities must be merged. Rear operations—the communications zone (COMMZ)—should be delegated to a single commander. Most often, the COMMZ commander will be an officer of the host nation. In those cases where the rear crosses multiple nations, as with the United Nations Command (UNC) in Korea and UNC (rear) in Japan, it is essential to clarify the responsibilities and obligations of each nation in addressing or accomplishing the coalition's

tasks, as well as the limits to the coalition's flexibility to operate within national boundaries.

Subordinate or tactical commands may be organized as the situation dictates. A naval commander who comes to the coalition with only surface assets must operate in the envelope of a three dimensional naval force and should logically be subordinate to the three dimensional commander. As a rule, the commander with the most complex multidimensional force possesses the most total understanding of how to fight that force. Ground armies or corps will probably be multinational in configuration. In fact, tactical integration of ground forces down to the corps level is virtually essential.

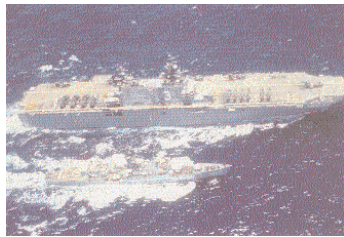
Tactical integration—and therefore command and control, C²—of ground forces is arguably the most difficult to achieve; it will be attained most rapidly by early integration of some tactical units. Fundamental considerations are the factors of mission, enemy, terrain, troops, and time available on the battlefield. This will dictate the alignment and missions of variously equipped and talented forces on the battlefield. Lightly armed forces can perform in military operations on urbanized terrain, densely foliated or mountainous terrain, heavy forces in more mobile environments, airmobile or motorized forces in virtually any terrain. While this may sound like common sense to an experienced commander, its practice becomes quite difficult when vertical boundaries and C² are dictated by the nationality of forces contained within the boundaries. As rapidly as possible, coalition ground forces must overcome any impediments to tactically integrated operations. To ignore this reality leaves vulnerable seams for enemy commanders to exploit, or it could cause placement of forces in unsuitable fighting conditions. Either could be fatal. There were a number of instances of this in the early stages of U.N. operations conducted during the Korean War. The virtual decimation of the Turkish brigade in the battle of Kumyangjang-Ni was a tragic instance of a tactical unit moved necessarily into a fluid battlefield that lacked the means to integrate operations with other

U.S. Air Force photo by H.H. Deffner



Saudi infantry take up position in a training exercise during Operation Desert Shield.

allied ground units. The unit fought fiercely against overwhelming odds in an attempt to stem the North Korean and Chinese counteroffensive occurring in its sector. As its losses mounted and the unit reeled under unrelenting enemy attacks, it was forced to fight in isolation and remained unable to rely on Allied combat power, which was available, or to coordinate its activities with American units on its flanks. During the early days of this conflict, the need for U.N. forces to be prepared to integrate tactically in unexpected circumstances was learned again and again. The need to ensure unity of command and to integrate forces under this principle became a matter of survival.



U.S. Navy photo

USS Belleau Wood and USS Reasoner during Exercise RimPac '90 which included forces from Australia, Canada, Japan, the Republic of Korea, and the United States.

Training

The first priority in generating coalition combat power from a conglomeration of nationally separated units is to train, emphasizing the fundamental commonalities outlined earlier. Only through training will combined units master and sustain collective warfighting skills. As the coalition is brought together, staffs and commanders must rapidly adapt to the units and processes in the fighting organizations being formed. The impediments and sources of friction become clear at once. So do the solutions that must be applied. This assumes, of course, that time is available for training before introduction to conflict. The situation may dictate otherwise.

General Joseph Collins, when he commanded VII Corps at Normandy, applied the techniques that are vital to ad hoc coalition warfare. When VII Corps forces hit the beaches at Normandy, they had been trained to fight a doctrine that had been based largely on earlier World War II experience. It proved woefully inadequate for the battle conditions faced by VII Corps. It became apparent that the doctrine was ill-suited to the hedgerows, flatlands, and built-up areas of France. In the midst of battle, Collins began to retrain and reinstruct his units as he constructed new doctrine applicable to the enemy and terrain he faced. He and his commanders analyzed every en-

gagement, gleaned the lessons to be applied in the future; testing new techniques and keeping them if they worked, discarding them if they did not. When units were not on the front line engaged in battle operations, they were training. When air-ground coordination and the procedures for tying in with Allied units on the flanks proved to be flawed, he invented new, more effective procedures on the spot. Within a few short weeks, Collins devised the doctrinal foundation that was applied by Allied forces successfully throughout the remainder of the European campaign—he did so under the most arduous conditions.

Standing coalitions should not need to rely on inventiveness and adaptability during conflict. Peacetime training should be designed to engage coalition forces in the most difficult and demanding tasks they may be asked to perform in war and to fathom the weak points that will cause friction under the most trying circumstances. The point is to identify, then eliminate or narrow the seams between forces that could reduce synergy and synchronization. Procedures that require multinational forces to operate seamlessly should be practiced routinely. Because of the complexity of joint and combined operations, the required skills atrophy quickly. Training should be joint and should reoccur cyclically at the operational and tactical levels. This is essential both to build the basis for trust, which will be vital in war, and to identify the abilities and limitations of coalition forces. For an ad hoc coalition, the same methodology applies, but the time available may be condensed and have to occur during hostilities.

Simulations are proving to be a means to exercise these skills and techniques frequently and inexpensively. They train commanders and staffs on essential planning and execution skills and may be applied through the range of strategic, operational, and tactical levels of war. When effectiveness is analyzed through the lens of battlefield operating systems and the tasks, conditions, and standards of various expected missions—attack, defend, delay, passage of lines, battle-handover, airmobile operations, CAS, amphibious assault, and so forth—a host of invaluable lessons may be accumulated.

procedures that require multinational forces to operate seamlessly should be practiced routinely

Even still, simulations cannot be a total substitute for field training. Small, yet important problems will escape visibility—national differences in air-to-ground attack procedures . . . cultural differences such as holy days or food restrictions . . . or even the absence of digital communications capability in indirect fire units of some armies may not become apparent. These point to the need for field training at the tactical, combined arms level.

Combined commanders must provide the focus and direction to organize training. They must provide subordinate commanders those mission essential tasks that must be conducted in combined operations and the tasks, conditions, and standards to be maintained.

Because time and resources for combined training are limited, it is all the more important that combined commanders give priorities for combined training that focus units on those missions most likely to be performed in combat.

Command, Control, Communications, Computers and Intelligence

Applying the tenets of combined doctrine relies on a command, control, communications, computers and intelligence (C⁴I) architecture that is capable of integrating the joint forces of all the nations in the coalition. It is in the various functions embedded in C⁴I that American forces possess some of their greatest advantages on the battlefield. Indeed, as we continue to improve our capabilities for collecting, analyzing, and disseminating intelligence, managing the vast amounts of information upon which decisions are made and incorporating more and more computer aids to the battlefield decision and execution processes, we must exercise care that these systems do not evolve into exclusionary processes. Unless the architecture incorporates the ability to share with, and in turn receive from, other national forces, the battlefield will not be seamless and significant risks will be present.

The impediments to achieving integrated C⁴I are several fold. First, of course, is the language barrier. Each order that is produced, every issue that arises unexpectedly on the battlefield, and every transmission

must be laboriously translated into the multiple languages included in the coalition. This steals precious time from the detect-decide-target-execute cycle and is apt to be fraught with errors. Although it is common for coalition headquarters to maintain translation cells, their speed will depend on the size and complexity of information to be processed, and the accuracy of translation will vary from translator to translator. Moreover, absent a common doctrine, basic military terms differ from nation to nation. The result, generally, is a severe narrowing in the amount of information conveyed between coalition commanders. Overcoming this, as a minimum, requires multilingual software that ties back to a common operating system. Because of the need to be rapidly employable by many national forces, its software must be user friendly and easy to learn. In addition, coalition headquarters should have prepared dictionaries of common military terms and symbols, both as a translation base for information management systems and to reduce the latitude of different translators to portray differing meanings. A final sidenote is that as forces enter a coalition, their capabilities and assets must be entered immediately in C⁴I data bases to enable theater command staffs to incorporate them into the multiple aspects of battle management and planning for the coalition. Because many nations now employ computers in managing their forces, it is also important that we share common standards within our peacetime alliances which will permit a rapid merging of information management systems.

These fixes, however, do not eliminate the problems at tactical levels where decisions and orders generally are not processed through multilingual systems, and teams of translators are not available. Moreover, different forces will bring noninteroperable communications devices, which block lateral and horizontal relations. Here there is no alternative but to determine where the critical nodes of multilateral contact occur and position translator liaison teams equipped with communications systems that expedite cross-communications. It is especially important to view the requirements for liaison cells from a joint perspective. Many land

DOD photo by Marv Lynchard



U.N. peacekeeping forces from Pakistan board a U.S. Air Force C-130 Hercules for a flight to Somalia.

forces, for example, do not have alliance liaison officers or do not position them below division level.

The sharing of intelligence and sensitive technical means will depend on providing the interpreted product of battlefield intelligence to each member of the alliance. The United States brings to battle the most sophisticated and enviable capability to gain deep operations visibility of any nation in the world. If it is kept in seclusion, it will significantly reduce the combat power available for deep operations and force other alliance members to fight blindly with regard to time. Some nations have alternative means and systems, and these should also be incorporated into a workable intelligence collection plan whose products are accessible to others.

Yet few nations, including the United States, are willing to share the sensitive sources of intelligence gathering or enlighten other nations on the technical strengths and weaknesses of various collection means. Military coalitions may include partners whose reliability is stipulated on the threat at hand and will not last beyond the resolution of the contingency—a point wryly observed by Prime Minister Winston Churchill when he noted he would sleep with the devil when survival was at stake. As well, our past history with coalition warfare has incorporated nations with whom we were already engaged in other alliances, such as NATO, where the protocols and limits of intelligence sharing are already embedded. Notwithstanding, allies must share intelligence at the tactical and operational levels as a minimum. As new collection means are introduced into our force, such as Joint Surveillance and Target Attack Radar System or remotely piloted vehicles, we must have means to rapidly share their products with coalition partners. Intelligence sharing arrangements must be rapidly agreed, even if sources are not shared. In fact, the more quickly allied forces become claimants and recipients of pooled assets, the variables of agility, initiative, depth, and synchronization increase accordingly.

Logistics

Logistics management of coalition forces is a matter ultimately dependent on a wide field of variables. National arrangements,

host nation support agreements, equipment compatibility, and cultural requirements are but a few. Some coalition forces will enter the coalition with the intention and means to provision themselves. In these cases, coalition control may be no more than a need to coordinate; or, providing ports of entry, off-load capabilities, storage sites, and routes and means for pushing sustainment forward. Others will arrive with the need for more extensive support. This may be solvable through binational agreements from one member nation to provide support to another, or may require active coalition management. As a rule, actual execution of tactical logistics support to alliance members should be decentralized. At the coalition headquarters level, the focus should be on measuring the requirements of executing the campaign plan, providing advance estimates of these requirements to national units, and ensuring that proper controls are in place to deconflict and permit movement and processing of combat power to units.

Its practice is remarkably difficult. Simulations, again, can be a tremendously valuable tool for finding problem areas before execution. Problems which are unique to coalition warfare continually surface. Depending on the infrastructure available in theater, there may be many claimants on sparse local resources. Potable water, fuel pipelines and storage, shelter, and local food production are almost all national infrastructures built at the capacity required to sustain the local population, and nothing more. Some national forces do not have the means for bulk delivery over long distances, or even a field ration system with preservable commodities. Unless centralized management is applied, each national force is likely to contract independently to acquire these essential goods. Aside from being inefficient and unwieldy, this approach will also ensure instant inflation in the costs of local goods and services, which is harmful to operating budgets and even more disastrous for local citizens who lack the capital to outbid national military forces. In effect the coalition headquarters must enter a unique relationship with host nation authorities for contracting goods and services, to include manpower and labor,



U.S. Navy photo by Norris Jones

The destroyer *USS O'Bannon* arriving at Kiel during Exercise BALTOPS '92 with the German national ensign flying in the foreground astern the destroyer *FGS Molders*.

and then serve as the intermediary between national force requirements.

Just as there may be significant technological differentials in the combat capabilities of various forces, there could be large differences in the quality and magnitude of support provided. As CS and CSS are echeloned rearward, various capabilities may have to be pooled. American or European field hospitals, for example, may have to be prepared to accept allied casualties. Ammunition stocks, if they are compatible with allied systems, may have to be shared. Each class of supply and form of support must be considered for each national force in order to identify requirements for mutual dependency. If this is not done, it could result in a loss of combat

power or unexpected perturbations in the midst of operations.

The coalition headquarters is also uniquely situated to apply efficiencies that will minimize the diversion of potential combat power from the battlefield. Arrangements for cross-national support, host nation contracts to shift transportation or other functions to local firms, developing nodal points for transferring supplies and materials, and other means should be employed to reduce independent burdens for moving goods from the ports or airfields to the forward line. Distribution and local repair systems should be pooled wherever possible to limit the numbers of personnel required to perform support functions, and reduce the confusion of controlling rear areas. Combined logisticians must always be on watch for opportunities to find efficiencies and improvements in the logistics architecture. They must step above the paradigms of their own national doctrines and structures and look for ways to combine efforts.

Some would define the purpose of military doctrine and leadership as to achieve order in the chaos of battle. In coalition operations we do this by accentuating the commonalties that exist: first, between our national interests; second, between how we intend to deal with threats to mutual interests; and then in how we actually apply our combined forces in battle.

Where commonalties are required but lacking, we move quickly to create them. Often, a coalition's cohesion will depend on the proportionate sharing of burdens, risks, and credit. All these can be most fairly and satisfactorily apportioned if the total force is able to operate as a single entity.

The key to achieving this unity is by promulgating a doctrine for warfighting that is commonly understood and applied. Planning systems must be collective and participatory, yet responsive and unerringly timely. Those areas where the seams are most prominent, and therefore where friction is most likely to arise—through combined tactical integration, C⁴I, training, and logistics—need to be rapidly analyzed and tested, then sewn tighter. Obvious differences such as language, culture, or interoperability cannot be eradicated, but they can be minimized. These dictums hold true for both long-term and ad hoc coalitions. Indeed the tools and lessons we develop in our standing coalitions must be captured and employed in the formation of ad hoc coalitions to accelerate the cohesion of coalition forces.

Technology also offers means of improving the unity and effectiveness of joint operations in a coalition environment. It can be applied to bridge different languages and operating systems. It also can be applied to share and integrate national resources, whether in combat systems, logistics management, or the flow of information to every component in joint and combined warfare.

For the foreseeable future, American military leaders will most often be the leaders of multinational military coalitions. As the U.S. Armed Forces continue to reshape for the challenges of the post-Cold War era, it is important that the requirements of coalition warfare remain a priority effort among all services. Every improvement in coalition operations that we bring to the battlefield will have an impact on the success of operations and reduce the human toll for our own forces, as well as every one of our allies. We have the technology and experience to improve coalition warfare. The understanding of joint and combined doctrine is the first step.

JFQ



DOD photo by Terry C. Mitchell

U.S. Navy Seabees drill for water in support of multinational forces at an airfield northwest of Mogadishu during Operation Restore Hope.

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The Limits of Jointness

By SETH CROPSEY

Cooperation like apple pie is rarely if ever questioned as a desirable thing. Unfortunately, while everyone knows what an apple pie is, fixing a military definition of cooperation is much harder. The easy response is *jointness*, but trying to define this quality produces surprisingly varied answers. By implication, legislation already written defines jointness as a diminution of the power of the individual services. In a more positive vein the Chairman of the Joint Chiefs, General Powell, sees jointness as teamwork and cooperation. Congressional ideas as expressed by the Chairman of the Senate Armed Services Committee, Senator Nunn, find jointness in the elimination of redundant weapon systems or overlapping

roles and missions. And history, both ancient and modern, testifies of a nearly universal agreement that true jointness demands seamlessly linked operations between different military capabilities.

If politicians and senior officers did not use the motley definitions in this strange pail to support different policies, the task of defining jointness could safely be left to theoreticians. Since, however, jointness has attained in the defense arena the buzzword status that *justice*, *equality*, and of late *empowerment* enjoy in the domestic debate, it is important to be as clear as possible about what jointness is and what it is not. Failure to do so is likely to lead to an erosion of the distinctive abilities of the military disciplines from whose differences—ironically—the rationale for jointness originally springs.

The difficulty of defining jointness was apparent in the debate over the Goldwater-Nichols Department of Defense Reorganization Act of 1986. Both opponents and supporters of the legislation appealed to this elusive term to justify their arguments. The former claimed that because of the increased powers granted to the Chairman, future Presidents would lose the joint perspective provided by the expertise of other service chiefs. The legislation's proponents responded that an increase in the Chairman's power was needed to provide the jointness that was

Summary

Jointness defies consistent definition. The Goldwater-Nichols Act, the Chairman of the Joint Chiefs of Staff, the Senate Armed Services Committee, and students of operational art all view jointness differently. What will be the result of divergent, often opposing concepts of jointness? Goldwater-Nichols mandated jointness by structural reforms; General Powell sees jointness as interservice teamwork; Senator Nunn hopes jointness will be a mechanism for eliminating what he considers to be redundant roles and missions. History has shown that unified forces triumph while poorly organized ones perish. Nevertheless, General Schwarzkopf—who is lionized as an operational commander—waged joint warfare with great success, though he served in few joint assignments during his career. The summons to the services to fight as a team will be ignored by commanders at their own peril, and a joint culture may ensure that as the defense budget is slashed the services are diminished proportionately. But jointness must not eliminate the debate on the purposes and utility of the individual services that must now be conducted in the post-containment era.

missing due to the disproportionate influence of the individual services and their chiefs.

Change the Organization

Goldwater-Nichols does contain a definition of jointness, if only by negation. The legislation suggests what jointness does not mean by identifying interservice rivalry as the obstacle to it. Accordingly, the act aims at reducing the power of the services by changing military education to emphasize interservice cooperation, diminishing the control exercised by each service over careers, and increasing exposure of officers to a central staff. The 1986 landmark legislation never offered a positive model of how a more joint military would think or perform. But it did draft very firm guidelines altering service college curricula, insisted on specified qualifications for career advancement, and laid the foundation for shifting effective responsibility for acquisition of major weapons systems to the Office of the Secretary of Defense.

So comprehensive was the congressional understanding of jointness that the reorganization directly touched military officers *and* senior civilian officials. The legislation drained power from the service secretaries and gave new, broad authority to the Office of the Secretary of Defense (OSD), specifically, the Under Secretary of Defense for Acquisition. Consistent with the 30-year effort to gather authority within OSD—which does not embrace the private sector's current efforts to decentralize—the legislation's authors doubted the ability of the services to manage major programs and preferred instead to consolidate control over a \$300 billion budget at the center.

Goldwater-Nichols applied the same approach to the military chain of command. Congress regarded the services as quarrelsome siblings with single, infinite appetites. It despaired at arbitrating endless contradictory

claims, and sought to raise the Chairman and the Joint Staff so that they could settle disputes and unite the efforts of the unruly services. So successful was the legislation that General Powell, the first Chairman to serve his entire tour under the new law, has been able to give jointness a new meaning.

Powell has defined jointness in more positive terms than the 1986 legislation. His view is that cooperation means teamwork. Given the increasingly dismal prospects for defense funding and demands on the Armed Forces in a disorderly world, his definition also makes political sense.

In the private sector scarcity encourages thrift, drives prices up, and then usually seeks out other avenues to satisfy demand. In the Government—especially the military—dwindling budgets have traditionally stimulated a free-for-all between and among the services that rewards the bureaucratically adept and ends only when resources once again start to flow. The bitter fight over roles and missions following World War II is the most notorious example in American military history. Demobilization and postwar budget reductions were the dry tinder; President Truman's decision to pick that moment to fundamentally rearrange the services was the flame that set the pile burning.

Colin Powell has turned out to be more skillful at politics than Harry Truman. Contemplating the defense cuts at the beginning of his tenure in 1989, Powell has consistently sought to create an atmosphere of cooperation among the services that fends off divisive issues of basic structural change or reordering priorities. A measure of the stature that the Chairman's political skills have earned is a willingness to disagree with both Senator Nunn and President Clinton.

Senator Nunn asked basic questions in July 1992 about the structure of the Armed Forces, such as whether naval aviation and the Marine Corps were still required. He wondered if a single service should be placed in charge of all electronic warfare aircraft, and whether the responsibility for defending troops and installations should be consolidated under the Air Force. Echoing these difficult queries, but taking them a major step

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toward execution, President Clinton in August 1992 told the World Affairs Council in Los Angeles that:

In 1948, then Secretary of Defense James Forrestal convened a meeting of the military service chiefs in Key West to allocate responsibilities among the four services. It failed. As President, I will order the Pentagon to convene a similar meeting to hammer out a new understanding about consolidating and coordinating military missions in the 1990s and beyond.

In a draft assessment of the future of the Armed Forces, noted in the press on the last day of 1992, Powell saw no reason for sweeping changes. "Yes, we can be said to have four air forces," said the Chairman's report, "but each is different, playing a unique and complementary role."

Change the Spirit

The image of the military as a powerful organism composed of mutually dependent and cooperative groupings of cell structures has characterized General Powell's tenure as Chairman. *Joint Warfare of the U.S. Armed Forces* (Joint Pub 1), which was published in November 1991, is the clearest picture of this image. Technology, it says, has made the services increasingly interdependent. Teamwork, trust, and cooperation among the services are needed now more than ever to succeed in war. And

as balance is required in the kinds of forces fielded, "there is no place for rivalry" among members of the joint team.

The idea of jointness in Joint Pub 1 is politically attractive because it helps suppress dissension among the services at a time when straitened budgets are most likely to cause such quarrels. Moreover, the need for teamwork between the different military disciplines rests on unassailable operational ground. Joint Pub 1 singles out examples in American history from riverine warfare along the Mississippi in the Civil War to Douglas MacArthur's amphibious attack on the enemy's rear at Inchon in 1950. But the

writers could have reached much further back into history.

In 425 B.C., the seventh year of their famous contest, the Athenians and Spartans fought over the protected harbor of Pylos on the west coast of the Peloponnesian peninsula. The Athenian command concentrated its efforts on the Spartan garrison which held out on Sphacteria, the island that guards the western approaches to Pylos. Throughout an operation that lasted over ten weeks the Athenian navy worked smoothly with heavy and light infantry, the former enforcing a blockade that hampered resupply of the Spartan detachment, the latter frontally harassing the besieged defenders. Eventually hunger helped break the Spartans' will to resist and allowed the Athenians to surprise their enemy in his fortified positions.

Two centuries later, the struggle between Rome and Carthage for power in the Mediterranean spilled over into Spain. As Scipio, the joint commander, directed a bombardment and infantry assault against the walled city of New Carthage (today's Cartagena), his naval component commander Admiral Caius Laelius launched a simultaneous amphibious attack on the city's seaward side. Diverted by these synchronized shocks, the defenders neglected their third flank which lay exposed to a shallow lake through which a Roman detachment waded and entered New Carthage. After defeating the besieged Carthaginians, Scipio offered a crown to the man who had first breached the walls. When both a marine and a centurion of the fourth legion claimed the honor, Scipio acted with great respect for what we would today call jointness. He awarded two prizes and declared that both warriors had mounted the wall at the same moment.

The need for combined operations and harmony between the different fighting disciplines has been understood—if not always practiced—since antiquity. But Joint Pub 1 takes this proven operational idea another step by arguing that the teamwork needed in battle is just as necessary throughout the military's other work, using the same language of exhortation to encourage equal harmony throughout the whole military.

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DOD photo

Senator Nunn during a visit to the Persian Gulf.

Because “the arena of our potential operations is the entire planet,” the Armed Forces require “the ability to project and sustain *the entire range* (emphasis added) of military power over vast distances.”¹ There is “no place for rivalry that seeks to undercut or denigrate fellow members of the joint team.”² And, “the nature of modern warfare puts a premium on cooperation with each other to compete with the enemy.”³

For actual combat, Joint Pub 1’s call to pull together is clear and cannot be disputed. However, in drawing up a concept of operations to prepare for combat or in drafting the doctrine that determines what forces will be called upon, or in choosing which weapons to build or what national military strategy to follow, the admonition to cooperate runs into problems. Reasonable men can—and do—differ about weapons systems, the appropriateness of certain missions, and the contributions of the individual services to the Nation’s security.

According to Joint Pub 1, “Individual professional growth, reinforced by military education and varied service and joint assignments, leads to a refined capability to command joint forces in peace and war.”⁴ But the document does not claim that this combination of education and experience will answer thorny military questions, the ones that predictably draw bureaucratic blood and leave trails of nettles from the Pentagon to Capitol Hill. What does Joint Pub 1 expect when such

issues arise? Should officers use teamwork and cooperation as a guide, adjusting their opinions to avoid clashes with other experts from different services?

This question is particularly relevant to still another current definition of jointness, the one noted above that has been proposed by Senator Nunn and endorsed by President Clinton. In their view the Key West agreements on service roles and missions that Secretary of Defense Forrestal and the chiefs reached in March 1948 have failed to prevent wasteful duplications of effort. As candidate Clinton said in his Los Angeles World Affairs Council speech:

I agree with Senator Sam Nunn that it is time to take a fresh look at the basic organization of our Armed Forces. We have four separate air forces—one each for the Marines, Army, Navy, and Air Force. Both the Army and Marines have light infantry divisions. The Navy and Air Force have separately developed, but similar, fighter aircraft and tactical missiles While respecting each service’s unique capabilities, we can reduce redundancies, save billions of dollars, and get better teamwork.

Change the Missions

Far more radical than either Goldwater-Nichols or the Chairman’s calls to join hands in battle and out, the Clinton-Nunn vision sees teamwork as the by-product of efficiency. Rationalizing the missions of the Armed Forces so that no two services perform the same job will save money first and demand cooperation second. Of the several approaches toward establishing a more unified military, the ideas supporting this one are weakest. Not because Nunn’s proposal to combine such staff functions as the medical, chaplain, and legal corps are baseless. And not because his questions about the need for separate air and infantry capabilities in his Senate speech of July 2, 1992 are unworthy.

Nunn’s argument fails to observe its own standards. Quoting a former Chairman, Admiral William Crowe, Nunn rightly faults the customary manner in which America has reduced its forces at “the end of a period of military crisis and the start of an era of relative peace.” Proceeding backwards, the United States has cut defense first, says Senator Nunn,

and asked second how “to shape a new force in light of the changed circumstances.”

However, instead of trying to peer into the years ahead or explain the lessons that should have been learned from the struggle against the Soviets, Nunn looks to the past. For him, the most important challenge in America’s change of circumstances is “to provide a fighting force . . . that is not bound by the constraints of the roles and missions outlined in 1948.”

Nunn, of course, is referring to the compromise by which the Office of the Secretary of Defense and the Joint Chiefs were established while maintaining a separate Marine Corps and naval aviation arm. This compromise was a political response to an idea developed by Secretary of War Henry Stimson and Army Chief of Staff General George Marshall. Deputy Chief of Staff General Joseph McNarney presented the proposal to the House Select Committee on Post-War Military Policy in 1944. Its original justification had been the lack of sufficient coordination between the Army and Navy during the war, especially just before the Japanese attack on Pearl Harbor.

But interservice coordination is not Nunn’s first goal; he nowhere claims the lack of it as a problem. The Nunn-Clinton proposal identifies the benefit of moving beyond the 1948 agreements in terms of potential savings. Looking at air power Nunn says, “We spend tens of

billions of dollars every year operating tactical aircraft squadrons in each of the four services.” Noting that the Navy wants to spend from \$55 billion to \$75 billion on a new version of the F-18 while the Air Force plans to replace its F-16 fleet, Nunn asks whether the services could save money by cooperating together in the development of a common multirole fighter.

These questions are rooted in the desire to save costs, not in *changed circumstances*. Nunn in the end offers merely another justi-

fication for cutting defense that may or may not suit the disorderly world and American interests. It does not start out by taking deliberate aim at these vexing problems. But whatever the merits of his proposal, it does expand the definitions of jointness.

These definitions share a common, suspicious view of the services and are differentiated by their political content. Goldwater-Nichols is the least political. Knowing the military’s responsiveness to hierarchy and promotion, it seeks harmony through organizational changes that tinker with power and incentives. The legislation has other effects, but it had no other end.

General Powell’s emphasis on operational teamwork stands unmovably on the firm ground of experience. It is harder to say what the positive effect of his call to reproduce this cooperation at the staff level means except in broad terms of encouraging respect for the views of officers from different services. But Powell’s more distant—and political—goal is to dampen the rivalry among the services that could still be an instrument of wanton dismemberment in the hands of legislators bent on extracting further *peace dividends* from the military.

Most political are Nunn’s questions on duplication and redundancy. Wrapped in reflections on the changed circumstances of our time and casting back to the political tussles of the late 1940s, the queries by the Chairman of the Senate Armed Services Committee are linked by the political goal of reducing defense costs, which accounts for campaigner Clinton’s support.

The Passion for Purple

There is a serious problem with this growing chorus of calls for jointness. The sense of purpose and morale, and thus ultimately the effectiveness of the services, is threatened by a calculus of their diminishing identities. The undesirability of absolute jointness—complete absorption of all the services into a single organization—should be plain since there is no serious proposal to go that far. Somewhere is a view of the services as too big and complicated to be led

the undesirability of absolute jointness—complete absorption of all the services into a single organization—should be plain since there is no serious proposal to go that far

easily from the center, and of their skills as too diverse to be mixed without weakening the final compound.

Unfortunately, albeit unintentionally, this is where we are headed. Ideas have been legislated, those representing the current thinking of the leaders of the Department of Defense, and those still in the planning stages, are not like a series of proposals on national health from which one must be chosen. Instead, these and other proposals will have a cumulative effect.

The increased time that officers spend in staff positions as a result of Goldwater-Nichols as well as the rising quality of officers who are assigned to joint billets has improved the strength of personnel on combined staffs. Of this there is no doubt. But at what price? When the system as retooled by Goldwater-Nichols produces its first Chairman and set of Joint Chiefs,

will they know as much about the capabilities of their services as those who preceded them? Will the opinions they give under the most demanding circumstances to a President who has no military experience be as operationally informed as the advice of a general officer such as Norman Schwarzkopf who, until he became a CINC, had only served one tour on a joint staff?⁵

And what dislocations are being caused by the legislatively induced requirement for the Armed Forces to push a large pool of qualified officers through the relatively narrow channel of joint duty billets? Personnel detailers already talk in private both about the demoralization junior officers sense at not earning joint qualifications soon enough, and the growing pressure to exclude from joint assignments any officer who is not rated first or second among several peers in yearly evaluations. Although men like George Marshall distinguished themselves

early in their careers, the genius of such other great officers as Ulysses S. Grant revealed itself later. Is the system's rational response to Goldwater-Nichols denying the Nation the talents of late bloomers? Or will the military ultimately find a way to move officers through joint duty assignments by unintentionally hamstringing the Joint Staff and the CINCs with a host of joint billets?

Neither alternative beckons. For the moment, however, one direction is clear. The current Chairman, General Powell, has used the powers of his office which were enlarged by Goldwater-Nichols, as well as his own exceptional political talents, to cultivate a spirit of cooperation among the services. Balanced reductions in forces reinforced by an inclusive approach to service assets in combat and cushioned by such educational efforts as this journal have been the order of the day.

But again, the call to jointness has some discordant notes. The need for teamwork when combined operations are required is incontestable. However, do joint assignments and education, the powerful message of documents such as Joint Pub 1, or even the Goldwater-Nichols Act itself promote such teamwork where it matters: in combat? Perhaps. But the evidence is scanty.

Joint Pub 1 paints General Schwarzkopf's victory over Iraq as a jewel in the joint crown. It quotes repeatedly and at length from all his component commanders on the virtues of harmony. But Schwarzkopf, by his own account, is a straightforward, old-fashioned Army man with little tolerance for staff life, and no warm feelings for joint duty. He speaks of his decision to accept an assignment in the Army Secretariat as ticket punching.⁶ And, the "happiest day" of Schwarzkopf's tour on the staff of U.S. Pacific Command occurred when he was ordered to Germany as assistant division commander of the 8th Mechanized Infantry.⁷ The Central Command commander did not trust the Joint Staff much either. Referring to slides from a briefing on Operation Desert Storm which President Bush received in Washington, Schwarzkopf told his chief of



DOD photo by R.D. Ward

General Powell
appearing before the
House Armed Services
Committee.

joint tours, revised educational curricula, exhortations to cooperate, and legislation did not help—or hurt—General Schwarzkopf in the execution of his joint duties

staff, “I want them presented by you personally, not some officer from the Joint Staff.”⁸

Nowhere in his popular autobiography does Schwarzkopf mention Goldwater-Nichols or the 1986 law’s supposed multiplication of the CINC’s power which others have touted as key to the success of U.S. arms in the Gulf War. Although he had anxious moments when Washington’s requests for information made him fear that the policymakers did not wholly grasp the true picture, Schwarzkopf attributes his success in

part to the freedom he was given to operate according to his best judgment and Powell’s ability to run political interference.

Schwarzkopf’s appreciation of jointness lacks the *diversity of approaches* and *harmony of effort* tone that characterizes Joint Pub 1, but the vacuum is filled by practical and effective action. When his order to move VII Corps into position in control of Safwan airfield was not obeyed, the CINC tells his Army component commander that unless the original orders are executed, he will give the job to the Marines. This threat helps speed action.

It fits neatly into the operational appreciation of jointness that Schwarzkopf gained in 1983 as Army advisor to Vice Admiral Joe Metcalf who led the invasion of Grenada. As Schwarzkopf tells it, when Metcalf required expertise on ground operations—as he did in planning the opposed movement of Army and Marine units across the island to free American medical students—Metcalf asked Schwarzkopf to write the orders.

However, when it subsequently became clear that a helicopter assault to release the students at Grand Anse would be quicker and less costly, Metcalf gave the order. Schwarzkopf explained the plan to the Marine colonel whose helicopters were to carry Army troops in the hostage rescue. When the colonel balked, Schwarzkopf noted that the order came from Metcalf and threatened

a court martial. The matter was quickly resolved and the operation proceeded.

Joint tours, revised educational curricula, exhortations to cooperate, and legislation did not help—or hurt—General Schwarzkopf in the execution of his joint duties. When he was called on for advice, he gave his best which was very good indeed because it was based on many years of work perfecting his skill. And when he required assistance and cooperation of officers from other services, he knew how to get it.

The balance in the system which produced Schwarzkopf and such other successful unified commanders as General Max Thurman, who led the U.S. Southern Command during the invasion of Panama in 1989, was as difficult to achieve as it is easy to upset. In this equilibrium, the need for competitive ideas at the center where decisions are made about the size, shape, purpose, and mixture of forces serves as equipoise to the demand for harmonious action in battle.

Such efforts as the increasing emphasis on jointness tip the scales in the direction of concerted operational effort. However, by effectively putting a damper on conflicting ideas, they also suppress debate over such fundamental issues as the composition and character of future forces. Backed by a forceful Chairman, Joint Pub 1’s insistence on *common perspectives, teamwork, and cooperation* delivers a strong warning against arguments, for example, that support asymmetrical reductions in U.S. forces in response to world events. Admonitions that “there is no place for rivalry” on the joint team, that the military should “exploit the diversity of approaches that a joint force provides,” help establish a standard of political correctness in the Armed Forces that chokes off consideration of ideas which, while troublesome to the interests of an individual service or a particular weapons system, might be important to the Nation.

The problem is not jointness but rather what is meant by jointness. Unified effort in the field has real meaning, and there is no serious argument against this. But outside the realms of the unified commanders, the

notion becomes unclear or encourages intellectual torpor.

The medical profession's contemporary experience offers clear parallels and a constructive direction. Like officers, physicians must devote a growing portion of their time to mastering the technical demands of their art. Technological advancements in diagnostic and surgical instruments as well as the doubling of medical knowledge roughly every four years is forcing doctors to concentrate on smaller and smaller parts of the human anatomy. The body, however, is a whole, and a pathology of the optic nerve, for example, might be apparent to neurosurgeons where ophthalmologists would overlook it. The cure is to balance specific with general knowledge. In military terms, the solution to the want of a common perspective is not to exhort officers and enlisted personnel to get one, but to provide one that is based on ideas rooted in experience.

In other words, one must study history to understand the causes of military success and failure. By noting joint and combined operations throughout the text, Joint Pub 1 does acknowledge this need. But its historical lessons all teach jointness. And dependence on ratios of students from different services to determine whether a service college course qualifies as joint in the wake of Goldwater-Nichols is an obvious example of the triumph of process over substance. Military history is richer and more complicated. It shows that organizations as well as great captains can make the difference between victory and disaster. It teaches the value of thinking through tactical and strategic problems beforehand. It demonstrates the advantage of being able to swiftly change ideas, plans, and operations in the face of the unanticipated.

Jointness is not an end in itself. Nor can anyone prove that it is. Jointness is a minimal requirement for most of the imaginable situations in which this Nation would use force in the future. Apart from combat, it is a rhetorical whip that maintains a politically useful discipline among the services in a

time of falling defense budgets. But the hierarchy's forceful message not to squabble also helps muffle consideration of such ideas as the unequal division of budget cuts based on national requirements or a national security strategy that may not rely on balanced forces. Unfortunately, such questions are precisely the ones to be examined. Insofar as the pressure for jointness keeps these issues at bay, the Nation is deprived of a debate it should conduct.

In *Federalist 10* James Madison, urging adoption of the Constitution, reflects on the proposed Union's ability to control the dangerous effects of political faction. "The causes of faction cannot be removed . . . relief is only to be sought in controlling the effects." Heading off controversy in the Armed Forces over basic questions on the future could eventually remove the causes of disagreements among the services by helping to strip them of their pugnacity. This would not serve America well either. It would be better to seek jointness off the battlefield in the renewed effort to understand the valuable lessons of warfare through the experiences of those who have succeeded and failed at it.

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NOTES

¹ The Joint Chiefs of Staff, *Joint Warfare of the U.S. Armed Forces*, Joint Pub 1 (Washington: National Defense University Press, 1991), p. 2.

² Ibid., p. 4.

³ Ibid., p. 15.

⁴ Ibid., p. 32.

⁵ Schwarzkopf quotes the reaction of his commanding officer, Major General Richard Cavazos, to the news Schwarzkopf had been ordered to the Pacific Command when he was a one-star general: "Whoever made that decision is a dumb bastard." H. Norman Schwarzkopf in *It Doesn't Take a Hero* (New York: Bantam Books, 1992), p. 214.

⁶ Ibid., p. 191.

⁷ Ibid., p. 221.

⁸ Ibid., p. 360.

A New Mission for Atlantic Command

By PAUL DAVID MILLER



DOD photo

Navy SEALs descend to a submarine.

DOD photo

In a February 1993 "Report on the Roles, Missions, and Functions of the Armed Forces," General Colin Powell, Chairman of the Joint Chiefs of Staff, recommended changing the Unified Command Plan (UCP) by placing certain forces in the continental United States under a single joint commander for the primary purpose of ensuring the joint training and readiness of response forces. The Secretary of Defense approved that recommendation in April and an implementation plan is now under development. The plan will merge Forces Command (FORSCOM), Atlantic Fleet (LANTFLT), Air Combat Command (ACC), and Marine Corps Forces Atlantic (MARFORLANT) into a single combat command. The services will retain their

Summary

In a recent report to Congress, General Colin Powell raised the issue of creating a joint command to enhance the ability of forces based in the United States to respond quickly in the event of crises. The Chairman concluded it would be advantageous to establish such an organization and recommended that assets of Forces Command, Atlantic Fleet, Air Combat Command, and Marine Corps Forces Atlantic be fused into a single joint command. U.S. Atlantic Command (LANTCOM) will become that command with responsibility for joint training, force packaging, and deployments during contingencies, including providing support to U.N. peacekeeping operations and assistance in times of natural disasters. To accomplish this new joint mission LANTCOM must streamline training and exercises, facilitate packaging and adapting forces to meet theater requirements, and enhance readiness through innovations in doctrine.

statutory responsibilities and the U.S. Atlantic Command (LANTCOM) will be responsible for joint training, force packaging, and facilitating deployment in crises.

The advantages of the proposed changes, particularly in the area of joint training, warrant a close look. LANTCOM is well-suited to assume this new mission. As a CONUS-based joint headquarters, it already enjoys strong component relationships with FORSCOM, LANTFLT, ACC, and MARFORLANT. Cold War planning in LANTCOM focused on defending the sea lanes and conducting offensive

naval operations against the Soviet Union. While the NATO Alliance endures—and LANTCOM retains a large regional area of responsibility—the threat of war is greatly reduced. Thus LANTCOM has the capacity

to assume added responsibilities in keeping with the revised military strategy and the proposed changes to the UCP.

The Commander in Chief of the Atlantic Command (CINCLANT) also has responsibilities under NATO as Supreme Allied Commander Atlantic (SACLANT). In the new plan CINCLANT will likely continue to serve as SACLANT where he will be well situated to integrate and tailor forces to support Supreme Allied Commander Europe (SACEUR) for NATO contingencies. Since LANTCOM will no longer be a predominantly naval command, CINCLANT will be a nominative position filled by an officer from any service. LANTCOM will also be assigned additional missions in support of United Nations peacekeeping and disaster relief missions. The command might also be renamed in order to more accurately reflect this new focus.

Comments on the Chairman's roles and missions report—both from inside and outside the military—cite the proposed new

mission for LANTCOM as one of the most significant aspects of this triannual report. The proposal builds on many important joint training initiatives which have flourished since the Goldwater-Nichols DOD Reorganization Act of 1986, particularly in the wake of Operations Desert Shield/Desert Storm.

General Powell helped to point the way with the publication of Joint Pub 1, *Joint Warfare of the U.S. Armed Forces*, which traces the roots of jointness and charts a course for the future. Meeting challenges with a smaller, less costly force depends on realizing the full force-multiplier potential of jointness. Joint Pub 1 is a focal point for the further refinement of joint doctrine.

Joint Training and Exercises

The first cornerstone in realizing the full potential of our Armed Forces is joint training—particularly regularly scheduled, major joint exercises. Both Exercise Ocean Venture in the Atlantic and Exercise Tandem Thrust in the Pacific are examples of joint training being done by the CINCs. In 1992 those exercises saw thousands of soldiers, sailors, airmen, and Marines train together on joint warfighting tasks. A new spirit of cooperation and enthusiasm was clearly evident. Progress was made on doctrinal and joint command, control, communications, computers and intelligence (C⁴I) issues as raised by Operations Desert Shield/Desert Storm such as procedures for the Joint Force Air Component Commander (JFACC) and effectively employing mobile operations and intelligence centers with joint C⁴I connectivity.

Joint training has a high priority in all theaters. The U.S. Pacific Command (PACOM) has developed an innovative, two-tier Joint Force Commander (JFC) concept to ensure the readiness of JFCs and staffs in responding to contingencies. PACOM has deployable JFC staff augmentation teams that train and exercise regularly with designated joint force commanders. The U.S. Central Command (CENTCOM) has been busily engaged in joint training in Southwest Asia since the end of the Gulf War. Regular joint strike and air defense exercises maintain readiness for rotationally deployed forces

meeting challenges with a smaller, less costly force depends on realizing the full force-multiplier potential of jointness

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U.S. Coast Guard photo



U.S. Navy photo by Jack C. Bahm

(Top) A Coast Guard cutter intercepts a group of Haitians. (Bottom) Carriers seen underway during Exercise Dragon Hammer '92, (from foreground) Italy's *Guisepe Garibaldi*, France's *Foch*, and Spain's *Principe de Asturias*.

from all services. The U.S. European Command (EUCOM) uses the Air Force's Warrior Prep Center in Germany to support aggressive joint training efforts. Joint training in the U.S. Southern Command (SOUTHCOM) supports counterdrug and nation assistance operations.

With all the attention that has already been directed toward joint training, one might question the need to assign overall responsibility for joint training of CONUS-based forces to a single commander. But there are two reasons to do so. First, such a consolidation will build on, rather than supplant or replace, ongoing efforts. Unified CINCs will continue to conduct joint training to sharpen the focus and maintain the readiness of assigned forces. Second, as the military grows smaller fewer forces will be positioned forward, either permanently stationed (as in Europe and Korea) or rotationally and periodically deployed (as CENTCOM). Assigning responsibility for joint training readiness to LANTCOM will help to ensure that deploying forces are ready on arrival for joint operations. It would also be a means for ensuring that those forces—and designated back-up units at the ready—can be trained to meet the requirements and standards of the supported CINC.

As in the case of joint training, each service is doing an excellent job of providing basic, intermediate, and advanced training to ensure its forces are ready for joint operations. This traditional stovepipe approach to training has served us well. It evolved during the Cold War to meet each CINC's requirements for forward positioned forces. In most

cases the requirements were met by using fairly rigid combinations of permanently assigned forces and standardized deployment groups. This was largely a single or dual service approach—as opposed to being truly joint. The system worked well and supported our military strategy. The supported CINCs dealt directly with the services providing the forces, and joint force integration was accomplished in the field, often on an ad hoc basis.

The Cold War prescription may now provide more capability than needed in some regions. To do the job with a smaller force, we must explore ways to more tightly lace together the full joint military capability of the United States. We must explore and refine ways of providing the CINCs with packages of capabilities more closely tailored to their requirements. Once assigned the joint training mission, LANTCOM will be ideally situated to assist CINCs in designing and training the needed joint capabilities packages.

Joint Force Packaging

The second cornerstone of realizing the force multiplier potential of jointness is developing effective joint force packages. The Chairman and the unified CINCs are already evaluating ways to better organize and train forces to support CINCs by making it easier to call forward specific capabilities needed in their respective areas of responsibility (AORs). One concept envisions rotationally deployed forces from all services organized into *adaptive joint force packages*—that is, specific capabilities deployed during a given timeframe and supported by designated back-up units in CONUS. This concept brings together initiatives from various quarters and involves two elements: *packaging* forces and *adapting* those forces to specific theater requirements.

Forging adaptive joint force packages does not require major adjustments to existing service organizations. Each service will remain responsible for individual unit readiness and training. The Atlantic Fleet, for example, has replaced traditional battle group formations with expanded force packages more closely aligning responsibilities for tactical training with the operational chain of command. The new organization provides

greater flexibility and adaptability, permitting battle groups, amphibious ready groups, or other needed force packages to be configured from a broad range of maritime capabilities. The Pacific Fleet has been reorganized along similar lines. In 1991 General Merrill McPeak, Air Force Chief of Staff, reorganized the basic structure of the air wing. New Air Force composite wings are comprised of the range of assets needed to provide a complete capability package. These new organizations provide more options to the unified CINCs and make it easier to select needed capabilities from each service force package kit. Single service force packages can be *adapted* by selecting capabilities to meet specific theater requirements. We are just beginning to explore ways of doing this.

Maritime forces provide a useful example of how force packages can be adapted to specific theater requirements. Formerly, to counter the global Soviet threat, carrier battle groups (CVBGs) comprised a fairly standard menu of assets and capabilities. New naval force packages facilitate breaking Cold War deployment patterns by making it easier to structure and train capability-specific packages. In today's fast-changing world a naval force may not need the same capabilities in one region or situation as in another. One CINC may desire to augment the offensive firepower of an aircraft carrier by varying the mix of strike aircraft in the embarked naval air wing. Another CINC may choose to modify the capabilities of the carrier by reducing the number of naval aircraft and instead embarking Special Operations Forces (SOF) or a special purpose Marine force with capabilities tailored to specific theater requirements. Circumstances in a third region may be such that requirements can be met with a tailored Marine Amphibious Ready Group (MARG) supported by Tomahawk cruise missile-firing ships and submarines. In each case the capabilities are tailored to meet CINC requirements. Army and Air Force capabilities may be similarly tailored.

From the vantage point of the supported CINCs, the ready forces of all services represent the full set of available capabilities. To meet CINC requirements for forward posi-

tioned forces with a smaller force, the particular full joint force package must be trained jointly and structured to support a given CINC's specific requirements. Training must focus on specific contingencies and operations that the joint force may be called upon to execute. As seen in the accompanying illustration, tailored elements of the full set of joint forces—adaptive joint force packages—can then be positioned forward as needed. As the concept matures, supported CINCs will be able to write a more accurate prescription—based on the situation in the AOR—and call forward only the precise capabilities needed. Since the full joint force will have trained together, an adaptive joint force package—once deployed—becomes the forward element of a trained and ready joint force available in CONUS.

In examining the adaptive joint force package concept, Navy and Marine Corps component commanders of LANTCOM jointly developed concepts for a carrier-based Special Purpose Marine Air-Ground Task Force (SPMAGTF). This special task force would provide the supported CINC with specified, focused capabilities—such as noncombatant evacuation, security operations, or tactical recovery of aircraft and personnel. Other maritime force package options, including tailored carrier air wings and MARGs with a more capable Air Combat Element (ACE), are also being examined. Recognizing the largely maritime flavor of these efforts, LANTCOM has been working with Army, Air Force, and SOF components, as well as the Coast Guard, to explore contributions that those forces could make to deployable joint capabilities packages.

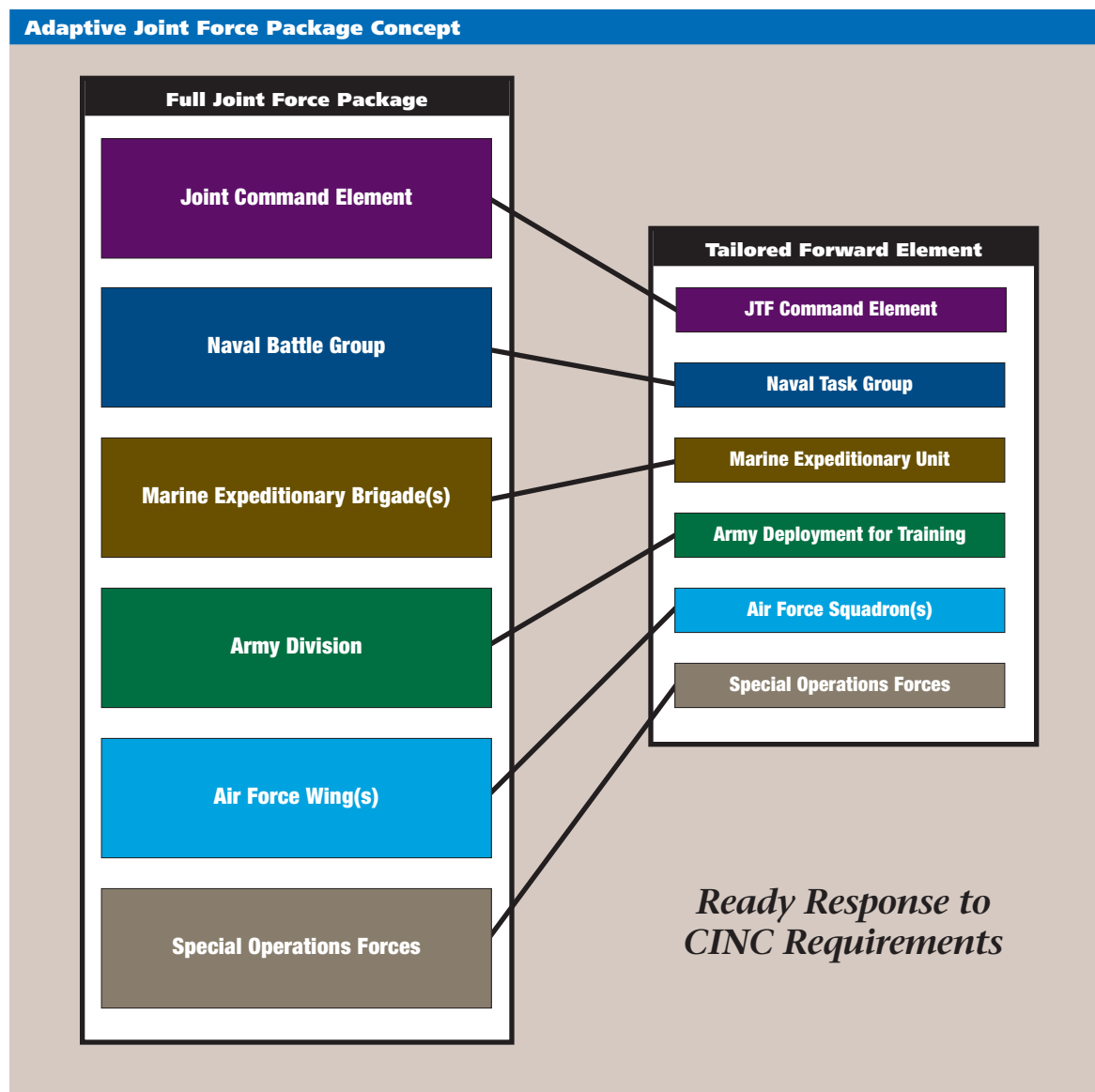
Tailored joint capability packages, structured and trained for a variety of requirements, will soon prove their value in EUCOM. Joint Force 93-2, for example, represents an adaptive joint force package which blends service capabilities by combining a typical 11-ship carrier battle group, 5-ship Marine amphibious ready group, Special Operations Forces, land-based Air Force and naval aircraft, and advanced Army helicopters. Working

with LANTCOM to develop, integrate, and jointly train such force packages will help the supported CINCs meet the requirements for continuous and periodic presence. By using the full potential of a joint force and calibrating forward-positioned capabilities to the needs of CINCs, we can maintain a forward presence without overcommitting our forces.

The end of the Cold War enables LANTCOM to focus increased attention on tailoring joint exercises and training to support

other CINCs. Assigning LANTCOM the joint training mission for CONUS-based forces will institutionalize this critical role. Orienting joint force training toward the supported CINCs' requirements and training deploying forces alongside designated back-up units will ensure additional forces can be sent forward. Surge forces would arrive in theater organized, trained, and ready for large scale joint operations.

To efficiently tailor joint training to the requirements of the supported CINCs, we need an effective, widely understood means



U.S. Navy photo



Lockheed photo by Schulzner and Lombard



to communicate requirements. The Joint Staff and the CINCs are developing a universal joint task list which will make it easier for supported CINCs to state their training requirements in common terminology, prioritize needed training, and aid LANTCOM in structuring exercises to meet those needs.

Joint Doctrine

The third cornerstone in realizing the full joint force multiplier potential is ensuring the readiness of JTF commanders and staffs to plan and execute contingency operations. Each geographic CINC is developing a JTF training concept, but individual theater approaches are not yet grounded in a common set of JTF staff tasks, conditions, and proficiency standards. Once the universal joint task list is finalized, LANTCOM will be able to train deployable JTF and component commanders in joint doctrine, tactics, techniques, and procedures tailored to the supported CINC's requirements from a menu of common standards that are applicable worldwide.

Four principles have guided development of the implementation plan for the new joint training mission:

- ▼ Finding ways to add value without adding cost
- ▼ Avoiding creating additional bureaucratic layers
- ▼ Resisting the pressure to increase the size of the LANTCOM staff
- ▼ Making good use of what already exists

These principles will help achieve the full value of the proposed changes to the Unified Command Plan. One example is the potential payoff to be derived from coordinating exercise schedules. Aligning individ-

ual service schedules will make training more efficient, relevant, and interesting. Considerable improvement can be achieved while staying within programmed budgets and force structure. Existing service exercises can be overlaid by joint training without increased cost. Service exercises can be synchronized for mutual benefit, and sequenced to yield efficiencies in transportation, range utilization, and support.

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Another area with important potential payoff is the evaluation and testing of joint tactics, techniques, and procedures to refine joint doctrine. Being located in close geographic proximity to the Joint Doctrine Center, the Army Training and Doctrine Command, and the newly created Naval and Air Force doctrine commands, as well as Army and SOF tactical training centers at Fort Bragg, LANTCOM is squarely at the *hub* of a number of activities. Assigning the expanded joint training mission to LANTCOM will facilitate evaluating, testing, and sequencing the development of joint doctrine.

The hub-and-spoke analogy also applies to other joint training activities. LANTCOM is working in cooperation with existing component commands to establish joint tactical training and development teams. Each team focuses on specific joint tactical mission areas such as joint air operations and joint air defense. The teams will assist in designing and evaluating realistic, relevant joint exercises and training. They will also develop joint tactical standards and assist in training joint staff elements. The teams provide focal points for developing joint tactics, techniques, and procedures, and cadres of joint tactical experts on the CINC and component staffs. Joint tactical training development teams could also provide a vehicle for drawing on the expertise, and integrating

the efforts, of various service tactical *school-houses* and *centers of excellence* in an effort to enhance joint training without infringing on service priorities.

Another useful hub-and-spoke arrangement could be created by establishing an appropriate joint agency to provide a range of technical support services to the exercise programs of both the CINCs and the services. This agency could provide turn-key support in technologies and services common to such efforts. One example is providing the distributed simulation technology needed to link existing training ranges, command posts, and simulators to an effective joint training network. While the services would continue to operate and use existing facilities, training horizons would be expanded by sharing data and capabilities

among users via a distributed simulation network.

The skills and experience required for such complex technologies are not plentiful. Building exercise support organizations separately for the CINCs, their components, and service staffs is inefficient and prohibitively expensive. One option under consideration would merge the Joint Doctrine Center (JDC) in Norfolk, Virginia, and the Joint Warfare Center (JWC) at Hurlburt Field, Florida, into a single command located near LANTCOM headquarters. This new JDC/JWC agency would be controlled by the Joint Staff and support simulation-based studies. By working in partnership with the JDC/JWC the pressure to expand the LANT-

COM staff would be minimized and potential redundancies would be limited, particularly in the areas of joint publications, distributed simulation, and exercise support.

The Atlantic Command currently has several JTF commanders. One of them, JTF-4, is the executive agent in the counterdrug campaign. Others are established for training and contingency response. Each service component has potential training/contingency JTF commander, namely, the Commanding Generals of the three CONUS-based active Army Corps; Commander Second Fleet; Commander 12th Air Force (soon to be Commander 8th Air Force); and Commanding General, Second Marine Expeditionary Force. The permanently assigned staffs of JTF commanders are oriented primarily toward service functions and responsibilities. Each JTF commander is routinely given important responsibilities in joint exercises, and augmented by personnel from CINCLANT and other components as necessary. Joint training and readiness could be measurably enhanced by permanently assigning sufficient personnel from each service to make the JTF staffs truly joint, but without diluting the ability to carry out service responsibilities or compromising primary areas of expertise. This could be accomplished by exchanging a modest number of permanent billets between existing organizations, though the need for some additional billets cannot be ruled out without further analysis.

One key to adding value without adding cost or additional bureaucratic layers is steadfastly controlling growth of the LANTCOM staff if it assumes new responsibilities. Ideally, the goal is zero growth. To accomplish the mission without additional personnel, LANTCOM would rely on service components—namely, FORSCOM, ACC, LANTFLT, and MARFORLANT—to perform their current functions. LANTCOM is not able to take over responsibilities or do the work of the component commands. Rather, it will provide a common vision and efficiently coordinate mutual efforts. The component commanders themselves would serve as an executive board, helping to develop

Members of the 82^d Airborne secure a building during an exercise in the Gulf.



DOD photo



U.S. Navy photo by John D. Biviera

Marines hit the beach in Manta, Ecuador, during a combined exercise.

and instill in LANTCOM the customer orientation needed for success.

Earlier organizations have had a CONUS-based joint training mission, such as U.S. Strike Command, established in 1961 and replaced by U.S. Readiness Command in 1971. Because they were perceived to conflict with service Title X responsibilities (that is, to organize, train, and equip forces), neither command succeeded in its mission. LANTCOM would succeed only by complementing, rather than competing with, service programs. Success would be measured by just how well LANTCOM satisfies cus-

tomers demand by providing trained and ready joint force packages to meet a supported CINC's particular needs for periodic presence forces, forward positioned forces, and surge forces in times of crisis or conflict.

The Goal of Unification

Global security and economic reality call for a restructuring of our defenses. This involves refining the capabilities and roles of the Armed Forces to advance the Nation's security interests in the future. The definition of those interests is growing. To do the job we must change and adapt. We must find new ways to bring our full capabilities to bear on emerging security challenges.

We still need a capable military to defend our national interests. But, at the same time, the Armed Forces *can* be smaller and less costly. Meeting future challenges with a smaller, less costly force, however, will depend both on continued technical and C⁴I superiority, and on realizing the full force-multiplier potential of jointness.

The fourth and final cornerstone in realizing that potential is assigning a single commander the mission of training designated CONUS-based forces to fight as a joint team. Giving that mission to LANTCOM, as recommended by the Chairman, would be the next logical step in the evolutionary process of unification which began in 1947. By wisely using the tremendous capability at hand, we *can* add value without increasing cost or the size of the bureaucracy. And, by so doing, we can ensure effective joint leadership and combat capability on tomorrow's multidimensional battlefields.

JFQ



DOD photo



U.S. Navy photo

(Top) Air Force A-10
Warthog.
(Bottom) Navy A-7
Corsairs.



Unity of Control: Joint Air Operations in the Gulf

By JAMES A. WINNEFELD and
DANA J. JOHNSON

IN THE ANNALS OF WAR few will deny Operation Desert Storm's uniqueness. It followed an uninterrupted U.S. force buildup on the Arabian peninsula that lasted five and a half months. The air resources of all services arrived quickly, and most occupied a preexisting base structure in theater that ensured land-based airpower would play the predominant role. The battlefield called Iraq and Kuwait was isolated before a bomb was dropped or a missile fired. Unlike Korea and Vietnam, the enemy had few places to hide. Communication and logistics lines were visible and readily targetable. Most important, the United States held the initiative; it would decide when, how, and where combat operations would begin and how the campaign would unfold. The officers in command were given wide latitude by political authorities over the conduct of the campaign—what targets to attack, when to hit them, and what weapons to use. In short, if the Commander in Chief, U.S. Central Command (CINCCENT), and his airmen could have started from scratch and defined circumstances ideally suited to the application of land-based airpower, they would have created a situation much like Iraq's with its army exposed to air attack in Kuwait.

Summary

Operations Desert Shield/Desert Storm demonstrated the effectiveness of modern airpower and joint air operations. The nature of those operations, and the extensive resources at the disposal of both U.S. and coalition forces, however, masked problems in command and control. Unresolved doctrinal issues and some residual controversy over roles and missions did not surface because of the abundant air assets in the theater. Accordingly, decisions about allocating resources never became contentious. The adage that one learns more from failure than from success should be applied to the Gulf War. There is still the danger that jointness may be a façade for single-service command structures and procedures, or that its influence may stop with the CINC. A cadre joint air staff that can be rapidly expanded in a contingency is one lesson of Desert Storm, an operation in which there was unity of control, but *not* command.

Excerpted from *Joint Air Operations: Pursuit of Unity in Command and Control, 1942–1991* by James A. Winnefeld and Dana J. Johnson. Copyright © 1993 by the Rand Corporation. Published by the Naval Institute Press in May 1993 [ISBN 55750 926 3].



But it is unfair at best to say that the United States should put the experience of Desert Storm aside because it was atypical. In spite of the many unique features of Desert Storm, several characteristics of the campaign are likely to be common to major contingencies in the future. First, the effective and efficient application of military force requires “empowerment” of the unified chain of command—to include joint commanders who are subordinate to the commander of the unified command. The authority delegated to the Joint Forces Air Component Commander (JFACC) made it possible to integrate the air effort. Second, the effectiveness demonstrated by joint air operations in Desert Storm will become even more important as total U.S. air resources diminish. Third, Desert Storm made it clear that airpower has developed vital new dimensions since Vietnam: stealthy strike aircraft, large-scale use of precision-guided munitions (PGM) including long-range cruise missiles, and comprehensive battlefield surveillance systems are but a few. Fourth, the air forces of the three services can be coordinated in the conduct of joint operations—if there is clearly a lead service and if each service component is demonstrably dependent on the others to provide capabilities it cannot supply, quantitatively or qualitatively. Finally, there is a place for air operations, separate from the land and naval operations, in theater contingency planning. This is not to argue that air operations are all that will be needed in most cases. But an air-only operation is an option—either as a precursor or as a stand-alone element of theater strategy. Because that option exists, air operations concepts must be integrated fully in their planning.

It is against this backdrop of unique features and broad lessons that we need to examine the air operations of Desert Storm

if CENTCOM could have defined circumstances ideally suited to land-based airpower, they would have created Iraq's army

and the way they were planned, organized, controlled, and executed. It was nearly a textbook application of U.S. Air Force doctrine, with the other services playing important supporting but not starring roles. The Air Force deserves great credit for bringing to the conflict a paradigm for command and strategy that was suited to the circumstances, while at the same time coordinating with the other services to achieve unity of effort and unity of control. For the first time since World War II all the engaged fixed-wing tactical air forces of the various services were under the tactical control of a single air commander.

Doctrine and Organization

Between the Vietnam War and Operation Desert Shield several developments fostered interest in joint command and control issues. The most important was the Goldwater-Nichols Department of Defense Reorganization Act of 1986. This piece of legislation gave the commanders in chief (CINCs) of unified commands and the Chairman, Joint Chiefs of Staff, major new responsibilities in resource allocation as well as national security planning and operations. Such empowerment came at the expense of the services, whose role was carefully limited to support of the unified combatant commands—to organize, train, and equip forces, but not to employ them. While these changes went far beyond joint air operations, their effect was most keenly felt in that sphere because it is where interaction among service roles and missions was the most sensitive.

Along with the subtle but important changes in mindset put into motion by Goldwater-Nichols, there was significant movement in the joint doctrinal realm. Three successive Chairmen pushed the formation of joint doctrine, culminating in the establishment of an Operational Plans and Interoperability Directorate (J-7) charged with developing the doctrinal underpinning to support truly joint operations, especially joint air operations.

But even beyond these factors, the services were gradually learning to operate together and to accept subordinate roles. The Grenada and Panama interventions as well as joint exercises—though not always involving joint air operations as defined here—built up a degree of familiarity that

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had been absent in Korea and Vietnam. Innovative commanders reached out to develop joint plans to exploit the aggregate capabilities of all the services. For instance, the late 1980s saw greatly increased coordination between commanders of the 7th Fleet and the 5th Air Force in Japan in developing joint contingency plans for Northeast Asia. Previously, each service had formulated its own contingency plan for striking theater targets.

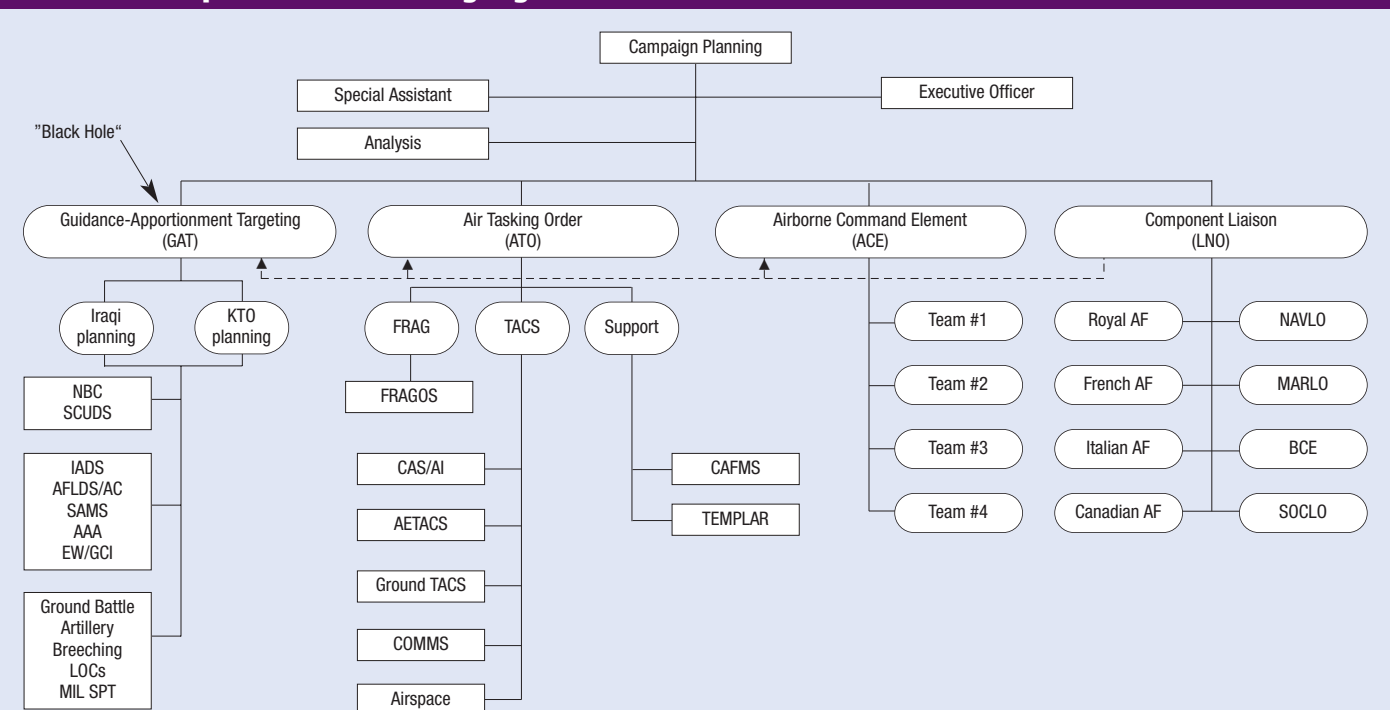
In spite of this progress, problems remained. Notwithstanding the 1986 Omnibus Agreement setting out guidelines for tactical control of Marine air forces, the Marine Corps resisted the idea that there could be circumstances in which its air assets would not be tied to the Marine Air-Ground Task Force (MAGTF) role. The Navy for its part saw itself as a full-service contingency force. Furthermore, the Air Force demand for unity of command to wage an air campaign (with much less emphasis on land and maritime campaigns) received a sour reception from the other services. The Air Force had continuing disagreements not only with the Navy and Marine Corps but with the Army over providing battlefield support to ground forces.

Both the remaining difficulties and the progress are easily overstated. The point is that the Department of Defense embarked upon Operations Desert Shield/Desert Storm with some major advantages compared to the situation that existed at the end of the Vietnam War. But some unresolved problems were masked by ambiguous compromises (for example, the Omnibus Agreement), simplistic solutions (some of the effects of Goldwater-Nichols), and an abundance of air assets (the product of the Reagan defense buildup) that allowed commanders to dodge difficult command and control issues. Desert Storm was to put both the progress that had been made and the problems that remained to a new test.

Initial Planning

Some observe that planning for Desert Shield started in August 1990. But for years the staffs of CINCCENT and his Commander of Air Forces (COMUSCENTAF) had been developing and honing plans for a massive movement of airpower to the Gulf region. While the prospective opponent and circumstances of combat shifted from time to time,

CENTAF/JFACC Operations and Planning Organization



Source: USCENAF Combat Plans Handout, December 31, 1990.



U.S. Air Force photo by Jose Lopez, Jr.

DOD leadership during the Gulf War: (front row, from left) GEN Colin L. Powell, USA, Chairman, Joint Chiefs of Staff; Hon. Richard B. Cheney, Secretary of Defense; GEN H. Norman Schwarzkopf, USA, Commander in Chief, U.S. Central Command (CINCCENT); LTG Calvin A.H. Waller, USA, Deputy CINCCENT; (back row from left) LtGen Walter E. Boomer, USMC, COM-USMARCENT; Lt Gen Charles A. Horner, USAF, Commander, 9th Air Force/COMUSCENTAF; LTG John J. Yeosock, USA, Commander, 3d Army/COMUSARCENT; VADM Stanley R. Arthur, USN, Commander, 7th Fleet/COMUSNAVCENT.

a continuing feature of the plans was the key role of theater airpower. A major uncertainty was the availability of bases in theater, which was quickly resolved by mid-August. Long-standing deployment plans, revised to fit the size of the forces committed and the bases available, were executed.

Less attention had been given to force employment plans for committed air forces because so much depended on the nature of U.S. involvement: would it be defending against an invasion of Saudi Arabia, or going on the offensive against an aggressor? Because Lieutenant General Charles A. Horner, USAF, Commanding General of the 9th Air Force and COMUSCENTAF, was in the midst of deploying forward to Saudi Arabia with additional responsibilities as CINCCENT (Forward), and because an early air offensive option was needed, CINCCENT, General H. Norman Schwarzkopf, USA, asked the Vice Chief of Staff of the Air Force to develop an outline air option.

The plan, known as "Instant Thunder," was delivered to Schwarzkopf on August 10, 1990 and tentatively approved as a planning option by him and later by the Chairman, General Colin L. Powell, USA. At the Chairman's direction, planning for the air campaign was made a joint effort at that time, and representatives of the other services and the Joint Staff were included.

The thought process behind "Instant Thunder" called for development of a concept for the air campaign as well as some details that could be part of an operations order. It was rough, but it was intended to

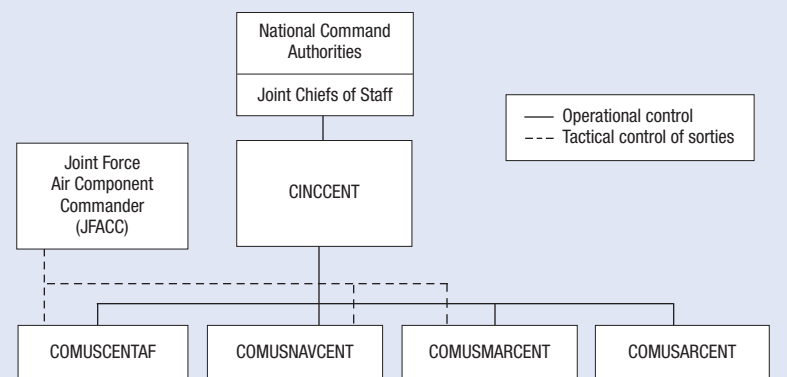
give the National Command Authorities an air option. It proposed an air offensive, not air defense or support of ground forces. In mid-August this outline plan was taken to Riyadh, and Lieutenant General Horner was briefed. At that point air operations planning shifted to Riyadh; thereafter the Joint Staff and the services played only a supporting role. The focal point of follow-on planning was the development of an Air Tasking Order (ATO) that covered the first 48 to 72 hours of air operations against Iraq and, to a lesser degree, Iraqi targets in occupied Kuwait.

Historically, the air tasking order is the means by which Air Force commanders translate campaign and attack plans into battle orders. It specifies which air forces will be used against which targets, at what time, and under what coordination and deconfliction modalities. The ATOs for Operations Desert Shield/Desert Storm were continuous and required time-consuming, meticulous staff effort to ensure that forces launched from different bases at different times (often flying through the same airspace) performed their missions and supported one another. Before Desert Shield the Air Force alone used such a document and its associated software for theater-wide operations. The other services, more accustomed to smaller operations and face-to-face coordination from a single base, used less detailed battle order documents or fragmentary orders. In Desert Storm the ATO became joint and was the master document shaping the air war.

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Developing the attack plans and the ATO for the first days of the air war was an immense undertaking because of the changing priorities, target lists, and availability of air assets. The effort was directed by the JFACC and carried out by the Guidance-Apportionment-Targeting (GAT) cell on the JFACC staff. The Iraqi targeting part of the GAT was referred to as the "Black Hole" because access to it was so limited. While manned mainly by Air Force officers, liaison officers from the other services also were

Command and Control in Operation Desert Storm



Source: Interviews with participants.



U.S. Air Force photo by Joe Coleman

Lieutenant General Charles A. Horner, USAF, USCENAF Commander, at an airbase in the United Arab Emirates.

part of the planning effort from the very beginning.

Developing the plan for the initial phase of air operations consumed most JFACC planning time through the autumn and early winter. Meantime, in the real world of Desert Shield, daily ATOs governed overland air defense, surveillance, and quick-reaction alert operations in the theater. These too were JFACC products, developed largely by Air Force officers and supplemented by officers from the other services and coalition air forces.

Command Arrangements

The command arrangements for Operations Desert Shield/Desert Storm were simple compared to the convoluted command structure in Vietnam. The chain of command went from the National Command Authorities in Washington through the Chairman to CINCENT. Under CINCENT was a mix of service component commanders, a functional component commander (JFACC), and assorted other support commands. The air functional commander (COMUSCENTAF wearing his JFACC hat) was General Horner, who was responsible for “planning, coordination, allocation, and tasking based on the joint force commander’s apportionment decision.”¹ Thus, ATOs approved by the JFACC guided the actions of the relevant service component commanders. This was a manifestation of tactical control of sorties (but not service components), an authority much more encompassing and rigorous than the “coordination control” that defined interservice relationships during the Korean War and

the “mission direction” supposedly operative in Vietnam.

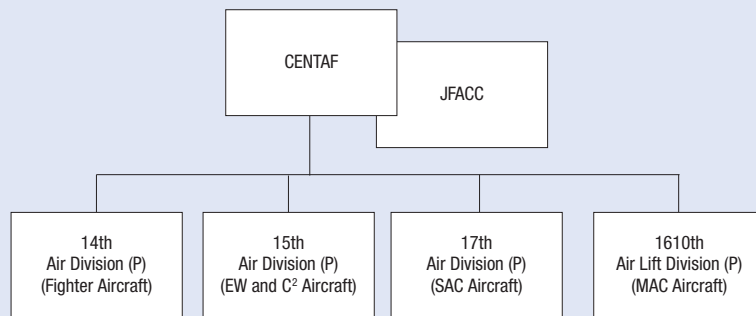
The wording of the 1986 Omnibus Agreement gave the Marines an opening to bypass this arrangement, but the command relationships were now clearer and more binding. The room for exceptions had been narrowed, and there were fewer incentives to exploit those exceptions. The Navy played by the new rules, in part because it was dependent on Air Force tanker and Airborne Warning and Control System (AWACS) support and in part because it had to work through the system to hit targets it considered important.

JFACC and ATO: Engines of Jointness

By centralizing planning and decision-making the JFACC forced a greater degree of coordination of joint air operations than was possible under the more laissez-faire command environment of Korea and Vietnam. If a service component wanted tanker support or air defense suppression, if it wanted to avoid having its aircraft endangered by friendly fire, if it wanted certain targets hit, and if it wanted to be a player in the air attack plan, then it had to participate in the functions of JFACC headquarters as well as fly the air attack plan as set out incrementally in the daily ATOs. As coordinating practices developed, the services oriented their efforts toward shaping the ATO and negotiating exceptions to this coverage. They could do that only by participating in the JFACC planning and order-writing process in Riyadh.

The ATO became a “bible”—transmitted electronically to Air Force and Marine Corps headquarters and delivered by naval aircraft to carriers at sea. This is not to say that service special interests did not attempt to work around the JFACC and ATO; but such attempts became an exception, and the game was played by tacitly approved rules.² The JFACC and ATO were flexible in many dimensions, and the special needs of specific operators were for the most part accommodated.

But in one important respect the ATO was not flexible: it took 48 hours to build an air tasking order for any given flying day. While one day’s ATO was being executed another two were in preparation, and two or three more were being sketched out conceptually in the strike planning cell. Changes

CENTAF Command Relationships

Source: U.S. Department of Defense, "Conduct of the Persian Gulf Conflict: Final Report to the Congress" (Washington: Government Printing Office, April 1992), p. K-12.

where joint doctrine was lacking, Air Force doctrine and organizational practices were used by default if not preference

could be made in execution, but it was awkward and occasionally risky if communications problems or other mishaps occurred. The ATO was particularly suited for use against a hunkered-down enemy who had lost initiative. But in a rapidly changing situation, or when there were delays in bomb damage assessment, execution problems could and did occur. The ATO meshed well with the Air Force command paradigm of centralized control—but not with Navy and Marine practices of decentralized control and mission vice tasking orders.

An ATO covering an entire theater of operations was large and unwieldy. In containing all the needed information for all operators, it necessarily provided a great deal of extraneous information for any particular operator. Fast access and an ability to manipulate ATO data into more usable formats required special software and systems support that the Navy and Marines lacked. The Air Force had a cumbersome but useful Computer-Assisted Force Management System (CAFMS) that could easily pick out data from the ATO and display it to fit the needs of different echelons. Moreover, it provided an interactive capability that Air Force users found helpful.

The Air Force

Desert Storm vindicated the Air Force doctrine of unity of theater air coordination and control and, up to a point, its strategic concept of air operations separate from ground operations. Circumstances of geogra-

phy, base infrastructure, and the type of enemy worked to the Air Force advantage, allowing use of its state-of-the-art weapons against an ideal opponent in a nearly ideal scenario. One need not dwell on the unique nature of the Gulf War to observe that the Air Force was well prepared in its strategic concept, doctrine, and hardware. The Air Force command and control system became the theater command and control system, and other services had to adjust to match it. A single air commander was designated; that position was filled by an Air Force officer who was in close proximity to the CINC. Moreover, there was little evidence that the CINC became involved in JFACC decisions other than those related to apportionment. However, as the ground campaign approached, the CINC did insist on establishing a Joint Targeting Board to ensure that the needs of all service components were more fully addressed.

JFACC was at its core an Air Force Staff. It was joint (or "purple suited") only to the extent that liaison officers from other services and the coalition air forces were temporarily assigned to it. The old USCENTAF (9th Air Force) staff was expanded with personnel from commands all over the Air Force. Where joint doctrine was lacking, Air Force doctrine and organizational practices were used by default if not preference.

The Air Force was equally well supported in hardware and weapons. It had virtually the only stealth, theater air-to-air refueling, state-of-the-art battlefield air surveillance, and deep penetrator bomb capabilities in theater. It also had adequate fighter aircraft. But it did not have enough tankers to support both itself and the other services, or enough Suppression of Enemy Air Defenses (SEAD), reconnaissance, and PGM designator and delivery aircraft.

The Navy

Before Iraq invaded Kuwait in August 1990, both Navy and Marine Corps forces were considered ideally suited to missions in the Persian/Arabian Gulf region because of the problematic status of base access. Moreover, a carrier battle group was rarely far from the Gulf, four to six surface escorts were usually in the region or in adjacent waters, and

there was equipment for a full Marine expeditionary brigade aboard a maritime prepositioning squadron moored at Diego Garcia.

Naval plans were oriented around two general scenarios: defense of shipping and maintenance of access to the Gulf (such as in Operation Earnest Will, the escort of re-flagged Kuwaiti tankers in 1987), and support of a less likely air-land campaign. In the late 1970s and early 1980s, the United States feared an incursion by Soviet or Soviet client forces; in the late 1980s the principal threat became Iran's (and later Iraq's) potential for causing trouble locally. In the larger conflict scenarios the Navy and Marine Corps might arrive first, but regional geography and the size of the requisite U.S. force argued for a primary Army-Air Force role.

In August 1990 the larger scenario occurred; bases were made available, and a massive, across-the-board U.S. military buildup began. The Navy's short-duration contingency operations paradigm could not prepare it for a new role as part of a large air-ground campaign. As the buildup continued successive battle groups arrived and found themselves plugged into a planning and tasking system and a command structure in which they had little experience—but some degree of suspicion. The connection to the JFACC and ATO system was not a perfect fit. There were setbacks as the Navy's new role as a team player, not team captain, evolved and was gradually accepted.

The key officer was the COMUSNAVCENT representative in Riyadh (in effect the

ashore deputy COMUSNAVCENT, who remained afloat). It was this officer and not the commander at sea who coordinated daily with the CINCCENT staff and the JFACC. During initial operations the coordination of naval air operations with theater air operations flowed from the JFACC through the Navy Staff in Riyadh to the commander afloat and then to the Red Sea and Arabian Gulf battle force commanders, the individual battle groups, and finally the carrier air wing commanders. This arrangement was too unwieldy for timely coordination, so a streamlined chain evolved in which the Navy staff in Riyadh worked directly with the commanders afloat, often with the strike cells on individual carriers. In effect, the commander at Riyadh and his officers at JFACC became COMUSNAVCENT's strike coordinators.

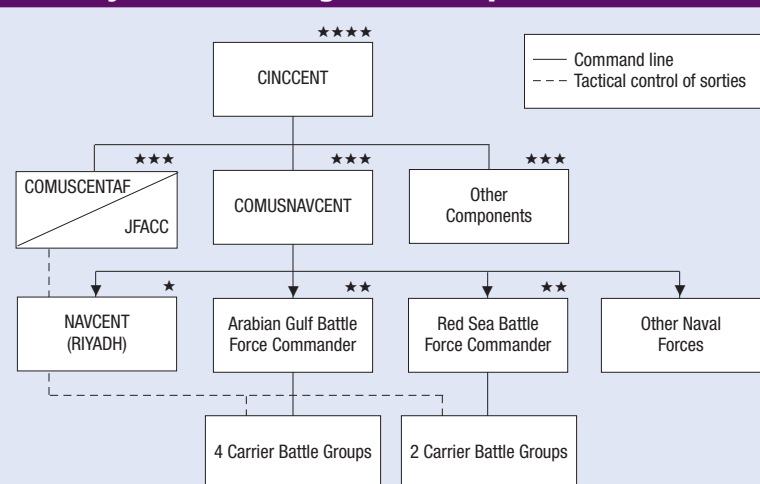
Consideration was given to moving the commander afloat to Riyadh so he could discharge his responsibilities as naval component commander more effectively and meet daily with the CINC and other component commanders. But powerful institutional voices within the Navy argued that operational command of the fleet must be exercised by an afloat commander, and that those responsibilities were more important than daily contact with the CINC and the other component commanders, including the JFACC. There was only one Navy flag officer in Riyadh aside from the one attached to the staff of CINCCENT, while there were as many as ten afloat. COMUSNAVCENT, Riyadh, was the junior battle group commander and (except from August to November 1990) a surface warfare officer.

The Navy experienced a series of operational deficiencies during Desert Storm. Some were the result of policy and program decisions made outside the Navy, but others stemmed from service priorities and implicit doctrine:

▼ Initial reluctance to deploy carrier battle groups in the narrow and shallow Arabian Gulf. The result was delay and difficulty in integrating the Gulf carriers with JFACC-controlled operations.

▼ Heavy reliance on Air Force tankers for strikes because the carriers were initially far from most targets. This denied the Navy the independent role it had grown accustomed to and became a basis for conflict with the JFACC when theater tanker assets were in short supply.

U.S. Navy Command Arrangements for Operation Desert Storm



Source: U.S. Department of Defense, "Conduct of the Persian Gulf Conflict: Final Report to the Congress" (Washington: Government Printing Office, April 1992), p. K-15.



An Air Force KC-135 tanker refuels Navy A-6 Intruders and A-7 Corsair II's over the Red Sea during Operation Desert Storm.

Navy KA-6D and A-7K aircraft from the Red Sea Battle Group refuel in flight on their way to engage enemy targets.

F/A-18A Hornets, SH-3H Sea Kings, and A-6E Intruders on the flight deck of *USS Saratoga* in the Red Sea during Operation Desert Storm.

U.S. Air Force photo by Rose Reynolds

U.S. Navy photo by Ed Bailey

U.S. Air Force photo by Chris Putman

▼ Inadequate target identification systems on Navy fighters. In the dense air traffic environment of Desert Storm, the rules of engagement were designed to require dual phenomenological identification of air contacts before engaging. Air Force fighters designed for the similarly restrictive environment of Central Europe had the necessary equipment; Navy fighters designed and equipped for the less crowded outer air battle in defense of the fleet did not and could not be used in some critical Combat Air Patrol (CAP) stations.

▼ A bottom-up strike planning system more attuned to short-term contingency operations than to massive, continuous strike operations. Fragmented Navy strike planning worked in single carrier operations and deliberately planned strikes, but in Desert Storm it caused initial difficulty in integrating Navy flight operations with other service and coalition forces.³

▼ A shortage (shared with the other services) of laser designator platforms and laser-guided bombs. The only designator platform was the venerable A-6. Many other aircraft could drop laser-guided bombs, but few could guide them.⁴ Moreover, the Navy lacked the equivalent of the Air Force's deep penetrator bomb (the laser-guided

I-2000). For this reason, Navy aircraft were not suitable for some important strike missions.

Balanced against these shortcomings were some Navy advantages:

▼ The land-attack Tomahawk missile was not only extremely accurate, but could be used in daylight and bad weather against strongly defended targets. The Air Force's stealth F-117s operated at night, but the only way to keep key targets under attack the rest of the time without putting aircrews at risk was to use Tomahawk missiles. There were no comparable standoff weapons in JFACC's arsenal.

▼ The Navy's high-speed radiation missile (HARM)-shooter team put real teeth into the SEAD mission. For many, Navy F/A-18s, A-6s, and EA-6s with HARM were the preferred SEAD package in theater. Navy (and Marine) resources were used to make up for Air Force and coalition SEAD deficiencies, thus putting a high premium on pre-strike planning and coordination of tactics.

▼ The Red Sea carriers provided useful strike capability in spite of the long distance to most targets and demonstrated again the complementary nature of land and sea-based air operations under competent joint command and control arrangements.

The Marine Corps

The Marines were early arrivals in Desert Shield. Advanced elements of the 1st Marine Expeditionary Force and the 7th Marine Expeditionary Brigade arrived in Saudi Arabia on August 14, 1990. Ships from Maritime Prepositioned Squadron Two began unloading equipment the next day. But Marine air units were slow to appear—the first fighter squadrons arrived on August 22—because of a shortage of Air Force tanker support for the transit.⁵ From the start the Marines were tasked with defending the Gulf coast of Saudi Arabia. Ultimately, their position was translated into an offensive posture intended to retake the coastal route to Kuwait City. Marine air bases were quickly established at Sheikh Isa (Bahrain) and King Abdul Aziz (near Al Jubayl). Some Marine AV-8B Harriers were kept afloat on amphibious units to fly missions against Iraqi forces in Kuwait and to provide air support for Marine Corps ground units.

Since Vietnam, Marine fixed-wing tactical air units had been completely reequipped. F/A-18s and AV-8Bs had replaced F-4s and A-4s, and only a few A-6s remained in the inventory. Senior Marine aviators still remembered Vietnam, including what they perceived as an Air Force attempt to gain control of Marine air at the expense of the MAGTF concept. As the Marines saw it, they had responsibility for a specified area in the vicinity of their ground forces. Within that area it was the commander of the MAGTF, not JFACC, who determined missions and priorities. Surplus sorties would be made available to JFACC. The Marines saw themselves as the only truly combined-arms team, integrated across air-ground lines and not across service lines in the air medium. The Air Force, on the other hand, focused on utilization of all tactical air resources in theater and remained adamant on the need for centralized allocation and tasking authority.

The series of compromises struck between the JFACC and Marine Corps commanders put their fixed-wing tactical air under the air tasking order system while the Marines retained control and tasking authority over sorties in specified zones near their ground formations. This was the old “route package” from Korea and Vietnam in all but name, but it did recognize in principle the tasking authority of the JFACC over all air operations in theater. One element of the

bargain initially allocated all Marine A-6 and half of all F/A-18 sorties to the JFACC for tasking as he saw fit, while the remainder of the F/A-18 and all the AV-8B sorties remained effectively under Marine control.

Sortie Generation Performance in Operation Desert Storm

Component	Number of sorties	Percent of total
<i>Sorties flown January 17–March 3, 1991</i>		
CENTAF	67,285	59
MARCENT	10,321	9
NAVCENT	18,007	16
Allies	18,190	16
Total	113,803	
<i>Sorties Flown February 23–27, 1991</i>		
CENTAF	8,133	54
MARCENT	1,854	12
NAVCENT	2,769	18
Allies	2,327	15
Total	15,083	

Percent of total flown during ground war: 13%

Percent of days of ground war compared to length of campaign: 11%

Source: U.S. Department of the Navy, Navy Historical Center, *Command and Control in the Vietnam War* (Washington: Government Printing Office, 1991), p. D-2. The Air Force reports a total of 109,876 sorties (all services/nations), compared to 113,803 in the corresponding Navy total. See U.S. Department of the Air Force, *Reaching Globally, Reaching Powerfully: The United States Air Force in the Gulf War* (Washington: Government Printing Office, 1991), p. 28.

The fundamental tension in this bargain was between the competing demands of a strategic air offensive under the JFACC (that is, Air Force) direction and eventual tactical air operations focused on support of ground forces (including Marines). From the start of combat air operations on January 17 to the offensive push into Kuwait and Iraq on February 24, the JFACC believed that Marine air had a role beyond preparing the battlefield for Marine ground operations. Marine commanders agreed but were concerned that when the time came to prepare the battlefield and conduct ground operations, their air units would be diverted to other tasks. It was a quarrel over apportionment and timing. Uneasy compromises were cobbled together, as they had been in Korea and Vietnam, but the fundamental doctrinal issue was not resolved.

In the course of events, the Marines did husband their sortie capabilities during early air operations before the start of the ground offensive, so that adequate air support would be available to Marines on the ground when

needed. The Marines' sortie rate nearly doubled while the ground war was in progress.

The Strategic Air Command

In prior campaigns the effective use of strategic bomber assets committed to theater operations was hampered by awkward command and control arrangements and equipment suitability problems. The simple explanation was that in Korea

and Vietnam those bomber forces were organized, trained, and equipped for a global strategic mission centered on nuclear weaponry. The Air Force did

not want its strategic bombers, which had a global role, placed under the command of a regional CINC for a regional mission. While bomber forces were made available to a regional CINC in sufficiently compelling circumstances, command and control remained firmly in the hands of the strategic bomber force commander.

In the early 1980s, however, Strategic Air Command (SAC) attitudes began to change, and bombers were increasingly made available to regional commanders for exercises and conventional contingency operations. Many explanations have been offered for this change. But for whatever reason, SAC bombers were included in the planning for Desert Storm, quickly put under CINCCENT operational control, and tasked under the centralized ATO.⁶ SAC liaison officers were assigned to the JFACC, and two generations of command and control problems went away nearly overnight.

Allied Air Forces

Insofar as the number of sorties flown are concerned, allied air forces played nearly

as big a role in the Gulf War as naval air forces. The air forces of the United Kingdom (RAF), France, Italy, Canada, Saudi Arabia, Kuwait, Bahrain, the United Arab Emirates, and Qatar were involved to some degree and were important politically as an expression of international resolve.

The allied air forces were under the JFACC and air tasking order system of control. Since they lacked certain C³ and other important combat support capabilities, they were critically dependent on U.S. in-flight and mission planning aid. Of interest to this exploration of command and control issues is the fact that they represented one more layer of complexity; the JFACC tried to broker various national interests and develop ATOs that fulfilled both his responsibilities and those external requirements.

Air Operations

U.S. and coalition air operations were the most massive and intensive since World War II. Sorties were flown from nearly three dozen airfields, six aircraft carriers, and several amphibious force ships. Major artillery and missile barrages were launched from across the battlefield and warships at sea. The most intricate aspects of coordination of operations were:

- ▼ Deconflicting forces using the same airspace or hitting the same targets while protecting them from friendly fire and preventing misidentification of friend and foe.

- ▼ Maintaining airpower flexibility and ensuring efficiency and effectiveness in the absence of timely bomb damage assessment.

- ▼ Allocating tanker support for thousands of tactical fighter sorties each day.

- ▼ Providing SEAD support to strike aircraft from a variety of air forces and operated by personnel from dissimilar operational and doctrinal backgrounds.

These challenges were all met successfully, though not without great difficulty and the occasional mistake. The careful planning facilitated by the long buildup and centralized control provided the basis of this success. The "short poles" in the operations tent were tankers and SEAD aircraft, not tactical fighter aircraft. These shortages prevented service components and coalition partners from opting out of some command and control problems; full participation in effective air operations required coordination.

U.S. and coalition air operations were the most massive and intensive since World War II

B-52 bomber taxis for takeoff.



U.S. Air Force photo by Donald McMichael

Once Desert Storm began, the major difficulties in planning and operations concerned locating and destroying Iraqi Scud missiles, allocating tankers, and making decisions about time and level of effort in the transition from strategic air operations to preparation of the battlefield in the Kuwaiti theater. The Scuds may not have posed a significant military threat, but their political implications forced the diversion of sizable amounts of the air effort and the attention of senior air commanders.

Some Navy and Marine officers complained of inadequate support and a JFACC bias toward supporting Air Force units. But their quarrel was more with the ground rules for tanker allocation than application of those rules. The Air Force staff officers who dominated the JFACC staff maintained that their overriding goal was to increase the number of quality weapons on Iraqi targets regardless of which service provided the strike aircraft. Because of geography, Navy aircraft required more inorganic tanker support than Air Force aircraft per ton of ordnance on target.

As the air war progressed Army and Marine commanders became concerned that insufficient attention was being paid to shaping and preparing the battlefield for ground operations. Strategic targets (such as command and control, lines of communication, and airfields) were being hit, but in their view enemy ground forces in the field were neglected in targeting. This restiveness resulted in the formation of a Joint Targeting Board under the deputy CINC.

The job of this board was to play a more active role in advising on air apportionment decisions and in targeting Iraqi forces of interest to U.S. ground commanders. This alleged interference nettled Air Force officers, who believed they had sufficient information and staff support from all involved services to arrive at apportionment and targeting decisions. Despite these conflicting viewpoints,

the results were satisfactory. By mid-February ground targets in Kuwait and southern Iraq were a major focus of the overall air effort. By February 24 and the start of the theater ground operations, Iraqi ground forces had been fixed and pounded to the point of being largely neutralized. Few ground commanders in history have been better served by their air brethren.

Unity of Command

Desert Storm featured two important elements of unity of command: a single joint force air commander and a single air tasking order that conveyed his instructions. The JFACC exercised tactical control of sorties in that he provided "detailed and, usually, local direction and control of movements and maneuvers necessary to accomplish missions or tasks assigned." Historically, this type of control, combined with the requisite authority, was largely absent in Korea and Vietnam, but COMAIRSOLS (the senior aviator in command of the air units in the Solomons) certainly exercised it from 1942 to 1944.

But there is an important distinction between tactical control and command authority. The JFACC did not command forces; he controlled their sorties when unity of effort was required and set conditions under which sorties were flown in his operating area. Navy, Marine, and some coalition air forces helped shape the ATO by designating the sorties that would be made available for tasking. And they did not always fly the ATO. Individual commanders and flight crews from the services free-lanced when the ATO did not match conditions.

While in some ways this sounds suspiciously like coordination control and mission direction, there were subtle differences. There was a joint force air commander from the start, and he had the authority that his Air Force counterparts in Korea and Vietnam had wanted. There was a focal point for air planning and employment decisions that was neither a committee nor a voluntary organization. Commanders who operated outside the JFACC/ATO umbrella did so with great care and only when they could justify their decisions. Centralized control and decentralized execution became the norm, and free-lancing the exception.

An Air Operations Chronology

August 2, 1990: Iraq invades Kuwait.

August 6, 1990: The *Independence* arrives in the Gulf of Oman, the first in an eventual buildup of six carrier battle groups.

August 7, 1990: U.S. forces begin to arrive in Saudi Arabia including Air Force tactical fighter aircraft, the first of ten fighter wings deployed to the region.

August 14, 1990: The 7th Marine Expeditionary Brigade arrives in Saudi Arabia.

August 22, 1990: The first Marine Corps tactical fighter aircraft arrive in Bahrain.

Late October and early November 1990: Massive air forces are brought into the region to include SAC tankers and Navy SLCM-shooters which marked the transition from the defense of Saudi Arabia to an offensive strategy for the liberation of Kuwait.

January 17, 1991: Combat air operations start with the targeting of enemy centers of gravity, defenses, battlefield preparation, and support of ground operations. "Proven Force"—an Air Force composite wing deployed from Incirlik, Turkey—begins combat sorties against targets in northern Iraq.

February 24, 1991: Ground offensive begins after five weeks of continuous air attack.

February 28, 1991: Cease-fire declared; Iraqi forces have been destroyed or neutralized by a combination of ground- and air-delivered firepower.

But some old practices lived on. In spite of rhetoric to the contrary, the route package concept (albeit in a new form) still flourished in Desert Storm. Many Navy, Marine, and Proven Force target sets were route packages in all but name. Even the system of time-sharing target sets or “kill boxes” made a reappearance. Liaison officers between the JFACC and the various service component commanders continued to perform an essential function. A service component commander who chose not to release sorties or to fly the ATO still had an “out”; various force elements still complained about lack of support or failure to play by the rules. How can we account for these lapses or reversions and still acknowledge Operation Desert Storm a success? The answer is that despite the

**few ground commanders
in history have been
better served by their air
brethren**

progress made toward achieving real jointness, the United States once again was able to buy its way out of command and control problems by the mass of its tactical air forces. It fought

“big” but not always smart.

A better measure of progress in joint air operations is whether the command arrangements and doctrine would have worked with only half the airpower. Seldom in the Gulf War did General Horner have to make the kind of decisions that COMAIRSOLS had to face daily—how to use his meager forces against a strong and active enemy. Horner’s problems were specialized, and he had time to solve them beforehand. For example, he did not have too few tankers, but rather too many fighter aircraft; he had to squeeze the large number into a small area, not spread them thinly. His problems were traffic separation and mutual support, not hard choices between missions for scarce assets (tankers and SEAD excepted). But the genius of General Horner was in gaining and exercising the minimum amount of control he needed to get the job done—and creating conditions that permitted the services to work effectively together.

In sum, Operations Desert Shield/Desert Storm were a major victory for U.S. and coalition arms. However, there remain important unresolved doctrinal issues as well as controversies over roles and missions. The abundance of resources available made it

possible to avoid some difficult apportionment and allocation decisions. Jointness often is used as a facade to cover single-service command structures and procedures. In many ways jointness still stops at the headquarters of the CINCs: they are the lowest level at which joint staffs exist in most theaters. Desert Storm points to the usefulness of cadre joint air staffs and the capacity to fill them out very rapidly.

What Desert Storm achieved was unity of control of air operations, not unity of command. Indeed, unity of control may be all that is needed. Unity of command for tactical air forces may be a needlessly abrasive and overarching term to describe what is actually meant by tactical control. We can rejoice in the progress that has been made since Vietnam in achieving a high degree of jointness in the command and control of air operations; but it is too soon to say that we have done all or even most of what needs to be done.

JFQ

NOTES

¹ Joint Chiefs of Staff, “Joint Doctrine for Theater Counterair Operations,” Joint Pub 3001.2 (Washington: Government Printing Office, May 23, 1986).

² Royal N. Moore, “Marine Air: There When Needed,” *U.S. Naval Institute Proceedings*, vol. 117, no. 11 (November 1991), pp. 63–64.

³ Steven U. Ramsdell, “Trip Report” (Letter to the Director of the Naval Historical Center), May 14, 1991.

⁴ Riley D. Mixon, “Where We Must Do Better,” *U.S. Naval Institute Proceedings*, vol. 117, no. 8 (August 1991), p. 38.

⁵ Lieutenant General Walter E. Boomer, USMC, “Special Trust and Confidence among the Trailbreakers,” *U.S. Naval Institute Proceedings*, vol. 117, no. 11 (November 1991), p. 47.

⁶ U.S. Department of Defense, “Conduct of the Persian Gulf Conflict: Final Report to the Congress” (Washington: Government Printing Office, April 1992), p. K–8.

OPERATION WESERÜBUNG

and the Origins of Joint Warfare

By RICHARD D. HOOKER, JR., and CHRISTOPHER COGLIANESE



Military history finds few examples of nations and armed forces that consistently excel in maneuver warfare based upon speed, focus, decentralized execution, high levels of initiative, and strong small-unit leader-

ship. The German military in World War II was such an organization. It is credited, in particular, with mastering the operational level of war. But one brilliant operation, the invasion of Scandinavia in 1940, has almost been reduced to a historical footnote. That

campaign, recorded as an outstanding example of maneuver warfare at the operational level, is also the first joint operation that involved significant land, sea, and air forces fighting under unified command.

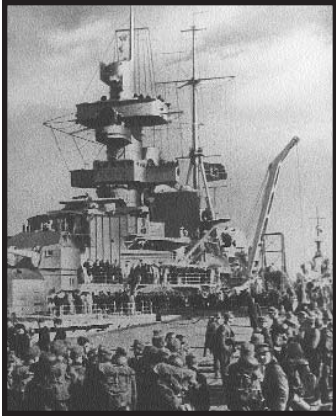
Because it preceded the better-known *Gelb* attack on the Low Countries by just one month, the invasion of Scandinavia (code-named Operation *Weserübung*) has received scant attention from most historians. Nevertheless, it is still worth studying by practitioners of the operational art since it is replete with examples of successfully implemented tenets of maneuver-based doctrine. It also demonstrates the importance of

Summary

The German military genius for maneuver warfare is well illustrated by an often overlooked operation of World War II, the invasion of Scandinavia in 1940. Operation *Weserübung* also warrants examination because it was joint in execution and demonstrates that the German army, navy, and air force—*Wehrmacht*, *Kriegsmarine*, and *Luftwaffe*—could fight as a team even if rivalry among the headquarters of the services made Hitler the operation's unified commander by fault. A combination of speed, surprise, and daring enabled the German armed forces to defy the Royal Navy by transporting troops directly to their objectives along the Norwegian coast. Furthermore, quickness and dash baffled the hapless Norwegians and beleaguered Allied forces. The lessons of this operation were not lost on the British for the balance of the war and remain relevant today as a case study in joint warfare and the operational art.

the linkages between the operational art and strategy and between the various arms and services which typically cooperate in

the first joint operation that involved significant land, sea, and air forces



German troops embarking for the invasion.

joint campaigns. Although more than five decades have passed, the problems and challenges inherent in modern joint operations stand clearly revealed in *Weserübung*.

In this operation, Germany employed a joint force of army, navy, and air force units in a centrally planned, simultaneous assault, along multiple avenues of approach and against numerous key objectives. Execution was highly decentralized, with a minimal need for excessive command and control structures that are the hallmark of modern military organizations.

Furthermore, the assigned objectives accurately identified and exploited Allied centers of gravity. Pitting strength against weakness, the Germans crushed the Danes in one day and destroyed Norwegian resistance in less than two months, despite the arrival of a sizable number of British and French troops.

This stunning success was based on a few simple factors. First, the Germans had good intelligence that led to accurate appreciations of enemy strengths and weaknesses thereby enabling them to focus on critical enemy vulnerabilities. Second, they applied their strengths—including airpower, surprise, and well-led professional forces—against Allied weaknesses such as timid commanders, ineffective mobilization systems, and a vulnerable command and control network.

Third, the bold use of German warships to carry troops to their objectives in the teeth of the Royal Navy led directly to operational success in the campaign. Fourth, Norwegian regular forces were outnumbered, ill-equipped, poorly organized and led, and generally neglected. Simultaneous multiple blows aimed at key points throughout the country paralyzed the Norwegian decisionmaking structure, thus allowing early successes against unprepared defenders.

Finally, the German invasion of France

in May 1940 forced the Allies (British, French, and a smattering of Poles) to entirely pull out of Norway in an effort to stave off disaster on the Western Front. This final element, essentially based on good fortune, saved beleaguered German forces at Narvik and permitted the Germans to complete their conquest of Norway.

Strategic and Operational Planning

The German High Command turned its gaze toward Scandinavia soon after the successful invasion of Poland. While preferring to keep Scandinavia neutral, German planners feared that Britain and France might violate Norwegian neutrality in order to position forces for an attack on Germany's northern flank.¹ Hitler repeatedly argued with the Army High Command (*Oberkommando des Heeres* or OKH) that if he did not act first, the British would establish themselves in the neutral ports. German naval

commanders touted Norway's suitability as a staging area for surface, air, and submarine operations to gain control over the Norwegian Sea and support eventual operations against Britain, which in turn would facilitate access to the North Atlantic.²

An important consideration was access to Swedish iron ore, which supplied German war industries and which traveled overland from Kiruna in Sweden to Narvik in Norway and thence along the Norwegian coastline to German ports in the Baltic.

Hitler, who had exercised supreme military command since February 1938, was also influenced by the tentative steps taken by the French and British to reinforce Finland during the Winter War (which he interpreted as proof of their malicious intentions



General-Admiral Saalwächter, the supreme commander of naval forces deployed to Norway.

Major Richard D. Hooker, Jr., USA, is a member of the National Security Council Staff and Second Lieutenant Christopher Coglianesi, USA, is a platoon leader with the 24th Infantry Division (Mechanized).

2000 hours, April 7



1200 hours, April 8



On April 7 German naval units were sailing at top speed toward Trondheim. At the British Admiralty, no one believed that Norway was the target: the German ships were expected to slip into the Atlantic in order to attack Allied convoys.

By noon on April 8 the Germans had already passed Trondheim. The British were still northwest and south of Bergen, whereas further south, unbeknown to the British, German naval groups were fast approaching the southern tip of Norway.

Source. Maps and narrative adapted from *Norway 1940* by François Kersaudy (New York: St. Martin's Press, 1991).

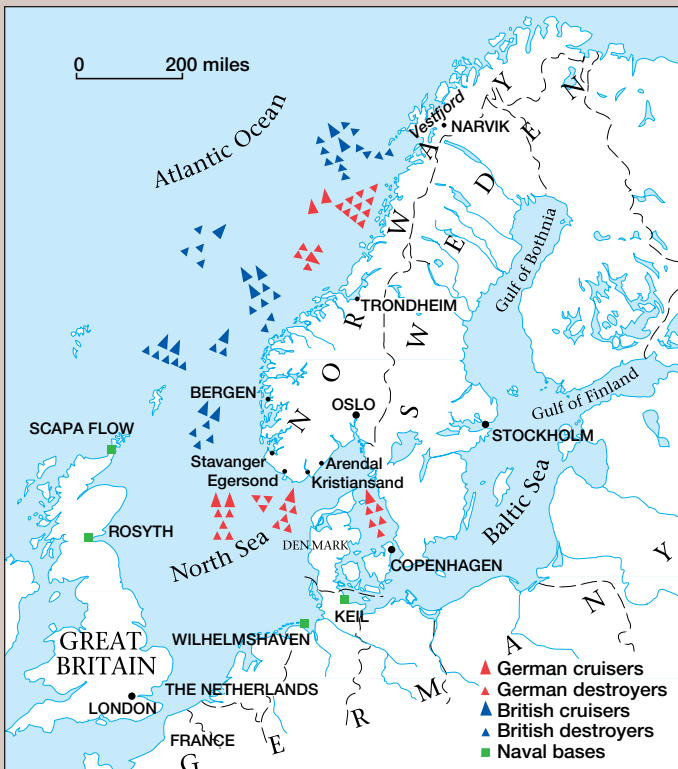
fast warships of the German fleet could be used as troop transports for part of the assault force

in Scandinavia) and later by the *Altmark* incident when British sailors boarded a German vessel in Norwegian territorial waters to free 300 British POWs.

On December 14, 1939, Hitler ordered the Armed Forces High Command (*Oberkommando der Wehrmacht* or OKW) to conduct preliminary planning for the invasion of Norway. The plan, known as *Studie Nord*, included reports submitted by the staffs of each of the services. Given its keen interest in the matter, the navy's report was the most exhaustive. The dominance of naval planning derives in part from the involvement by the army and air force in the preparations for the upcoming invasion of France and the Low Countries, known as *Plan Gelb*.

The navy (*Kriegsmarine*) staff worked out an expanded version of *Studie Nord* between January 14 and 19, 1940, that reached two important conclusions. First, surprise would be absolutely essential to the success of the operation. If surprise could be achieved Norwegian resistance would be negligible, and the only significant threat would be British ships on patrol off the coast of Norway, originally believed to be one or two cruisers. Second, the planners concluded that fast warships of the German fleet could be used as troop transports for part of the assault force. This use of the surface fleet would overcome the range limitations on air transport and allow for the simultaneous occupation of

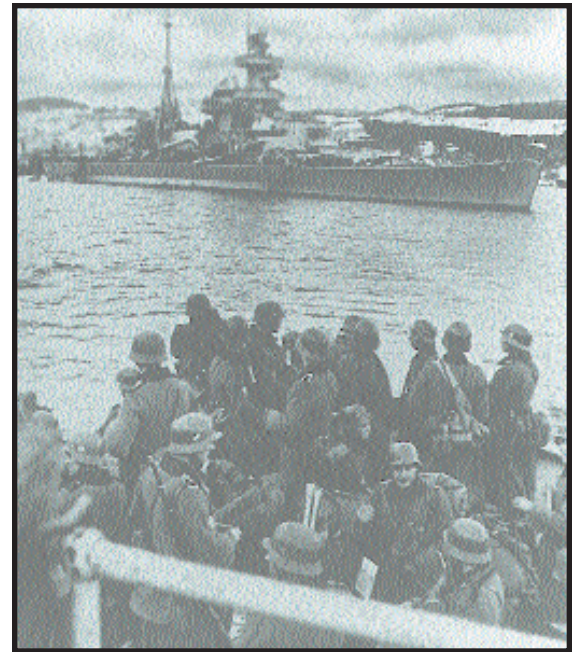
1400–1600 hours, April 8



In mid-afternoon on April 8 the Germans changed courses several times. A British plane spotted the German naval group heading west, and radioed the message back to base. As a result, British ships headed west, thus losing any chance of blocking the German landings.

numerous points on the Norwegian coast, including Narvik.³

These two conclusions revealed daring and a “bias for action” which permeated the German armed forces and had already been exhibited in the Polish invasion. The study called for landings along the entire Norwegian coast from Oslo to Tromsø. On January 20, 1940, the report was submitted to Hitler and the following day he ordered the creation of a special staff within the OKW dedicated to formulating operational plans for *Weserübung*.⁴ Hitler apparently had at least two reasons for bypassing the air force, which would play the dominant role in the actual operation, and taking personal control of *Weserübung*. First, he probably thought that the operation was too complex and ambitious for



German troops successfully land at all locations from Oslo to Narvik, a unique accomplishment in the history of naval warfare.

the junior and untested service to plan and control. Second, Hitler was venting his rage at the air force over an incident earlier in the month when a *Luftwaffe* major carrying *Gelb* was forced down in Belgium thereby letting the invasion plan get into Allied hands.⁵

On February 5 a joint planning staff was assembled at OKW to prepare detailed plans for the invasion. Significantly, the operations staffs of the services were excluded from the planning process. The principal planner was Captain Theodor Krancke, commanding officer of the cruiser *Admiral Scheer*, assisted by a small number of army and air force officers.

Studie Nord had initially called for only one division of army troops.⁶ But Krancke's plan established a requirement for a corps of army troops consisting of an airborne division, a mountain division, a motorized rifle brigade, and six reinforced infantry regiments. Small parachute units were to seize selected airfields so that follow-on forces could arrive by air. Krancke identified six operational objectives which, if simultaneously

captured, would cripple the country militarily and politically and achieve the strategic goals established by Hitler, namely:⁷

- ▼ Oslo, the capital
- ▼ the populated southern coastal areas
- ▼ Bergen, a major southern port and likely British landing site in the event of counter-attack
- ▼ Trondheim, a major rail terminus and the key to control of central Norway
- ▼ Narvik, the chief city in northern Norway and the crucial rail link to Swedish ore fields
- ▼ Tromsø and Finnmark (northernmost areas of Norway)

The loss of ports and airfields in those areas was expected not only to crush Norwegian resistance at the outset but also to forestall intervention by the western powers until it was too late. Seeking security in boldness and enterprise, the Germans intended a large scale *coup de main* to dislocate their true opponents, the British and French, by preempting their intervention in Norway through the simultaneous attack and occupation of all the important points in the country.

To do this, Krancke's plan called for moving German troops by both air and sea. Only a sudden descent on the Norwegian coast and rapid buildup of forces by airlift and sealift (supported primarily by tactical aviation) offered the hope of success without interference by the Royal Navy. Both the large scale use of warships as assault troop transports and the strategic movement of large troop formations by air were innovations in modern warfare.

The German intent was to induce the Danes and Norwegians to surrender quickly without a fight. To ensure this Hitler ordered the immediate capture of the kings of Denmark and Norway.⁸ The Germans believed that seizing both monarchs would shatter resistance at the outset and lead to a bloodless occupation.

After the *Altmark* incident on February 14, 1940, Hitler appointed General Nikolaus von Falkenhorst to prepare forces for the *coup de main* to take the Norwegian ports.⁹ General der Infanterie von Falkenhorst was a mountain warfare expert who had acquired some experience in Nordic operations as a result of German operations in the Baltic in 1918.¹⁰ Falkenhorst quickly concluded that

Denmark should be occupied as a land bridge to Norway.¹¹ Although the size of the landing force was ultimately raised to six divisions, daring and surprise, not overwhelming force, remained the plan's basis. If resistance was encountered, landings were to be forced, beachheads secured, and nearby Norwegian army mobilization centers occupied.¹² The inability of the Norwegians to mobilize was their Achilles Heel—a critical vulnerability and obvious target for German military action.

The final plan assigned the 3^d Mountain Division and five untested infantry divisions—the 69th, 163^d, 181st, 196th, and 214th—to the conquest of Norway under command of XXI Group. Three divisions made up the initial assault echelon while the remainder were scheduled to reinforce thereafter (a seventh division, the 2^d Mountain, was added later).¹³ The air force contributed three companies of parachute troops to seize airfields (in the German military the air force, not the army, owned airborne forces).

The initial landing detachments were small, with the bulk of invasion forces slated to arrive by air and transport ship in subsequent echelons during the first week. In the south, the 170th and 198th Infantry Divisions, supported by the 11th Motorized Brigade, formed XXXI Corps for the assault on Denmark. X Air Corps, a very large organization of some 1,000 aircraft of all types, was tasked to keep the Royal Navy at bay and supply German forces by air.¹⁴

Lightning Strikes

Hitler's initial desire to place all *Weserübung* forces under a single army commander was not realized. Despite his status as Supreme Warlord, and the obvious operational advantages of unified command, Hitler was unable or unwilling to overrule the strong objections of the navy and air force, which rebelled at the idea of placing large naval and air forces under a land force officer. The operation remained under Hitler's personal command (exercised through the OKW operations staff). Falkenhorst was designated the senior commander, exercising no direct command authority over naval and air forces. In the official after action report, German commanders noted that the harmonious cooperation achieved



Generaloberst von Falkenhorst.

by the engaged forces was a compliment to the personalities and professionalism of the commanders involved, but not a result of command arrangements, which they recognized as unsatisfactory.¹⁵

Mindful of signs that the Allies were preparing to occupy Scandinavia first (British planning, code-named *Wilfred*, was far advanced and British forces did indeed lay mines in Norwegian waters on April 8), Hitler ordered *Weserübung* to begin early on the morning of April 9, 1940, with landings at Oslo, Bergen, Kristiansand, Trondheim, and Narvik. Supply ships camouflaged as merchant vessels actually preceded the assault ships and lay in wait in Norwegian harbors. Despite some intelligence indicators, British surface units were not deployed to detect large-scale German movements. The British fleet, with troops embarked to conduct their own landings in Norway, did sortie on April 7 from Scapa Flow, but the fleet did not intercept the fast-moving German ships or interrupt their landing operations. In a tragic

blunder, the Royal Navy marched off its soldiers and steamed away in search of German battlecruisers reported in the area, leaving Falkenhorst to carry out his landing operations unopposed.

The magnitude and speed of the Ger-

man landings completely paralyzed civilian and military leaders in both Denmark and Norway, as well as the Allies. Denmark was quickly overrun on the first day, allowing German close air support operations to be staged from landing fields in Jutland. Norwegian coastal defenders put up a sharp fight in the Oslo Fjord, sinking the cruiser *Blücher* (with the staff of 163^d Infantry division aboard) and delaying conquest of the capital by half a day. (Oslo fell that afternoon to a few companies of troops which flew into Fornebu airport.) Except at Narvik, the remaining landings met only minimal resistance. After clashing with landbased aircraft and small destroyer units on April 9, the Royal Navy drew off, permitting the remainder of the German assault echelons to land unimpeded. Except for the successful escape by the Norwegian Royal family, the day was one of breathtaking success for the German armed forces.

The ineptness of the Norwegian army was a significant factor in the planning and actual success of the campaign.¹⁶ General Laake, Norwegian army commander in chief, was selected for the post less for his military prowess than for a willingness to deeply cut the military budget.¹⁷ On the day of the invasion he was reluctant for many hours to grasp what was happening. When he finally did realize that his country was under attack he returned to headquarters to find it deserted. Among those who had departed was Laake's aide who had taken the general's uniforms with him. Lacking even a personal vehicle, Laake tried to catch up with his headquarters by public transport—a symbol of the debacle that afflicted the Norwegian army that day.¹⁸

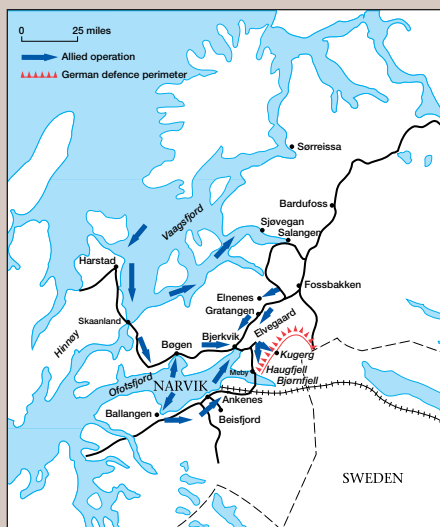
The mobilization centers were under constant assault, and weapons depots and mobilization lists fell into German hands before Norwegian reservists could assemble. However, hundreds of young men came streaming out of the cities and towns to join General Ruge, who was appointed commander in chief after the invasion. His highly improvised force was untrained and included make-shift battalions and companies with little equipment. The troops were unable to maneuver and deemed useless for of-

Troop transport aircraft enroute to Norway.



As the first Germans land at Oslo airport at 1000 hours on April 9, a cloud of smoke marks a downed British aircraft in the distance.





Operations in northern Norway until May 27, 1940 (above). Operations in central Norway, April 1940 (right).



ments and complete the occupation of Norway.

The first effective blow by the Allies came on the morning of April 13 and was a disaster for German naval fortunes. Following a failed air attack from the British carrier *Furious* against Trondheim the previous day, a British destroyer group commanded by Admiral Sir Charles Forbes encountered German surface units screening landing forces off Narvik. Supported by the battleship *Warspite*, British destroyers advanced into the fjords and engaged German ships sheltered there. Unable to reach the open sea the Germans ships fought until their fuel and ammunition were exhausted, and then were beached by their

commanders or sunk by British gunfire. The losses, combined with those of the previous days, deprived the German navy of half its destroyer force and dealt its surface fleet a blow from which Germany never recovered.

In marked contrast to their earlier indecision, the Allies now moved to break the German hold on central and northern Norway. On April 14, a party of Royal Marines landed at Namsos, 127 miles north of Trondheim, followed days later by the 146th Infantry Brigade and the French 5th Demi-Brigade of Chasseurs-Alpins (mountain troops). On April 18, the 148th Brigade landed at Andalsnes and, five days later, the 15th Brigade disembarked at Gudbrandsdal for the drive to retake Trondheim. Thus, by April 23, four Allied brigades together with naval support were positioned to the north and south of Trondheim, assisted by 6,000 Norwegian troops.

Against these numerically superior forces the German commander in Trondheim, General Kurt Woytasch, could initially deploy only seven infantry battalions. Nevertheless, he responded vigorously by pushing out strong parties to the north and south to deny the Allies use of the limited road net. Calling for reinforcements and air support, Woytasch counterpunched aggressively at Steinkjer to the north, stopping the cautiously advancing Allied units in their tracks. Assisted by German forces pushing up from the south, which drew off the British threat

Despite barriers blown from the rock German soldiers advance northward.



Field Marshal Milch, commander of the air fleet deployed to Norway.

fensive operations. Furthermore, most had never trained with artillery, planes, or tanks. Some units would eventually get organized and fight effectively, but except for brief clashes here and there, Norwegian opposition at the outset was sporadic and ineffectual.¹⁹ In agony, Norway could only hope that the Allies would arrive soon.²⁰

The Allies Respond

Fear of German airpower and the rapidity with which the Germans manned Norwegian air and coastal defenses kept the Allies from striking back in the south. In both central and northern Norway, however, which were farther removed from German airbases, an Allied riposte seemed more feasible. In a race against time Allied planners strove to mount

a relief expedition before German forces could organize for defense, even as German units raced north along the valleys and coastal roads to link up with isolated detach-



The capture of Narvik, May 28, 1940.



General Dietl.



Operations in southern Norway during April 1940.

cruisers and destroyers were massing off Narvik and the first detachments of British troops arrived to join the fleet.

The German situation in Narvik was tenuous from the outset. The loss of sea control had prevented German reinforcements from reaching the area. The 3^d Mountain Division, under the command of General Eduard Dietl (less its 138th Mountain Infantry Regiment which was attacking Trondheim to the south) found itself cut off from the rest of the country. Days after his successful seizure of Narvik, Dietl was only able to muster 2,000 mountain infantrymen together with 2,600 disembarked sailors. Fully 1,200 miles from Germany and cut off from weak German garrisons to the south, Dietl and his mountain troopers waited grimly for the counterblow to fall.

The British Imperial General Staff believed that an Allied success at Narvik would go far to restore their flagging fortunes. Aside from denying the German war machine the Swedish iron ore it so desperately needed, a convincing defeat of the isolated German forces in north Norway would boost Allied morale and prick the German aura of invincibility. Yet the reasoning of the General Staff was fundamentally misplaced. By dissipating precious naval and air forces in two separate efforts—the attempts to retake first Trondheim and then Narvik—they ensured the failure of both, while a resounding success by stronger forces at Trondheim would have established Allied forces ashore in possession of a good port, rendering the small German contingent in Narvik irrelevant.²¹

Allied ground operations in the north began in earnest on April 24 as four Norwegian battalions attacked Dietl's outposts at Gratangen, supported by a French brigade which landed four days later. In early May a second French brigade and a Polish brigade arrived; with the addition of British forces the Allies built their strength up to 24,500 troops.

to his rear, Woytasch easily dealt with the half-hearted thrusts of the French and British.

Although their losses were light, the combination of a pugnacious opponent and devastating air attacks on their bases at Andalsnes and Namsos convinced the Allied commanders that their situation was hopeless. On May 3 the last Allied troops sailed away from Namsos just ahead of the advancing German troops, precipitating the surrender of 2,000 Norwegian troops in the area. Outnumbered by more than six to one, the supremely confident Group Trondheim force and their able commander inflicted an embarrassing defeat, further eroding Allied confidence. Southern and central Norway now lay firmly in Hitler's grip.

Epic at Narvik

German airpower—demonstrating range, speed, and firepower unprecedented in modern warfare—had played a key role in the battles around Trondheim, but range and weather limitations greatly restricted the ability of the *Luftwaffe* to support German forces at Narvik far to the north. Even as the first troops went ashore at Andalsnes, British

throughout the campaign, planners and commanders ensured that tactical concerns were subordinated to strategic and operational requirements

British naval forces were further strengthened with a battleship and aircraft carrier.

Dietl's problems were mounting quickly. The Allies were building up their forces far faster than the Germans (on April 18 Hitler ordered that no new forces would be committed to Narvik). The German troops in Narvik were exposed to continuous shelling from destroyers lying offshore. Freezing temperatures, fog, and snow hampered mobility and sapped the morale even of the tough mountain soldiers. The naval companies were untrained in land warfare and armed only with captured Norwegian weapons. Moreover, food and ammunition stocks were dangerously low.

Despite these vulnerabilities Dietl resisted stubbornly, aided by a curious lack of energy and aggressiveness by the two British commanders, Admiral of the Fleet the Earl of Cork and Orrery and General P.J. Mackesy.



Narvik harbor.

Lacking the troops, artillery, and air support needed to conduct major engagements, the Germans fought delaying actions to maintain a precarious foothold in Narvik as well as control over the rail line leading eastward to Sweden. The Norwegian forces moving down from the north made slow but steady progress. Although the 2^d Mountain Division was pushing hard from Trondheim to relieve

Dietl (at one point marching 90 miles in four days over terrain determined to be impassable by British intelligence officers²²), distance, poor weather, and lack of roads were daunting obstacles.

On May 13, under attack from both north and south and suffering from constant bombardment from sea and continuous threat of landing, Dietl informed OKW through XXI Group that the situation at Narvik was critical. Dietl reported that his

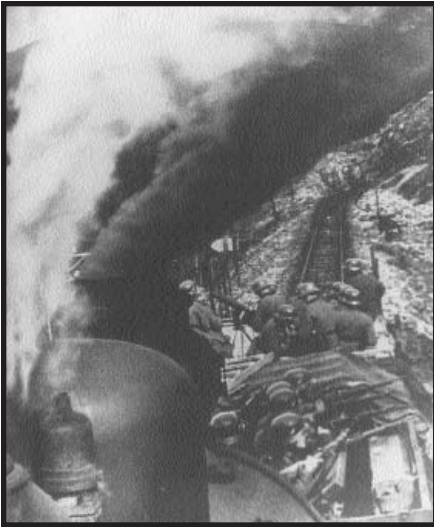
troops were too exhausted even to retreat southward towards the advancing relief columns. He planned to give up the city if the Allies persisted in their offensive and to hold a bridgehead on the railroad, but this would depend on speedy reinforcements, something the Germans had not anticipated. Otherwise, there was no alternative except to cross into Sweden and request internment. Group XXI requested permission for Dietl to do so should enemy action necessitate it. Hoping for a miracle, the 3^d Mountain Division (actually no more than a weak regiment by this time) prepared for the end.

Dietl got his miracle. With pressure from XXI Group and OKW, Hitler approved limited reinforcements (Plan *Gelb* was underway by then and diverting large formations to Norway would draw strong opposition from his commanders in France). On May 14, a token force of 66 paratroopers arrived. Over the next three weeks a parachute battalion and two companies of mountain infantry (hastily trained in parachute operations) were dropped into Narvik.

These forces enabled Dietl to hold on long enough for the full weight of the invasion of the Low Countries to make itself felt on the Allies. Although finally compelled to give up Narvik to vastly superior forces on May 28, the remnants of 3^d Mountain Division continued to fight astride the Kiruna rail line. On June 8, 1940, the Allies secretly evacuated the Narvik area. The next day the Norwegian Command signed an armistice ending the fighting and giving Germany total control of Norway.²³ The German reputation as an undefeated force remained intact and, in honor of their heroic stand, Dietl's mountain troopers were awarded a sleeve device commemorating their service at Narvik during the battle.

The Aftermath

The true strategic significance of the German conquest of Norway and Denmark remains in dispute. Possession of the entrance to the Baltic and effective control over the Scandinavian peninsula secured Germany against attack from the north until the end of the war. German submarine and air units gained bases for attacks against Britain and later Allied resupply convoys being run into Murmansk. Sweden was cowed into remaining neutral for the rest of



An armed German troop train moving to link up with forces in the north.

the war. Germany was also enabled to support Finland in its second war against the Soviets from 1941 to 1944 which tied up large numbers of Red army troops at minimal cost to the Germans.

These gains must be weighed against the loss of German surface shipping, the requirement to maintain large forces in Scandinavia, and the relative ineffectiveness of air and naval operations subsequently launched against the British Isles

from Norway. On balance, and given the fact that U.S. intervention and defeat in Russia lay in an uncertain future, it is difficult to be too critical of German strategy. Britain would have undoubtedly occupied Norway, and possibly Denmark, had Germany not done so, with clear implications for the invasion of France and the Low Countries.

As an illustration of mastery of the operational art, however, *Weserübung* has few historical rivals. Throughout the campaign German planners and commanders ensured that tactical concerns were subordinated to strategic and operational requirements. Early tactical engagements, widely separated in space and in some cases in time, were considered in light of the operational plan and not allowed to take on existences of their own; the decision not to sacrifice the campaign or disrupt *Gelb* to save a desperate situation in Narvik is only the most obvious example.

In planning and executing the campaign, Krancke and Falkenhorst showed an impressive ability to distinguish between risk and foolhardiness. Where the British dismissed the chances of landing large formations in the teeth of the Royal Navy,²⁴ German planners correctly surmised that speed, surprise, and airpower combined to give *Weserübung* a good chance of success. While the campaign is occasionally interpreted as a desperate gamble, the Germans undoubtedly saw it as a bold venture with better than even odds of victory. They had good reason to be confident.

Although few of the units employed in the campaign had served in Poland, commanders were sure of the tactical superiority of their leaders, soldiers, and doctrine. They had demonstrated this superiority in virtually every engagement with Allied troops. Where French, British, Polish, and Norwegian units displayed hesitation, indecision, and timidity, the Germans showed dash, aggressiveness, and tenacity under extremely adverse conditions. Particularly at Trondheim and Narvik, the Germans faced numerous obstacles: bad weather, naval inferiority, unfavorable force ratios, poor roads, and failing resupply. Their triumph was as much a victory over the hardships of northern warfare as it was a decisive strategic setback for the Allies.

A key lesson is that resolute leadership can keep the hope of victory alive when everything else indicates otherwise. Outnumbered and outgunned, the Germans continuously held because of their superior will. Certainly luck played a part in the outcome, but had Falkenhorst or Dietl succumbed to their fears, the outcome of the Norwegian campaign might have been different. Well-trained and well-led troops who were able to improvise when necessary, the effective use of sailors in service-support roles, and the capability to fall back smartly and shorten the line when required combined to give the Germans a marked advantage. Lesser commanders, unable to fight when cut off, who had limited reinforcements and whose logistics were always straining, who feared taking risks when necessary, and whose lines of communication were never secured would have quickly capitulated.

Dietl in particular, a strong product of the German military education, took all these disadvantages in stride. Even had the Allies not pulled out, significant overland, seaborne, and airborne reinforcements were on the verge of being committed to the defense of north Norway following the collapse of the West if only German commanders could induce their troops to hold out.²⁵ Here, a superior attitude and will to win, fundamentals of success in any endeavor, helped overcome a potentially disastrous situation.

The Significance of *Weserübung*

In what sense did *Weserübung* demonstrate maneuver warfare at the operational level of war? First and most importantly, the Nordic campaign reveals a characteristic preoccupation with achieving a rapid decision. Like *Gelb*, its more famous sibling, *Weserübung* shunned a systematic advance through the enemy's territory in favor of a series of lightning strikes designed to knock the enemy out of the fight at the start. This obsession with decisive battle, which obviates the need for protracted and costly campaigning, is perhaps the most defining feature of maneuver warfare.

In comparing German and Allied operational planning and command and control during the war, striking differences appear. The German decision-action cycle, which operated on the basis of brief mission orders, was crisper and faster. Whereas the British passion for detailed planning and ponderous execution revealed itself at every turn, the

Germans emphasized mobility, speed, and tempo—or in the words of Confederate General Nathan Bedford Forrest, they consistently got there “first with the most.” The German system granted maximum independence to subordinate commanders, requiring only that they remain faithful to the operational goals of the campaign. While the Allies advanced cautiously and methodically, the Germans fought with greater fluidity, focusing more on the enemy and less on retention of specific terrain features.

One difference was the strong preference for methodical battle shown by the Allies and the absence of that approach on the part of the Germans. It is almost impossible to imagine the British tossing isolated detachments along 1,200 miles of coastline, hoping to link them up later, and in the face of a much stronger enemy navy, bad flying weather, and large amphibious counterattacks. The German planning relied on a sudden disruption of Norwegian mobilization and simultaneously seizing all likely landing sites suitable for Allied reinforcements, with little regard for secure flanks or a continuous front.

In so doing the Germans directed their strengths—that is, speed, shock, tempo, air-power, and superior tactical prowess—against the weaknesses of a less resolute adversary and crushed its will to fight. Falkenhorst and XXI Group neither fought nor planned to win a campaign of attrition. Though the casualties on both sides were roughly equivalent (with those of the German navy and air force significantly higher),²⁶ German morale remained steadfast throughout the campaign while the Allies showed little heart for the fight.

As a laboratory for future joint operations, the German invasion of Scandinavia broke new ground in the history of war. One lesson was that cooperation among the services was an absolute precondition for success. Unlike the major land battles of World War I and the Polish campaign, Operation *Weserübung* required the full integration of land, sea, and air forces, with each service responding aggressively. The *Wehrmacht* improved on its performance in Poland, demonstrating tactical superiority over its enemies and a willingness to cooperate with, and rely upon, the other services for its very survival. The surface fleet of the *Kriegsmarine*, grossly inferior to the British navy, suffered extraordinary losses but succeeded in getting its assault forces ashore and covering their deployment inland. The *Luftwaffe* conducted perhaps the most challenging air operations up to that time. Flying at extended ranges in miserable weather, with primitive refueling and ground control, German pilots provided much of the strategic mobility and most of the fire support for the army (which lacked heavy artillery). Their contribution was decisive.²⁷

As previously noted, Operation *Weserübung* command arrangements were unsatisfactory. Although the principle of unified operational command was sound, Hitler and the OKW staff could not effectively exercise command and control over theater operations from Germany, and no joint command structure existed on the ground in Norway. German commanders also did not have the benefit of comprehensive joint doctrine or training prior to the operation.

Nevertheless, Operation *Weserübung* was an outstanding success. As capable leaders

the German system granted maximum independence to subordinate commanders, requiring only that they remain faithful to the operational goals of the campaign

do, the German commanders worked together harmoniously to achieve the operational goals that they understood thoroughly. Individual service prerogatives were in the main consciously subordinated to joint considerations, the only real standard that counts. While later in the war Germany would pay dearly for lacking organizational and doctrinal frameworks for the conduct of joint warfare, in Norway the efforts to promote jointness among the services contributed to a shining victory.

Compared to many operations later in the war, *Weserübung* was minor. Despite Hitler's expectation that Britain would not abandon its strategic aim of cutting off access to raw materials,²⁸ German forces in Norway were not attacked save for commando raids. As an isolated operation, *Weserübung* was a resounding success for the German armed forces. The conquest was achieved without a material reduction of forces on the Western Front or interference with preparations for *Gelb*. Moreover, the operation was the first to be carried out under a unified command system.²⁸

The conquest of Norway and Denmark is an interesting and worthwhile case for students of joint warfare and the operational art. Many of the lessons from *Weserübung* remain valid today when complex joint operations mounted over great distances have become the norm. Although the technology base changes rapidly, campaigns and battles between comparable adversaries ultimately are a clash of wills. In that sense Operation *Weserübung* is still instructive. **JFQ**

For an appreciation of how the German army turned adversity into military advantage during the interwar years, see the review of *The Roots of Blitzkrieg* on pages 125–127 in this issue of *JFQ*.

NOTES

¹ B.H. Liddell Hart, *History of the Second World War* (New York: G.P. Putnam's Sons, 1970), p. 52.

² B.H. Liddell Hart, *The German Generals Talk* (New York: Quill, 1979), p. 37.

³ Matthew Cooper, *The German Army* (Chelsea, Mich.: Scarborough, 1991), p. 191.

⁴ François Kersaudy, *Norway 1940* (New York: Saint Martin's Press, 1991), p. 43.

⁵ Earl F. Ziemke, "The German Decision to Invade Norway and Denmark" in *Command Decisions* (Washington: U.S. Army Center for Military History, 1960), p. 58.

⁶ Earl F. Ziemke, *The German Theater of Northern Operations* (Washington: Department of the Army, 1959), p. 13.

⁷ *Ibid.*, p. 15.

⁸ Kersaudy, *Norway 1940*, p. 49.

⁹ Liddell Hart, *The German Generals Talk*, p. 37.

¹⁰ Ziemke, *The German Theater of Northern Operations*, p. 16.

¹¹ John Keegan, *The Second World War* (New York: Viking, 1990), pp. 50–51.

¹² Ziemke, *Command Decisions*, pp. 62–64.

¹³ Christopher Buckley, *Norway. The Commandos. Dieppe* (London: Her Majesty's Stationery Office, 1951), p. 10.

¹⁴ In all the *Luftwaffe* lifted 29,280 troops and 2,376 tons of supplies during the first weeks of the invasion, an impressive feat given the bad flying weather and the small size of transport aircraft at that time. Ziemke, *The German Theater of Northern Operations*, p. 56.

¹⁵ Ziemke, *Ibid.*, p. 32.

¹⁶ Kersaudy, *Norway 1940*, p. 68.

¹⁷ *Ibid.*

¹⁸ *Ibid.*, pp. 68 and 72.

¹⁹ Bernard Ash, *Norway 1940* (London: Cassell, 1964), p. 44.

²⁰ *Ibid.*, p. 109.

²¹ Ash, *Norway 1940*, p. 98.

²² Ziemke, *The German Theater of Northern Operations*, p. 97.

²³ *Ibid.*, pp. 102–104.

²⁴ J.L. Moulton, *The Norwegian Campaign of 1940* (London: Eyre and Spottiswood, 1967), p. 60.

²⁵ Ziemke, *The German Theater of Northern Operations*, p. 104.

²⁶ The Germans lost 1,317 dead and 2,374 at sea; the *Luftwaffe* had 127 combat aircraft shot down while British attacks on the *Kriegsmarine* succeeded in the sinking of 1 heavy cruiser, 2 light cruisers, 10 destroyers, and 6 submarines. The British lost 1,896 troops and 2,500 sailors, as well as 1 aircraft carrier, 1 cruiser, 7 destroyers, and 4 submarines. The French and Poles combined suffered 530 dead while the Norwegians lost 1,335. A total of 87 Allied airplanes were shot down. See Ziemke, *The German Theater of Northern Operations*, p. 109.

²⁷ Williamson Murray, *German Military Effectiveness* (Baltimore: Nautical and Aviation Publishing Company, 1992), p. 154.

²⁸ Cooper, *The German Army*, pp. 258, 267, 492; Ziemke, *Command Decisions*, p. 68.

Doctrine

EYE ON NORFOLK

With the establishment of the Navy Doctrine Center at Norfolk Naval Base in March 1993 and the stand-up of the Air Force Doctrine Center at Langley Air Force Base scheduled for July, Norfolk and environs have become the undisputed capital of doctrinal development. This concentration of joint, interservice, and service doctrine activity includes—in addition to the new Navy and Air Force centers—the Joint Doctrine Center, the Air Land Sea Appli-

cation Center, and the U.S. Army Training and Doctrine Command.

The synergistic effect of this community of doctrine developers in the Tidewater area of Virginia will be further enhanced by the establishment of the Joint Warfighting Center in the near future [see insert on the opposite page]. Moreover, the proximity of U.S. Atlantic Command with its expanded joint training mission will facilitate the evaluation, testing, and sequencing of joint doctrine [which is described in "A New Mission for Atlantic Command" on pages 80–87 of this issue].

JFQ

JOINT DOCTRINE PUBLICATIONS

Since the passage of the DOD Reorganization Act of 1986 there has been a steady stream of publications on joint doctrine as well as on joint tactics, techniques, and procedures (JTTP). Taken collectively these publications are having a significant impact that reaches far beyond the doctrinal development community. The joint publication system is comprised of 192 titles, of which about 130 are currently in various stages of development or revision. A useful

A Common Perspective

Taking its name from a phrase in Joint Pub 1—"Joint doctrine offers a *common perspective* from which to plan and operate, and fundamentally shapes the way we think about and train for war"—the Joint Doctrine Center (JDC) launched a newsletter in April for the joint doctrine community. *A Common Perspective* will appear quarterly and provide information on doctrine as it relates to current issues, combatant command and service initiatives, JDC involvement in exercises, status of select publications, Joint Electronic Library, and terminology. Further details on the newsletter are available by calling:

(804) 444-1065/
DSN 564-1065
FAX: (804) 444-3990/
DSN 564-3990
or writing:
Joint Doctrine Center
1283 CV Towway (Suite 100)
Norfolk, Virginia 23511-2491

The Air Land Sea Bulletin

To spread the word on recent developments in service interoperability the Air Land Sea Application (ALSA) Center publishes a quarterly newsletter, *The Air Land Sea Bulletin*. Additional information on the bulletin is available by calling:

(804) 764-5936/
DSN 574-5934
FAX: (804) 764-5935/
DSN 574-5935

or writing:
HQ ACC XP-ALSA
ATTN: *The Air Land Sea Bulletin*
114 Andrews Street (Suite 101)
Langley Air Force Base, Virginia
23665-2785

Recent and Forthcoming Joint Publications

Number	Title	Final Approval
Reference		
1-01.1	Compendium of Joint Doctrine Publication Abstracts	Jul 93
1-01.2	Joint Electronic Library User's Handbook	Aug 93
1-03	Joint Reporting Structure (JRS) General Instructions	Sep 93
1-05	Religious Ministry Support to Joint Operations	Aug 93
1-07	Doctrine for Public Affairs for Joint Operations	Jul 94
Intelligence		
2-0	Doctrine for Intelligence Support to Joint Operations	Aug 93
2-01	JTTP for Intelligence Support to Operations	Nov 94
2-01.1	JTTP for Intelligence Support to Targeting	Oct 94
2-01.2	Joint Doctrine and TTP for Counterintelligence Support	Feb 94
2-02	JTTP for Intelligence Support to JTF Operations	Dec 93
Operations		
3-0	Doctrine for Joint Operations	Oct 93
3-00.1	Joint Doctrine for Contingency Operations	Sep 93
3-01.4	JTTP for Suppression of Enemy Air Defense	Sep 93
3-01.5	Doctrine for Joint Theater Missile Defense	Aug 93
3-02.1	Joint Doctrine for Landing Force Operations	Aug 93
3-02.2	Joint Doctrine for Amphibious Embarkation	Apr 93
3-03	Doctrine for Joint Interdiction Operations	Aug 93
3-04.1	JTTP for Shipboard Helicopter Operations	Jul 93
3-05.3	Joint Special Operations Operational Procedures	Jul 93
3-05.5	Joint Special Operations Targeting and Mission Planning Procedures	Jun 93
3-06	Doctrine for Joint Riverine Operations	Oct 93
3-07	Doctrine for Joint Operations in Low Intensity Conflict	Oct 93
3-07.1	JTTP for Foreign Internal Defense	Jun 93
3-07.2	JTTP for Antiterrorism	Jun 93
3-07.3	JTTP for Peacekeeping Operations	Jul 93
3-07.4	JTTP for Counterdrug Operations	Jan 94
3-09.2	JTTP for Radar Beacon Operations	Apr 93

point of departure for gaining an appreciation of the joint doctrine development process is found in Joint Pub 1-01, "Joint Publication System," which defines the process and outlines the steps involved in joint doctrine projects. Joint Pub 1-01 provides a hierarchy of joint publications essential to the functional order and organization of joint doctrine and JTTP. Publications which have been recently approved or are scheduled for approval through next winter are listed below.

JFQ

Joint Warfighting Center Announced

The establishment of a Joint Warfighting Center (JWC) has been approved by the Chairman of the Joint Chiefs of Staff. The center will be a separate activity functioning under the Director for Operational Plans and Interoperability (J-7), Joint Staff, to assist the Chairman, CINCs, and service chiefs prepare for joint warfare through exercises and training, and by conceptualizing, developing, and assessing doctrine. The JWC will subsume the activities of both

the Joint Warfare Center at Hurlburt Field, Florida, and the Joint Doctrine Center in Norfolk, Virginia; the stand-up of the center is expected to take about 15 to 18 months. The JWC will take advantage of state-of-the-art technology to enhance joint training, doctrine, tactics, techniques, and procedures, and be a cost-effective mechanism for integrating exercises and training, doctrine development, and lessons learned among the services.

Number	Title	Final Approval
Operations—Continued		
3-10	Doctrine for Joint Rear Area Operations	Feb 93
3-10.1	JTTP for Base Defense	Mar 93
3-11	Joint Doctrine for Nuclear, Biological, and Chemical (NBC) Defense	Dec 93
3-12	Doctrine for Joint Nuclear Operations	Apr 93
3-14	Joint Doctrine and TTP for Space Operations	Sep 93
3-15	Joint Doctrine for Barriers, Obstacles, and Mines	Apr 93
3-50.2	Doctrine for Joint Combat Search and Rescue	Sep 93
3-50.3	Joint Doctrine for Evasion and Recovery	Sep 93
3-52	Doctrine for Joint Airspace Control in the Combat Zone	Aug 93
3-53	Joint Psychological Operations Doctrine	Jul 93
3-55	Doctrine for Joint Reconnaissance, Surveillance, and Target Acquisition	Apr 93
3-55.1	JTTP for Unmanned Aerial Vehicles	Aug 93
3-56	Command and Control Doctrine for Joint Operations	Dec 93
3-57	Doctrine for Joint Civil Affairs	Dec 93
3-58	Joint Doctrine for Operational Deception	Nov 93
3-59	JTTP for Meteorological and Oceanographic Support	Aug 93
Logistics		
4-01.3	JTTP for Joint Movement Control	Aug 93
4-01.5	JTTP for Water Terminal Operations	Jun 93
4-02	Doctrine for Health Service Support in Joint Operations	Aug 93
4-03	Joint Bulk Petroleum Doctrine	Jun 93
4-04	Joint Doctrine for Engineering Support	Jul 93
Plans		
5-0	Doctrine for Planning Joint Operations	Nov 93
5-00.1	JTTP for Campaign Planning	Feb 94
5-03.1	Joint Operation Planning and Execution System: Vol 1., Planning, Policy, and Procedures	Jun 93

[JTTP = Joint Tactics, Techniques, and Procedures]

Source: Joint Doctrine Division (J-7), Joint Staff (May 25, 1993).

Recent and Forthcoming ALSA Publications

"Army Air Force Air Base Ground Defense Manual" (A-AF ABGD), FM 90-30/AFM 3-3, describes responsibilities and procedures for the ground defense of air bases and installations.

"AWACS Ground Based Air Defense Operations" (AWACS-ADO), FM 44-12/FMFRP 5-57/ACCP 50-37/USAFEP 50-37/PACAF 50-37, provides an integrated joint air defense network for situations when standard ground-based systems are not in place.

"Integrated Combat Airspace Command and Control" (ICAC²), FM 100-21/FMFRP 5-61/ACCP 50-38/USAFEP 50-38/PACAF 50-38/CINCLANTFLTINST 3320.1, covers responsibilities for multi-service activity within specifically defined airspace.

"Multi-Service Procedures for the Joint Application of Firepower" (J-FIRE), FM 90-20/FMFRP 2-72/ACCP 50-28/USAFEP 50-9/PACAF 50-28/CINCLANTFLTINST 3330.5, contains standard formats for requesting various types of fire support from the services.

Education

PEACEKEEPING CURRICULA

To support future U.S. military commitments to United Nations peacekeeping operations, the President has directed the establishment of peacekeeping curricula at joint and service colleges. Several initiatives are underway to define the emergency roles of the Armed Forces in peacekeeping and humanitarian relief operations. The Strategic Plans and Policy Directorate (J-5) of the Joint Staff has the lead in implementing actions under a National Security Directive entitled "President's Peacekeeping Initiatives." The educational and training dimensions are being addressed through an interagency effort with participation from the Military Education Division and the Joint Exercise and Training Division of the Operational Plans and Interoperability Directorate (J-7), Joint Staff.

Toward that end a survey has been conducted by J-7 of the curricula at the joint and service colleges to determine the extent to which peacekeeping is being taught. The results revealed that peacekeeping and humanitarian relief operations are covered to some degree at each institution. The Joint Staff is now in the process of facilitating a flow of information on this emerging area of study to these colleges. In addition, the on-going joint education accreditation process will monitor the increased emphasis on peacekeeping in curricula.

The corresponding development of joint doctrine for peacekeeping continues with the Army as lead service. Joint Pub 3-07.3, "Joint Tactics, Techniques, and Procedures for Peacekeeping Operations," was recently revised. The current draft of that publication can be reviewed through the Joint Electronic Library [see "Documentation" on the next page].

JFQ

DEFENSE ACQUISITION UNIVERSITY

The passage of the Defense Authorization Act of FY91 and the Defense Acquisition Workforce Improvement Act of 1990 led to the creation of the Defense Acquisition University (DAU), which was officially dedicated in October 1992. DAU operates as a consortium by tailoring existing educational programs at colleges, schools, and other activities across DOD to provide for the professional development of the acquisition workforce, including some 17,000 military personnel.

The new university is the executive agent for mandatory acquisition courses offered at the basic, intermediate, and senior levels—from introductory courses in contract management offered at several institutions to a senior course presented at the Industrial College of the Armed Forces. The main objective of the courses is the certification of the Defense Acquisition Corps in the functional areas, and corresponding career fields, shown below.

DAU anticipates that over 27,600 students will take 49 different acquisition courses during FY93. The 16 institutions participating in the DAU consortium are the Air Force Institute of Technology, Army Logistics Management College, Army Management Engineering College, Defense Contract Audit Institute, Defense Logistics Civilian Personnel Service Support Office, Defense Systems Management College, European Command Acquisition Training Office, Industrial College of the Armed Forces, Information Resources Management College, Lowry Technical Training Center, Navy Acquisition Management Training Office, Naval Facilities Contracts Training Center, Naval Postgraduate School, Naval Supply Systems Command Regional Contracting Centers, Naval Warfare Assessment Center, and Office of the Assistant Secretary of the Navy for Research, Development, and Acquisition.

For more details, see DOD Manual 5000.52M, "Career Development Program for Acquisition Personnel," or contact the director of acquisition career management for your service.

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Functional Areas	Career Fields
Acquisition Management	Program Management Communications-Computer Systems
Acquisition Logistics	Acquisition Logistics
Production	Manufacturing and Production Quality Assurance
Procurement and Contracting	Contracting Purchasing Industry Property Management
Systems Planning, Research, Development, Engineering, and Testing	Systems Planning, Research, Development, Engineering Test and Evaluation Engineering
Business, Cost Estimating, and Financial Management	Business, Cost Estimating, and Financial Management
Auditing	Auditing

Documentation

THE JOINT
ELECTRONIC
LIBRARY

Niccolo Machiavelli, the 16th century “national security advisor” to the Florentine ruler Lorenzo the Magnificent, is best known to us as the author of *The Prince*. That repository of the principles of statecraft and the use of force was certainly an invaluable gift to present to any ruler, for it offers sound advice without subjecting readers to relentless research elsewhere. In the opening dialogue Machiavelli proclaims to Lorenzo, “And now I offer the results to Your Highness within the compass of a small volume . . . that of enabling You to understand in a very short time all those things which I have learnt at the cost of privation and danger, in the course of many years.” By enabling Lorenzo to quickly retrieve and assimilate axioms on contemporary statecraft—without having to distill wisdom from the vast stores of raw data—Machiavelli professed power and greatness. Imagine what such an accomplishment would mean today. Consider the rewards that any advisor could claim for being able to spontaneously retrieve information with effortless flexibility, categorical systemic accuracy, and research yields in multiple formats in the prescribed order of relevance. But for readers of *Joint Force Quarterly* who may be looking for such a gift, go no farther: your modern-day *Prince* is at hand in the Joint Electronic Library (JEL).

JEL is a library of joint and selected service publications available via computer and modem over both commercial and governmental phones to registered users worldwide. It contains more than 100,000 pages of material on doctrine, education, and operations, including all unclassified joint doctrine publications approved by the Chairman, Joint Chiefs of Staff, as well as many other doctrinal publications developed by the services and allied nations, extracts from some intermediate- and senior-level college curricula, plus research conducted by faculty and students at those institutions. In addition, the library includes *The Air University Library Index of Military Periodicals*, *Department of Defense Dictionary of Military and Associated Terms*, and selected source

material on historical and contemporary issues. Consideration is being given to developing separate classified databases while continuing to expand the unclassified repositories.

Most electronic libraries do not have full-text databases. Instead they offer only bibliographies and brief abstracts that attempt to distill the contents of documents. These libraries normally operate as follows: having reviewed a database and identified abstracts of specific documents that may contain material relevant to the researcher's needs, the items must be requested to access them. Once the request is received, the host library must determine whether the documents are in stock, and then send those that are available to the requestor—a process that can take two to three weeks. This system is akin to searching library shelves: first the document must be identified and located, then the researcher must peruse the material to determine its utility. Regrettably, items retrieved from the stacks, or through electronic libraries, sometimes prove of little value to the researcher.

JEL, however, has the complete text of every document so that within seconds it is able to scan its collection and identify where the word or words being searched appear. Imagine walking into a library and being able to quickly find everything on a given subject. Also consider leaving fully confident that no pertinent information has been overlooked, and that the data gathered had been systematically arranged. That largely describes JEL's efficiency and effectiveness. Obviously there will be cases when specific research requirements cannot be satisfied. The difference lies in instantaneously determining a document's relevance and then proceeding without any delay. Experienced researchers agree that collecting data is tedious and time-consuming; JEL can greatly facilitate this process.

The databases are also available on compact disc-read only memory (CD-ROM) that offers the same full-text, rapid search, and relevance-ranking retrieval capabilities as the on-line modem system. Aside from

Subscribing to the Joint Electronic Library

Agencies interested in gaining on-line access to JEL must submit a request on official letterhead indicating the name, mailing address, and telephone number of a point of contact to:

Director, Joint Doctrine Center
1283 CV Towway (Suite 100)
Norfolk, Virginia 23511-2491

or call the Joint Doctrine Center at:

(804) 444-3627/DSN 564-3627
FAX: (804) 444-3990/DSN 564-3990

In addition to potential DOD users, requests for access are accepted from other Federal agencies, nonprofit organizations, and NATO countries. Once approved, users are provided with “hook up” packages that allow them to access JEL on a 24-hour a day basis without any charge.

Orders for CD-ROM supplements must be placed through service distribution systems. JEL discs conform to ISO 9660 specifications.

an extraordinary capacity to accept and store data, the CD-ROM supplements eliminate transmission time—they contain up to 300,000 pages of full-text which is equivalent to transmitting 26 days with a PC and modem—and allow unlimited research activity without either the expense or priority limitations imposed by system-related telecommunications. The CD-ROM also contains the graphic images found in the documents. This technology significantly augments JEL on-line access by serving numerous users worldwide in an efficient and cost-effective manner.

The operational requirements placed on today's "Magnificent Lorenzos"—whether they are action officers or planners, doctrinal developers or educators, policymakers or warfighters—will continue to grow at the same rate as rapidly changing crises and global events. Not surprisingly, this will call for continued expansion of JEL databases. Future developments are likely to include the coverage of functional areas directly related to or impacting on joint doctrine and warfighting.

As Machiavelli's dialogue with Lorenzo continues, he implores, "May I trust, therefore, that Your Highness will accept this little gift in the spirit in which it is offered; and if Your Highness will deign to peruse it, You will recognize in it my ardent desire that You may attain to that grandeur which fortune and Your own merits presage for you." Such are the practical riches within the grasp of those who use this modern day *Prince*.

Contributed by
COL Jerry Dunn, USA (Ret.)

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DEFENSE LIBRARY ON DISC

The holdings of the Pentagon Library and the National Defense University Library are now available on a CD-ROM disc. Later this year the Staff College Automated Military Periodicals Index (SCAMPI) will be added to the disc.

These collections of open literature can be searched together or separately, although access to the material cited is subject to the respective policies of each library. The Defense Library on Disc contains over 220,000 records including items in the fields of international security affairs, defense policy, military history, resource management, and the art of war.

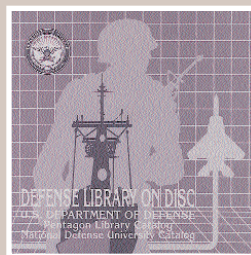
The "National Defense University LS/2000 Catalog" contains records of the holdings found in the university's two libraries in Washing-

ton, D.C., and Norfolk, Virginia. The "Pentagon Library ILS Catalog" lists books, periodicals, documents, reference works, microfilm, and videos which support the missions of DOD and the services. But the catalog does not include classified material, administrative publications, or congressional hearings and reports.

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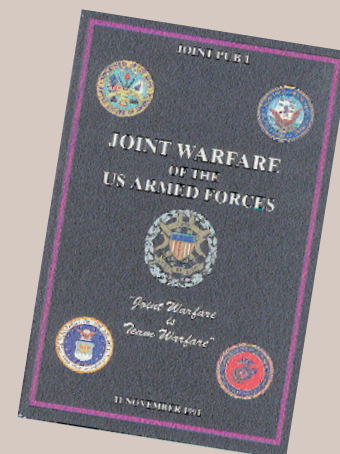
Joint Warfare of the U.S. Armed Forces ON VIDEO

A ten-and-a-half minute video tape that highlights major concepts and themes found in Joint Pub 1, *Joint Warfare of the U.S. Armed Forces*, is available on request to military organizations/units by writing:

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Visual Reading Facility
The Joint Staff (J-3)
Room 3C941, The Pentagon
Washington, D.C. 20301-7000

or calling:

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1993 CJCS Essay Competition

The 12th Chairman of the Joint Chiefs of Staff (CJCS) Strategy Essay Competition was held on May 20-21 at the National Defense University. This competition challenges students at the intermediate and senior colleges to write on some aspect of international security, defense policy, or military affairs, with special emphasis on joint topics. Each institution may submit five individual and five group essays to a panel of judges selected from the joint and service colleges. Winners receive prizes provided by the National Defense University Foundation.

Top honors this year were shared by two entries while eight others were cited for distinction:

Co-Winning Essays

Lieutenant Colonel Peter W. Chiarelli, USA (National War College),
"Goldwater-Nichols Revisited: A Proposal for Meaningful Defense Reorganization"

Captain Brett D. Barkley, USMCR (Naval War College),
"Bosnia: A Question of Intervention"

Distinguished Individual Essays

Lieutenant Colonel Jon R. Ball, USAF (Air War College),
"Islamic Resurgence in the Middle East"

William H. Dunn, Department of the Army (U.S. Army War College),
"In Search of Measures of Effectiveness for Counterdrug Operations"

Lieutenant Colonel Scott W. Conrad, USA (Industrial College of the Armed Forces),
"Moving the Force: Desert Storm and Beyond"

Lieutenant Colonel Gregory A. Keethler, USAF (Air War College),
"The Impact of the Soviet Union's Demise on the U.S. Military Space Program"

Joseph McBride, Department of State (National War College),
"Coping with Chaos: Promoting Democracy and Regional Stability in the Post-Counterinsurgency Era"

Captain Terry J. Pudas, USN (Naval War College),
"Coalition Warfare: Preparing the U.S. Commander for the Future"

Major Thomas R. Griffith, Jr., USAF (Air Command and Staff College),
"Attacking Electrical Power"

Distinguished Group Essay

Commander Michael J. Sare, USN; Peggy J. Grantham, National Security Agency;
and Gerald A. Lambrecht, Defense Intelligence Agency (National War College),
"U.S. Intelligence Support to United Nations Military Operations: Trends and Issues (U)"

REVISITING THE GULF WAR: A REVIEW ESSAY

By HARRY G. SUMMERS, JR.

Critical analysis, like theory, observed Carl von Clausewitz in *Von Kriege (On War)*, can become a guide to anyone wanting to learn about war from books. While not a recipe for action, "it is meant to educate the mind of a future commander, or, more accurately, to guide him in his self-education." Critical analysis is "the application of theoretical truths to actual events," he warned. To be effective "the language of criticism should have the same character as thinking must have in wars; otherwise it loses its practical value and [loses] contact with its subject."

But as in Clausewitz's day, that is often not the case. Readers of much of what passes for critical thinking today from academe and think-tanks will recognize Clausewitz's complaint that "our theoretical and critical literature, instead of giving plain truths, straightforward arguments in which the author at least always knows what he is saying and the reader what he is reading, is crammed with jargon, ending at obscure crossroads where the author loses his readers."

"Sometimes," he adds, "these books are even worse: they are hollow shells. The author himself no longer knows just what he is thinking and soothes himself with obscure ideas which would not satisfy him if expressed in plain speech. . . . The light of day usually reveals them to be mere trash, with which the author intends to show off his learning."

Memoirs

"In the art of war," according to Clausewitz, "experience counts more

Colonel Harry G. Summers, Jr., USA (Ret.), is a noted writer, lecturer, and distinguished fellow of the U.S. Army War College; he is the author of *On Strategy II: A Critical Analysis of the Gulf War* and *Gulf War Almanac*.

The Commanders

by Bob Woodward

New York: Simon and Schuster, 1991.

398 pp. \$24.95.

[ISBN 0 671 41367 8]

It Doesn't Take A Hero

by H. Norman Schwarzkopf,
with Pete Petre

New York: Linda Grey/Bantam, 1993.

530 pp. \$30.00.

[ISBN 0 385 42584 8]

Desert Victory: The War For Kuwait

by Norman Friedman

Annapolis: Naval Institute Press, 1991.

435 pp. \$24.95.

[ISBN 1 55750 254 4]

Storm Over Iraq: Air Power and the Gulf War

by Richard P. Hallion

Washington: Smithsonian Institution Press, 1992. 383 pp. \$24.95.

[ISBN 1 56098 190 3]

Moving Mountains: Lessons in Leadership and Logistics from the Gulf War

by William G. Pagonis
and Jeffrey L. Cruikshank

Boston: Harvard Business School Press,

1992. 248 pp. \$24.95.

[ISBN 0 87584 360 3]

Storm Command: A Personal Account of the Gulf War

by Peter de la Billière

London: HarperCollins, 1992.

248 pp. £18.00.

[ISBN 0 00 255138 1]

She Went To War: The Rhonda Cornum Story

by Rhonda Cornum,
with Peter Copeland

Novato, California: Presidio Press, 1992.

203 pp. \$19.95.

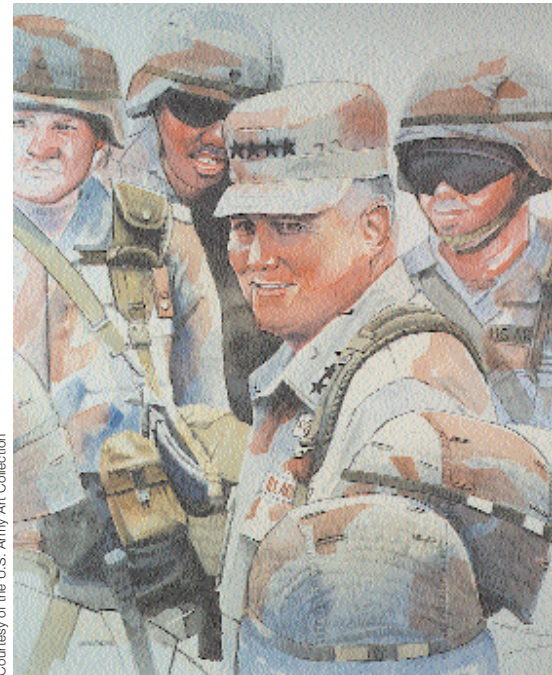
[ISBN 0 89141 463 0]

Hotel Warriors: Covering the Gulf War

by John J. Fialka

Washington: Woodrow Wilson Center Press, 1992. 78 pp. \$9.75.

[ISBN 0 943875 40 4]



Courtesy of the U.S. Army Art Collection

"The Man of the Year (The Bear)"
Portrait by SFC Peter G. Varisano, USA.

than any abstract truth." When it comes to critical analysis "if the critic wishes to distribute praise or blame, he must certainly try to put himself exactly in the position of the commander; in other words, he must assemble everything the commander knew and all the motives that affected his decision."

"[A] situation giving rise to an event can never look the same to the analyst as it did to the participant," Clausewitz noted. "These can only be discovered from the memoirs of the commanders, or from people very close to them."

Fortunately for anyone exploring the theoretical truths of the Gulf War, such works are at hand. Five of the eight books reviewed here are from commanders or participants, and the balance from "people very close to them." Their accounts of actual events provide a basis for examining such theoretical truths as unity of command, Total Force, joint and combined warfare, women on the battlefield, and the state of media-military relations.

Bob Woodward's *The Commanders* provides insights into the effects of the Goldwater-Nichols Depart-

ment of Defense Reorganization Act of 1986 on unity of command, especially as it impacted on the Chairman of the Joint Chiefs of Staff. He also tells of the President's decision to mobilize the Reserve and seek congressional approval for the war. In *It Doesn't Take a Hero* the impact of the Goldwater-Nichols reforms on the Commander in Chief of U.S. Central Command (CINCCENT) in the Gulf is recounted by the CINC himself. And General Schwarzkopf illuminates another truth, the criticality of joint operations. Richard Hallion in *Storm Over Iraq* argues the case for airpower. Norman Friedman's *Desert Victory* heralds Navy and Marine Corps contributions to the war. In *Moving Mountains* General Gus Pagonis details not only the importance of logistics, but the enormous contribution of the Reserve components as well.

Combined operations is a focus of Schwarzkopf's book as he discusses coalition war both in terms of allied forces under his direct command and through cooperation with the Arab coalition commander. That story is reinforced by the account of the British commander, General Sir Peter de la Billière, in *Storm Command: A Personal Account of the Gulf War*.

Another major truth to emerge from the Gulf War was the role of women in combat. Major Rhonda Cornum's *She Went to War* debunks much of the myth about women's unique battlefield vulnerability in relating her experiences as a prisoner. Finally, with *Hotel Warriors*, John Fialka of *The Wall Street Journal* provides a scathing indictment of the military and the media as both failed to live up to the theoretical truth of the importance of keeping the American people informed.

Unity of Command

One of the key principles of war is unity of command. It has been argued that the violation of this principle alone was a major factor in the loss of the Vietnam War. In the wake of that conflict Congress reformed the military chain of command, primarily through the Goldwater-Nichols Act which gave increased power to the Chairman of the Joint Chiefs of Staff as the principal mili-

tary advisor to the President and increased the authority of the CINCs of the unified commands.

How did Goldwater-Nichols work in practice? From the senior editor of *The Washington Post* comes an unparalleled inside look at decisionmaking in the White House and Pentagon. Invited into the inner circles of the defense community to recount the military's side of the Panama invasion, Woodward, who served in the Pentagon as a naval lieutenant in 1969–70, was literally present at the creation of the Gulf crisis. The result is *The Commanders*, a book which appeared in 1991 a scant three months after the end of the Gulf War. While not without its faults, this account provides an unprecedented look at how the top-level of the chain of command really works. "It is above all a book about how the United States decides to fight its wars before shots are fired," says Woodward. Using the Chairman, General Colin Powell, as protagonist, he focuses on the machinations of the Washington bureaucracy rather than the war itself.

Among the many insights is the role of the President in the decision-making cycle. Unlike Vietnam, there was no dithering about National Command Authorities, a catchphrase for whoever it was, if anybody, who made the critical decisions in Washington. This time there was no doubt about who was in charge. Another departure from the Vietnam War was the Chairman's role. As Goldwater-Nichols had envisioned, he proved to be the principal military advisor to the Secretary of Defense and the President. Conversely, as Woodward reports, while "Powell had used the service chiefs quite effectively . . . in fact they played almost no role in the decisionmaking. Their influence hovered around zero."

Not so for General Schwarzkopf. Goldwater-Nichols gave enormous new powers to the heads of unified commands and Schwarzkopf was quick to use it. As his autobiography recounts, he had total operational command in Southwest Asia and

power over the manpower and material assets of all the services. As General Pagonis, Schwarzkopf's logistics chief, told Senator Sam Nunn, he could not have done his job before Goldwater-Nichols.

But not everything ran smoothly. In an incident that would be repeated in the opening days of the Clinton administration, there was a brouhaha when Woodward's book was published about his revelation that Powell disagreed with President Bush's going to war, preferring instead to allow more time for sanctions to work.

Asked about this apparent "insubordination," Bush said "as far as Colin Powell goes, he owes the Commander in Chief his advice. When the Commander in Chief makes a decision, he salutes and marches to the order of the Commander in Chief.

"And if there is anybody that has the integrity and the honor to tell a President what he feels, it's Colin Powell. . . . Colin couldn't have given me more sound advice along the way and couldn't have been a better team player and couldn't have been a more sterling military commander."

Senator Nunn, Chairman of the Senate Armed Services Committee, took a more jaundiced view. In October 1991, at the confirmation hearing for his second term as Chairman of the Joint Chiefs of Staff, General Powell was questioned sharply, as *The Washington Post* put it, "for apparently telling more to Woodward than [he] told the committee during the Persian Gulf War." Nevertheless, Senator Nunn, who had been severely criticized for supporting sanctions and opposing Bush's decision to go to war, allowed the confirmation to proceed.

Woodward's description of President Bush at an eleventh-hour meeting to decide whether to get congressional approval before taking the Nation to war is far-reaching in its implications. The decision and vote were both close, but they marked the return to a constitutional warmaking framework that had been abandoned with disastrous consequences over Korea and Vietnam.

Total Force

Closely tied to the decision to seek congressional approval for the war was the mobilization of the Reserves. As Woodward notes, "Certain critical military specialties such as logistics, transportation, medical services, construction, and intelligence were concentrated in the Reserves." This was not accidental. "Frustrated by President Johnson's refusal to fully mobilize the military during Vietnam by calling up the Reserve for any major military action . . . the Reserve call-up was inevitable. Bush now authorized it."

It was a momentous decision, for the war could not have been fought without them. "At the peak of Desert Shield," Schwarzkopf said, his logistics command "had 94 different Reserve and National Guard units under [its] command," some 70-plus percent of its personnel. As important as their physical contribution was to the operation, their psychological impact was even greater. In 1964 when then Army Chief of Staff General Creighton Abrams devised the Total Force concept, he realized that the Reserve was a bridge between the active force and the public. "When you come to war you bring the American people with you," General Ed Burba of U.S. Forces Command remarked to a Reserve audience after the Gulf War.

Joint Operations

Mobilizing the Reserve and the Nation was only one of many ways the Gulf War differed from Vietnam. Another was organizing for combat. "MACV [Military Assistance Command Vietnam] functioned not directly under the Joint Chiefs of Staff in Washington but through CINCPAC [Commander in Chief, U.S. Pacific Command in Honolulu]," said General William Westmoreland in his memoirs. "What many fail to realize was that not I but [CINCPAC] was the theater commander in the sense that General Eisenhower . . . was the theater commander in World War II." By contrast Schwarzkopf was very much in the Eisenhower mode. Instead of

headquarters being 6,000 miles from the battlefield as it was in Vietnam, Schwarzkopf moved U.S. Central Command (CENTCOM) from its peacetime location at MacDill Air Force Base in Tampa, Florida, to Riyadh, Saudi Arabia, by late August 1990 where it was to remain for the duration.

While in reality he acted as his own ground force commander, Schwarzkopf had a classic joint chain of command. He exercised command of Army forces through Lieutenant General John Yeosock (commander of 3^d Army), Marines through Lieutenant General Walter Boomer (commander of I Marine Expeditionary Force), air forces through Lieutenant General Charles Horner (commander of 9th Air Force), and naval forces through Vice Admiral Hank Mauz, and his successor, Vice Admiral Stanley Arthur (commander of 7th Fleet).

"Officially, as a commander in chief, I reported to Secretary [of Defense Dick] Cheney," Schwarzkopf wrote, "but Colin Powell was virtually my sole point of contact with the administration. 'It's my job to keep the President and the White House and the Secretary of Defense informed,' Powell would say. 'You worry about your theater and let me worry about Washington.' This arrangement was efficient. . . . But I also found the arrangement unnerving at times, because it kept me in the dark. Often, after White House meetings, Powell would call with questions that made me wonder whether our civilian superiors had grasped military realities." One such case was the decision to begin the ground war, which Schwarzkopf describes as a shouting match with Powell. "You are pressuring me to put aside my military judgment for political expediency," he said at one point. Another was the decision on ending the war. "Frankly my recommendation had been, you know, continue the march," he commented to television interviewer David Frost in March 1991. "I mean we had them in a rout." But after White House and Pentagon remonstrances that he had recommended no such

thing, he apologized for a "poor choice of words."

In an address at the U.S. Naval Academy in May 1991, Schwarzkopf said that Operations Desert Shield/Desert Storm were certainly "the classic example of a multiservice operation, a truly joint operation." But *It Doesn't Take a Hero* focuses on the ground attack. The Navy gets short shrift from Schwarzkopf as it did from the media. "During Desert Storm courageous [Navy] air crews . . . literally decimated major-league targets," complained Rear Admiral R.D. Mixon, commander of Battle Force Red Sea. "Navy strike aircraft flew 23 percent of all the combat missions." The problem is that no one knew it. "We tend to avoid the press," Mixon said, an omission his service paid for dearly.

To compensate for that omission we have Norman Friedman's *Desert Victory*. While not a participant in the war, Friedman—a respected defense analyst who writes a monthly column for the Naval Institute's *Proceedings*—is certainly close to those who were there. A chapter in his book entitled "The Seaward Flank" and an appendix on "Naval Forces in the Embargo and the War" detail the Navy's role in the Gulf. Friedman's analysis is not confined to naval operations but covers the air campaign as well. He is particularly critical of the rigidity of the Air Force computer-driven Air Tasking Order (ATO) system. While acknowledging the success of air operations, he believes that it could never be decisive. "Saddam never did decide to surrender to air attack," he concludes, "but the coalition always had to be aware that he had the option of stopping the attack before its real objective (the elimination of Iraq as a regional threat) had been made." When it appeared Saddam Hussein might do just that with his overtures to the Soviet Union for a "peace plan" in February 1991, the decision was made to launch the ground attack.

In *Storm Over Iraq*, another respected analyst, Richard Hallion, takes a different point of view. The author of a number of books on the subject, Hallion believes airpower was decisive in the Gulf. "Simply (if

boldly) stated," he avers, "airpower won the Gulf War." One may disagree with his conclusions, but it is impossible not to be impressed with the scope of his analysis, which traces the impact of airpower from its beginnings. His arguments were deemed so persuasive that selected portions of his book were excerpted by the Air Force and published as part of "Reaching Globally, Reaching Powerfully: The USAF in the Gulf War," that service's "quick look" at what the air war had accomplished. Quoting a comment by Defense Secretary Cheney approvingly, that the Iraqis "didn't fight back because the air war turned out to be absolutely devastating," Hallion concludes that "airpower can hold territory by denying an enemy the ability to seize it and by denying an enemy the use of its forces. And it can seize territory by controlling access to that territory and movement across it. It did both in the Gulf War."

While the debate continues over whether airpower alone can be decisive, there is no argument with Lieutenant General William (Gus) Pagonis's account of the decisive role logistics played during the Gulf War in *Moving Mountains*. A total of 122 million meals were served, 1.3 billion gallons of fuel pumped, 52 million miles driven, 32,000 tons of mail delivered, 730,000 people processed through aerial ports—just some of the statistics from the logistics of the war. Making it all possible was Gus Pagonis, Schwarzkopf's Deputy Commander for Logistics responsible for "fuel, water, food, vehicles, ammunition, all classes of supply (except equipment spare parts) for the Marine Corps, Air Force, and the Army." From a 20-man team, Pagonis's force grew to some 88,000 individuals, including 39,925 soldiers. "I owe much of the success of my command to the talents of our flexible and well-trained Reserve component (National Guard and Reserve) units," he writes. "At the height of the Gulf conflict, the 22^d Support Command drew a full 70-plus percent of its personnel from Reserve units; and we're lucky we were able to do so." As director of host-nation support, Pagonis built

REFUSING TO REFIGHT THE LAST WAR

... America's hands were no longer tied. Unlike North Korea's Kim Il Sung and North Vietnam's Ho Chi Minh, Saddam Hussein was not shielded by the skirts of China and the Soviet Union. American military strategy had come full circle, and in many important respects was back to World War II again. Like Adolph Hitler, to whom he has been compared, Saddam Hussein was to feel the full fury of America's conventional military might.

Gradualism and stalemate were out the window. "Prior to ordering our forces into battle," said President Bush, "I instructed our military commanders to take every necessary step to prevail as quickly as possible and with the greatest degree of protection possible for American and allied servicemen and women."

"No President can easily commit our sons and daughters to war," he concluded. "They are the Nation's finest. Ours is a volunteer force—magnificently trained, highly motivated. The troops know why they're there."

And that was more than just rhetoric. Because of the renaissance in military thinking in the 1970s and 1980s, our soldiers, sailors, airmen, Marines, and coast guardsmen were the best-trained and best-prepared military force that the United States had ever committed to action.

From *On Strategy II: A Critical Analysis of the Gulf War*
by Harry B. Summers, Jr.
New York: Dell Publishing, 1992.
[ISBN 0 440 21194 8]

an effective in-country supply base for food, water, and ground transport. "Conducting business with the Saudis and other Middle Eastern nationals was an ongoing educational experience," he says, in what is a masterpiece of understatement.

Combined Operations

Pagonis was not the only one dealing with foreign nationals. Operation Desert Storm not only represented a Total Force operation—with both active and Reserve components of the Army, Navy, Marine Corps, Air Force, and Coast Guard—and a joint operation involving a team effort by all the services—but it was also a combined operation involving military contingents from some forty allied nations. Crucial to prosecuting the war was the cooperation of the Kingdom of Saudi Arabia. "Without Saudi Arabia—without its harbors and airfields, military bases, housing, transportation systems, money, fuel, and friendly environment—the war would have been far more difficult and dangerous to wage, if it could have been waged at all," said Schwarzkopf's Saudi counterpart, Lieutenant General Prince Khalid Bin Sultan al-Saud. The son of the Saudi Minister of Defense, Khalid was educated at the Royal Military Academy, Sandhurst; attended the Air War College at Maxwell Air Force Base; and holds a master's degree from Auburn University. While Schwarzkopf exercised unity of command as sole commander of all U.S. forces, such an arrangement was not politically feasible for control of combined forces. Instead there was a cooperative, dual command: Schwarzkopf commanded the American, British, and French forces, and Khalid commanded the forces of Saudi Arabia, Gulf states, Egypt, Syria, and the other coalition partners. "Schwarzkopf and I had a successful and friendly partnership," Khalid noted, "and I would like to think we both acquitted ourselves well." Unfortunately this spirit did not survive the publication of Schwarzkopf's book. "It is not unusual after a war for generals to magnify their own achievements and belittle those of others,"

Khalid wrote. "I regret to say that . . . my comrade in arms during the Persian Gulf War has succumbed to this temptation . . . he gives himself all the credit for the victory over Iraq while running down just about everybody else."

More forgiving is *Storm Command: A Personal History of the Gulf War* by General Sir Peter de la Billière, commander of British forces in the Gulf. An Arabist with 15 years experience in the Middle East, Sir Peter, Britain's most decorated serving soldier, spent most of his career in the Special Air Service (SAS), the British army's premier special operations unit. Accustomed to avoiding the limelight, de la Billière nonetheless had a major impact on the war. For one thing, he was instrumental in increasing British ground contributions to a full division and then gaining his 1st Armoured Division an independent battlefield mission. For another, his SAS forces operating behind enemy lines drove the SCUDs out of range of Israel. Reportedly these efforts led the way to increased use of U.S. Special Operations Forces in covert operations on the battlefield.

Unfortunately, there has been little written—in English at least—on the contributions of the French 6th Light Armored Division and the Saudi, Egyptian, and Syrian divisions. Friedman does discuss, however, the contributions of allied navies. Likewise, Hallion has a very moving section on allied participation in the bombing campaign where eight Tornado aircraft were lost, including six from the Royal Air Force, one from the Saudi air force, and one from the Italian air force.

Women on the Battlefield

Another theoretical truth of the Gulf War was the affirmation of the role of women on the battlefield. Women had served in past wars, mostly as nurses or clerical personnel, but for the first time they served in large numbers in combat support and combat service support units. Some 41,000 women served in the Gulf. There were 27,000 in the active force, but the highest proportion—

13 percent of the total—were Reservists, including 21.3 percent of the Reserve officers. As Defense Secretary Dick Cheney said on March 2, 1991, "Women have made a major contribution to this effort. We could not have won without them." And Schwarzkopf was equally complimentary. "Discussion with the congressional delegation led by Congressman Ford," reads his war diary for March 16, 1991. "One issue was women in the military—how did they do? The CINC said 'Great!' " One major fear was the public reaction to women coming home in body bags—though some 200 military nurses were killed in World War II and eight in Vietnam—and what would happen if a woman was taken prisoner, forgetting that during World War II 79 Army and Navy nurses were held as POWs by the Japanese.

She Went to War is Army Major Rhonda Cornum's account of her captivity at the hands of the Iraqis. A flight surgeon and helicopter pilot, she was shot down while on a search-and-rescue mission over southern Iraq. Her matter-of-fact tale of what she went through, and her subsequent revelation that she had been sexually molested—what she called "an occupational hazard of going to war"—does much to refute the idea that women are somehow peculiarly vulnerable in battle and unable to withstand the rigors of combat. Be that as it may, while the argument continues over assigning women to direct combat, there can no longer be any doubt over women's legitimate role on the battlefield. As Cornum says, "The qualities that are most important in all military jobs—things like integrity, moral courage, and determination—have nothing to do with gender."

The Media

The final theoretical truth is that, like it or not, the news media are an essential part of the American way of war. In November 1984, in a discussion of the necessary preconditions for going to war, then Defense Secretary Caspar Weinberger said that there must be some reasonable assurance of public and congressional support. But how do you get that support? "A Gallup public opinion poll in early 1991 showed 85 percent of the public had a high level of confidence in the military," noted Rear Admiral Brent Baker, the Navy's Chief of Information. "Where did the public get its perception of the military's professionalism? They got it from news media reports."

After the Gulf War there was much whining and sniveling from the media, much of it antiwar diatribes cloaked in First Amendment pieties. But there has been legitimate criticism as well, and the military ignores it at its peril. Among such criticisms is *Hotel Warriors: Covering the Gulf War* by John J. Fialka, the war correspondent of *The Wall Street Journal*. Finding fault with both the media and the military, he argues that the present system serves neither journalists nor soldiers. "The basic point that John Fialka makes," says the Library of Congress's Peter Braestrup, "is that the Nation and the Armed Services are best served . . . by competent firsthand reporting of military performance, good or bad."

Some argue that it is too soon to make a critical analysis of the Gulf War. Others argue that it was an anomaly with no lessons to proffer. But such arguments miss the point. "The military student does not seek to learn from history the minutiae of method and technique," said then Army Chief of Staff General Douglas MacArthur in 1935. "In every age these are decisively influenced by the characteristics of weapons currently available and the means at hand for maneuvering, supplying, and controlling combat forces."

"But research does bring to light those fundamental principles, and their combinations and applications, which in the past have been productive of success. These principles know no limitation of time. Consequently the Army extends its analytical interest to the dust-buried accounts of war long past as well as those still reeking with the scent of battle."

JFQ

THE MILITARY COST OF DISCRIMINATION

A Review Essay by ALAN L. GROPMAN

The Golden Thirteen: Recollections of the First Black Naval Officers

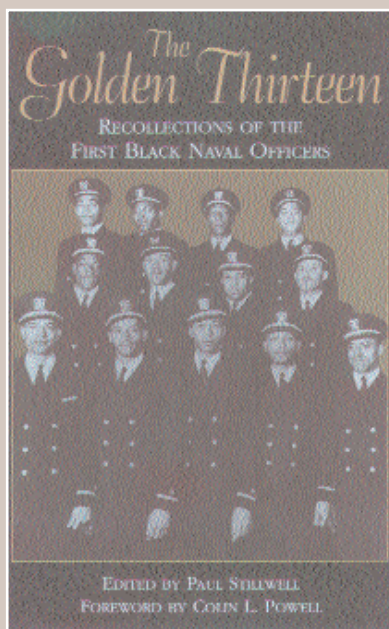
edited by Paul Stillwell,

foreword by Colin L. Powell

Annapolis: Naval Institute Press, 1993.

304 pp. \$21.95.

[ISBN 1 55750 779 1]



The Navy commissioned its first black officers—twelve ensigns and one warrant officer—in April 1944, thereby ending symbolically and painfully 146 years of racial discrimination. The Golden Thirteen is an oral history recounting the wartime experiences of eight surviving members of that first cohort of black naval officers. Their

Alan L. Gropman is a professor of history at the Industrial College of the Armed Forces and the author of *The Air Force Integrates, 1945–1964*. A retired Air Force colonel, he flew more than 650 missions in Vietnam.

reminiscences are complemented by interviews with white officers who both trained and commanded the Golden Thirteen during World War II. This book is a clear reminder of a long and painful chapter in U.S. military history in which the combat potential of black soldiers, sailors, marines, and airmen was lost to the Armed Forces.

Recruiting the Thirteen

The Golden Thirteen was a successful group of enlisted men who trained for ninety days in early 1944 at Great Lakes Naval Training Station to provide a token complement of commissioned blacks. The group was made up of solid performers, better educated than many white officers of the period. Several were exceptionally well qualified. Samuel Barnes, for example, was a college graduate and athlete who later earned a doctorate; Frank E. Sublett had completed three years of college and gained a national reputation as a football player; Graham E. Martin, who had excelled both academically and athletically at Indiana University, starred on the Great Lakes football team which ranked among the best in the country; and William S. White had been graduated from the University of Chicago Law School and served as an assistant U.S. Attorney before his induction into the Navy. But because they were black, no assignments other than menial jobs were open to White and other members of the Golden Thirteen when they enlisted. In fact, if they joined the Navy on December 7, 1941, their only choice of assignment would have been mess steward.

The Navy had stopped enlisting blacks in 1919, by which time Afro-American sailors were relegated to duties as stewards and cooks. In 1932 the Navy opened up enlistment once again, but only to those blacks who agreed to wait on tables or work in the kitchen. But assigning blacks to servile duties had not always been the Navy's practice. From the days of John Paul Jones to the Civil War, and as recently as the Spanish American War (in which a black sailor earned the Medal of Honor), blacks had

served in combat. In fact, until the closing years of the last century blacks made up a higher percentage of the naval combat force than their share of the national population. Yet by 1932, although they made up over 10 percent of the U.S. population, blacks had fallen to less than 1 percent of the Navy's enlisted force. (By the end of World War II black sailors made up about 5.5 percent of the Navy.) In other words, the pervasive racism of the early 20th century influenced attitudes in the Navy to the extent that the service was denied the contributions of qualified warriors solely on the basis of their race. During the 18th and 19th centuries, when slavery had been legal and racism common, the Navy had overcome prejudice to employ blacks profitably and in integrated fashion on warships. But by the early 20th century, race rigidity had become so severe that the Navy denied itself fighters and humiliated tens of thousands of blacks.

The Golden Thirteen, proud of being commissioned, suffered their share of indignities. The commander at Great Lakes, for instance, ordered the new ensigns not to enter the officers' club. The Bureau of Naval Personnel, moreover, had no plan for using these unique officers, so many of the thirteen served in billets beneath the level of white officers. For example, two went to the West Coast to jointly command a yard oiler, a job previously held by a single enlisted man.

Had it not been for President Franklin Roosevelt the Navy would have not permitted blacks to serve outside the mess, but because of the Commander in Chief's pressure, the Navy permitted blacks to compete for general service positions after June 1942, though duty was still limited to shore installations and small local-defense craft. In the fleet blacks could serve only in messes. The Navy, moreover, barred any serving messman from transferring from that specialty to the general service, claiming that such transfers might cause a shortage of servants. Roosevelt also forced the Navy to open its naval commissioning program known as V-12 to blacks on a

nondiscriminatory basis, but this program was not advertized widely and many blacks never got the word.

Assistant Navy Secretary Adlai Stevenson convinced Secretary of the Navy Frank Knox that the service would be less subject to criticism by the black press and leadership if a dozen blacks could complete an abbreviated officer training course before the first black V-12 people were graduated. The Golden Thirteen thus sprang from Stevenson's intervention. Throughout the war the Navy commissioned only 60 blacks compared with more than a hundred thousand whites.

Elsewhere in the Department of the Navy, the Marine Corps was infected by the same racial poison. Before World War II the Marines had accepted no blacks. In April 1941, as his service rapidly expanded, the Commandant of the Marine Corps went on the record as follows: "If it were a question of having a Marine Corps of 5,000 whites or 250,000 Negroes, I would rather have the whites." While many blacks were qualified for duty in the infantry or combat aviation, segregation prevented them from being warriors. The Marines actually instructed medical examiners to simply disqualify black applicants during enlistment physical exams (the Army Air Force acted similarly). The Marine Corps leadership denied blacks combat positions during and even after World War II, but today blacks make up more than 20 percent of Marine riflemen.

Blacks in the Army

The Navy and the Marine Corps were not the only services that refused to assign blacks to combat during the war. Despite a heritage of black service in the Civil War, Indian campaigns, and Spanish American War, the Army reacted similarly. In the interwar years fewer than 2 percent of the Army was black, and those few black soldiers were relegated to support duties.

Although the Army studied ways to employ more blacks, bigotry blocked the beginning of actual reform. During World War I blacks constituted a much smaller percent-

age of the Army's combat force than it did of the population, thus the fighting and dying burden disproportionately fell upon whites. The General Staff directed the Army War College to study the underuse of blacks in combat, and it did on numerous occasions. But each time the question was examined racist myths and stereotyping interfered with the ability of the War College's students and faculty to make useful recommendations. The class of 1925, for example, asserted its racist findings in a report that stated blacks had smaller craniums than whites, and that the black brain weighed 20 percent less. The authors also concluded that blacks were instinctively cowardly. Despite these blatantly false conclusions, the students and faculty argued that blacks ought to serve in combat for manpower considerations, though always under white officers and within segregated units because social inequality made

The Golden Thirteen were not activists. None of them had sought to make history. The Navy's leaders had simply decided that it was past time to bring down the barriers to opportunity in the fleet; and as a consequence, these thirteen sailors were plucked out of their separate lives to learn the ways of officership.

Yet from the very beginning they understood, almost intuitively, that history had dealt them a stern obligation. They realized that in their hands rested the chance to help open the blind moral eye that America had turned on the question of race.

And they recognized that on their shoulders would climb generations of men and women of America's future military, including a skinny seven-year-old kid in the Bronx named Colin Powell.

*From the foreword to
The Golden Thirteen
by Colin L. Powell*

"close association of whites and blacks in military organizations inimicable to harmony and efficiency." Nine subsequent War College reports presented such pseudoscientific generalizations which cost the Army full use of black soldiers. Blacks comprise nearly 30 percent of the Army today, even higher percentages in the combat arms, whereas in 1940 black soldiers constituted only 1.5 percent of the total enlisted force, with none being truly combat soldiers.

The war expanded the number of blacks in the Army exponentially. Some did see combat in segregated units and, by 1945, a few thousand were actually fighting beside whites in essentially integrated units. The Army's racial experience was unhappy, however, because its leaders, including those in the Army Air Corps, both civilian and military, remained deeply prejudiced

Tuskegee Airmen Go to War

In 1940 the Army Air Corps had no blacks serving in any capacity and wanted to retain that status quo. But as in the case of the Navy the President forced the War Department to change its policy. Consequently, in 1941, the Army was forced to establish a training base for black aviators, and it did so near Tuskegee, Alabama. The graduates of Tuskegee Army Air Field, still known as "Tuskegee airmen," were formed into the 332^d Fighter Group and the 477th Medium Bombardment Group.

The 332^d got into action and built a fine record flying from bases in North Africa, Sicily, and Italy. The group flew about 1,500 missions during the war, more than 15,000 sorties in all, shot down more than 100 enemy aircraft in air-to-air combat, destroyed more than 150 others on the ground, and sank a destroyer with machine gun fire (a unique achievement). Most significant of all, the 332^d never lost an escorted bomber to enemy fighters in 200 escort missions. Tuskegee airmen flew over some of the most heavily defended enemy targets, among them the Ploesti oil fields in Romania and Berlin itself. The success of the 332^d in escort missions was also unique.

No other unit with a similar number of missions had comparable success.

The triumph of the 332^d, however, while publicized in the black press, was not advertised widely by the Army; so during the balance of the war the achievements of the Tuskegee airmen did not bring about increased opportunities for blacks. In fact, the unit remained segregated, its airmen often treated badly and frequently humiliated by prejudiced leaders. Thus deprived of their rightful due as heroic aviators the men of the 332^d could not stand as role models for recruitment. By the end of the war blacks still formed only about .5 percent of the pilot force.

Perhaps the most egregious example of the damage done to the war effort by bigotry—and an instance of how prejudice can drive officers who were otherwise professional to act against the national interest—was the provoked mutiny of officers in the 477th Medium Bombardment Group. The 477th was a four-squadron B-25 unit formed in January 1944 at Selfridge Air Force Base, Michigan. It was initially earmarked for the European theater, later for the Pacific. However, the group commander, Colonel Robert E. Selway, instigated an uprising that destroyed unit morale, thereby dashing the group's chances for getting into combat.

Selway selected only whites to staff his headquarters and command the flying squadrons. All the other aviators as well as the mechanics and support specialists were blacks. In the 477th, the policy was that no black could command a white despite the fact that many black veterans of the 332^d had flown numerous combat missions and had volunteered for more combat with the 477th. None of the white officers had combat experience.

Selway, moreover, himself refused to associate with blacks by visiting the officers' club. Because of his example the white squadron commanders did likewise. Fearing a negative reaction from nearby Detroit with its large black population, Selway moved the 477th south to an inadequate airfield. He anticipated that the relocation would offer him

better control over his troops, although in fact they had caused no trouble to that point. The move set back the training schedule, and since the airfield was poor, he had to relocate again in March 1945 to catch up on training.

At the new base, Freeman Field in southern Indiana, he constructed one officers' club for his white cadre and another for blacks. The action violated Army regulations and drove the black aviators of the 477th to exercise their rights. When they informed Selway of their intention to enter any club he opened, he threatened them with prosecution, issued an order specifying by name who could enter the white club, and finally arrested (and manacled) 61 black aviators who disobeyed his regulation. These men were shipped out, and his outfit, supposedly on its way to war, stood appreciably short of aircrews. He then compounded the injustice by ordering the remaining officers to certify by signature that he was not discriminating against blacks on the basis of race. All the whites complied and, because it was a direct order in time of war, about 300 black officers also signed, but 101 blacks refused even under threat of arrest and worse. Selway arrested these men and shipped them off as well, leaving his outfit short of 162 pilots, navigators, and navigator-bombardiers. The 477th was dead.

In his actions, Selway was supported by superiors who, in turn, were backed by general officers in the Pentagon, including the Deputy Commanding General of the Air Corps. Thus in a time of war, when the country was counting on every asset, bigotry not only drove senior officers to violate their oaths, but also to deprive the Nation of the combat services of skilled and dedicated aviators.

Racial integration and the full utilization of human resources based upon ability rather than race came to all the services within six years of World War II, sooner in the cases of both the Navy and the newly established Air Force, evidence that the costly discrimination of the war years could have been abandoned. Read *The Golden Thirteen* and learn

of the trials and triumphs of a fine group of Americans, and let this latest entry in the record of black military history serve as a painful reminder for all who wear the uniform that intolerance is destructive. In this current era of constrained resources, the defense establishment cannot afford to waste any human asset. **JFQ**

ON THE OTHER SIDE OF THE INTERWAR YEARS

A Book Review by BRIAN R. SULLIVAN

The Roots of Blitzkrieg: Hans von Seeckt and German Military Reform

by James S. Corum

Lawrence, Kansas: University of
Kansas, 1992. 274 pp. \$29.95
[ISBN 0 7006 05 41 X]

Those who find themselves dismayed by impending cuts in the Armed Forces can take considerable heart from a new study of the German army between 1918 and 1933. James Corum, who teaches in the School of Advanced Airpower Studies at the Air Command and Staff College, has written an engrossing history of the *Reichswehr* that serves as an antidote to worries over declining force structures.

The Versailles Treaty compelled the Weimar Republic to reduce the strength of the German army to 100,000 men. (With a German population of 63 million in 1925, this was proportionate to a U.S. Army of 400,000 today.) Furthermore, the Allies forbade the *Reichswehr* to possess aircraft, armor, antiaircraft guns, medium and heavy artillery, and poi-

Brian R. Sullivan is a senior fellow in the Institute for National Strategic Studies at the National Defense University. He is the coauthor of a recent book entitled *Il Duce's Other Woman*.

son gas, as well as limiting it to 1,926 machine guns and 252 mortars. The force structure was set at seven understrength light divisions and three brigade-size cavalry divisions. The establishment of a General Staff was outlawed. But despite these restrictions, the author demonstrates that the German army soon was "the best-led, best-trained, and arguably the most modern army in the world." In fact, Corum observes, this "small, lightly armed *Reichswehr* became the best trained army . . . in carrying out large-scale operations."

The principal credit for this extraordinary achievement goes to General Hans von Seeckt, who headed the German army from 1919 to 1926. While Seeckt employed a number of methods, he emphasized a scrupulous system for selecting both officers and enlisted men plus a demanding regimen of formal education and an uncompromisingly realistic approach to field training. Despite the care with which they were chosen and the size of the manpower pool (in the late 1920s there were 15 applicants for each enlisted slot and fewer than 200 officer candidate positions each year), the *Reichswehr* ruthlessly weeded out those who

failed to meet its iron standards. Officer candidates were required to serve 18 months in the enlisted ranks before undergoing 30 months of pre-commissioning training. And each year scores of candidates were found lacking and dismissed.

Recruits were subjected to crushing pressure while doing 6 months of infantry training, followed by equally rigorous specialized branch training. Enlisted men were issued tactical handbooks and compelled to study them with the same diligence as medical or law students. Promotion even to the rank of lance corporal required demonstrated leadership capabilities and the successful completion of extremely demanding written and oral examinations.

The Versailles Treaty permitted Germany to have an officer corps of only 4,000 but placed no limit on the number of NCOs. Taking full advantage of this loophole, Seeckt eventually created 19,000 senior NCOs, while restricting the total number of field grade and general officers to 920. He also limited the size of division staffs to 32 officers, a level the *Wehrmacht* retained. Senior NCOs commanded platoons, received training to lead companies or

batteries, and were expected to employ combined arms in battle. The *Reichswehr* did not use majors as office managers, nor staff sergeants to make coffee. But it was able to expand from 100,000 in January 1933 to 3.7 million in September 1939, then smash its enemies and overrun Poland, Scandinavia, and Western Europe in ten months.

The *Reichswehr* also laid the foundation for the later victories of the *Wehrmacht* on brilliant tactical and operational doctrine, modern and extremely efficient weapons and equipment, and the development of mechanized and air-ground warfare. But as Corum notes, Seeckt's *Reichswehr* did not propagate doctrine. "The American term implies a rigidity of tactics, the 'proper' way to employ the principles of war. . . . The closest equivalent term that the Germans had was concept. Military tactics were general guidelines—they were not meant to be literal formulas or principles of warfare." This intellectual flexibility, combined with Seeckt's encouragement of dissent, allowed the *Reichswehr* to push very far and rapidly beyond the thinking of 1918.

WORLD WAR II REMEMBERED



THE 50TH ANNIVERSARY OF WORLD WAR II is being commemorated in various ways, including publication by the services of monographs and pamphlets on the European and Pacific theaters as well as the homefront. Some titles are reprints of works which originally appeared during or shortly after the war and offer contemporary accounts of many of the most important joint and combined operations in military history. Among the publications issued by the Army and Air Force are those listed below; titles published by the Navy and Marine

Corps will be found next time in "Off the Shelf."

The U.S. Army Center for Military History is developing a series of brochures for distribution during the commemorative period entitled "The U.S. Army Campaigns of World War II." Of those titles in the series already in print, the following are focused on the war in the Pacific:

"Philippine Islands, 7 December 1941–10 May 1942." CMH Pub 72–3. Washington: Government Printing Office, 1992. 23 pp. [ISBN 0 16 035879 5]

"Central Pacific, 7 December 1941–6 December 1943." CMH Pub 72–4. Washington: Government Printing Office, 1992. 23 pp. [ISBN 0 16 035880 9]

"India-Burma, 2 April 1942–28 January 1945." CMH Pub 72–5.

Washington: Government Printing Office, 1992. 26 pp. [ISBN 0 16 035881 7]

"Aleutian Islands, 3 June 1942–24 August 1943." CMH 72–6.

Washington: Government Printing Office, 1992. 26 pp. [ISBN 0 16 035882 5]

"Papua, 23 July 1942–23 January 1943." CMH 72–7. Washington: Government Printing Office, 1992. 22 pp. [ISBN 0 16 035883 3]

The Center for Air Force History is reprinting a series entitled "Wings at War" which was first issued by the Army Air Forces. It includes the following titles on air campaigns in Europe:

"The AAF in the Invasion of Southern France." *Wings at War*,

Clandestine development and testing in foreign countries of prohibited weaponry—particularly trials of tanks, aircraft, artillery, and gas in Russia—allowed the *Reichswehr* to validate new concepts of war. (The book's superb illustrations document this story well.) Once Hitler ordered rearmament in 1933, the German army could put prototypes into full-scale production. Describing the process, Corum explodes some myths about Seeckt's attitudes toward armored and air warfare. Contrary to Heinz Guderian's self-promoting claims, Seeckt and the *Reichswehr's* armored enthusiasts developed ideas and equipment that made possible the panzer division. Nor were such ideas taken from Liddell Hart or Fuller. In fact, German armor experts did not learn of Liddell Hart's bizarre tank warfare concepts until 1945. As for Fuller's influence Corum says the *Reichswehr's* armor theorists "were, in the main, critical readers who carefully chose concepts—Fuller's and others—that seemed reasonable and practical and discarded the rest."

The 180 officers Seeckt appointed to his shadow air force were familiar with the theories of Douhet, Trenchard, and Mitchell. But the fu-

ture leaders of the *Luftwaffe* came to the same conclusion as Seeckt and rejected such thinking. Their analysis of strategic bombing concepts convinced them that such attacks would lead to unacceptable losses. Instead, "the *Reichswehr's* air staff . . . developed a comprehensive air doctrine that emphasized the tactical role of the air force in supporting ground forces. Even [when] the *Luftwaffe* was established as a separate branch of the armed forces, the overwhelming majority of officers had been trained to think of airpower in terms of just one element of a combined arms effort. . . ." The *Luftwaffe* failed, however, to develop strategic bombers and long-range fighters to accompany them. But the *Reichswehr's* air officers did initiate the air component of the *Blitzkrieg* that proved so successful in 1939–42.

The *Reichswehr's* accomplishments are best appreciated by contrasting them with developments in the British and French armies during the same period. Corum's work should be read in conjunction with Shelford Bidwell and Dominic Graham, *Fire Power: British Army Weapons and Theories of War, 1904–1945* (London: George Allen and Unwin, 1982), and Robert A. Doughty, *The Seeds of Disaster: The Development of French Army Doctrine, 1919–1939* (Hamden, Conn.: Archon Books, 1985). For the consequences which resulted from the impact of the twenty years of German military innovation on a generation of French army torpor, see Doughty, *The Breaking Point: Sedan and the Fall of France* (Hamden, Conn.: Archon Books, 1990).

The Roots of Blitzkrieg offers healthy reassurance to those who may feel desperate over the financial stringencies of the 1990s. Seeckt's *Reichswehr* suffered from a nightmare of restrictions and economies compared to those that face the U.S. Armed Forces today. But the narrow material parameters of 1919–33 offered no effective barrier to revolutionary *Reichswehr* advances in tactics, operations, weapons, and equipment. Many of the same intellectual and organizational methods of seventy years ago remain applicable today, under the far more advan-

tageous circumstances enjoyed by the American military. But they are also available to our less fortunate potential opponents. For anyone interested in turning adversity into advantage, read *The Roots of Blitzkrieg*. **JFQ**

BOOKSNOTED

NEW ARRIVALS

The following list contains some recently published titles on defense studies and military affairs. Beginning with the next issue of *JFQ*, "Off the Shelf" will feature a quarterly annotated roundup of books, articles, and monographs dealing exclusively with joint and combined warfare.

Thomas A. Cardwell III. *Airland Combat: An Organization for Joint Warfare*. Maxwell Air Force Base, Ala.: Air University Press, December 1992. 269 pp.

Kenneth W. Condit. *The Joint Chiefs of Staff and National Policy, 1955–1956*. The History of the Joint Chiefs of Staff. Volume 6. Washington: Historical Office, Joint Staff, 1992. 326 pp.

Trevor N. Dupuy et al., editors. *International Military and Defense Encyclopedia*. 6 vols. Washington: Brassey's (US), 1993. 3,132 pp. [ISBN 0 02 881061 9 (vol. 1)]

William Jackson and Edwin Bramall. *The Chiefs: The Story of the United Kingdom Chiefs of Staff*. London: Brassey's (UK), 1992. 508 pp. [ISBN 0 08 040370 0]

Anthony James Joes. *Modern Guerrilla Insurgency*. Westport, Conn.: Praeger Publishers, 1992. 248 pp. [ISBN 0 275 94263 5]

Brian W. McLean. *Joint Training for Night Air Warfare*. Maxwell Air Force Base, Ala.: Air University Press, October 1992. 103 pp.

Donald M. Snow. "Peacekeeping, Peacemaking, and Peace-Enforcing: The U.S. Role in the New International Order." Carlisle Barracks, Pa.: Strategic Studies Institute, U.S. Army War College, February 1993. 40 pp.

Ghulam Dastagir Wardak et al., compilers. *Issues of Operational Art. The Voroshilov Lectures: Materials from the Soviet General Staff Academy*. Volume 3. With an introduction by David M. Glantz. Washington: National Defense University Press, 1992. 568 pp. **JFQ**

no. 1. Washington: Government Printing Office, 1992. 60 pp. [ISBN 0 16 038133 9]

"Sunday Punch in Normandy."

Wings at War, no. 2. Washington: Government Printing Office, 1992. 32 pp. [ISBN 0 16 038134 7]

"Pacific Counterblow." Wings at

War, no. 3. Washington: Government Printing Office, 1992. 56 pp. [ISBN 0 16 038130 4]

"Airborne Assault on Holland."

Wings at War, no. 4. Washington: Government Printing Office, 1992. 57 pp. [ISBN 0 16 038135 5]

"Air-Ground Teamwork on the

Western Front." Wings at War, no. 5. Washington: Government Printing Office, 1992. 50 pp. [ISBN 0 16 0381232 0]

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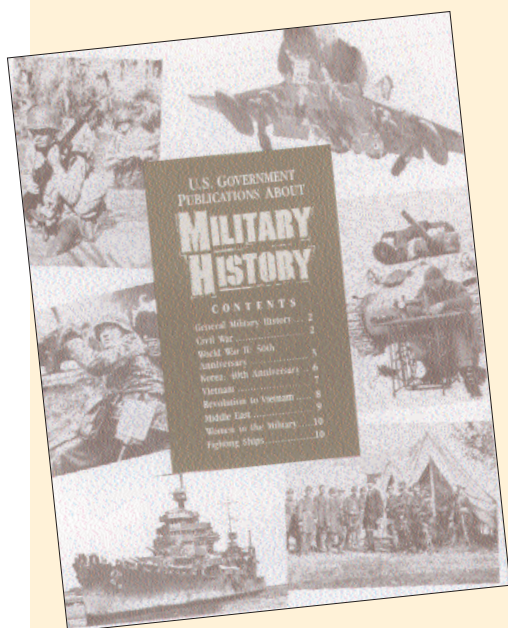
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Published by the
Institute for National Strategic Studies
National Defense University
Washington, D.C.