

JFQ



Logistics and Support

**Chairman's Strategic
Essay Contest Winners**



**New Series—
Interagency Dialogue**

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*Without supplies, no army is brave.
—Frederick the Great, 1747*

*Victory is the beautiful, bright-coloured
flower. Transport is the stem without
which it never could have blossomed.
—Sir Winston Churchill, 1899*



*The war has been variously termed a war
of production and a war of machines.
Whatever else it is, so far as the United
States is concerned, it is a war of logistics.
—Fleet ADM Ernest J. King, USN, 1946*

*Good logistics is combat power.
—LTG William G. Pagonis, USA, 1992*





A Word from the

General Myers with U.S. Soldiers
in Kabul, Afghanistan



1st Combat Camera Squadron (D. Myles Cullen)

Chairman

As we progress through this fourth year of sustained combat in the war on terror, I am continually aware of the enormous and varied demands this struggle places on our Armed Forces, our Nation, and our allies. The violent extremists we battle are a tough enemy. They are agile, adaptive, and unencumbered by any boundaries—territorial or moral. Winning this struggle demands that we transform how we work together across organizations, deploy, equip ourselves, train, and employ and adapt our doctrine. That is no small task for an organization of our size.

At the same time, I am tremendously impressed by the energy, dedication, and ingenuity of all the men and women who have stepped up to the task of fighting this high-stakes fight: Soldiers, Sailors, Marines, Airmen, Coastguardsmen, civilians in the Department of Defense and across the Government, and our all-important allies. The men and women of the logistics community are a prime example.

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JFQ

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PHOTO CREDITS



The cover shows Marines loading up to escort convoy to Turaybil, Iraq (2^d Force Service Support Group/Brian A. Jaques). The front inside cover features [top to bottom] USS *Harry S. Truman* and USS *Monterey* being replenished at sea by USNS *Arctic* (U.S. Navy/Joe Burgess); Marines guiding high mobility multipurpose vehicle off high speed vessel *Westpac Express* in Thailand, Operation *Unified Assistance* (U.S. Marine Corps/Patrick J. Floto); Soldiers building A-22 container delivery system with humanitarian aid in Afghanistan (416th Air Expeditionary Group/Scott T. Sturkol); and HH-60 helicopter being offloaded from C-5 at Kadena Air Base,

Japan (18th Communications Squadron/Michael Pallazola). The table of contents depicts [left] tsunami victims helping unload relief supplies from Navy MH-60S in Sumatra, Indonesia, Operation *Unified Assistance* (Fleet Combat Camera Group, Pacific/Alan D. Monyelle); [right] Marines providing security for engineers on the Iraq-Syria border (U.S. Marine Corps/Christopher G. Graham). The back inside cover shows C-17s making low level pass near Biggs Army Air Field during Composite Force Operations training (1st Combat Camera Squadron/Matthew Hannen). The back cover reveals [top] Soldiers filing off C-130 for Quick Reaction Force exercise in Texas (U.S. Air Force/Derrick C. Goode); [left to right] Sailors conducting maritime security operations in Gulf of Aden, Operation *Iraqi Freedom* (Fleet Combat Camera Group, Atlantic/Robert McRill); Coast Guardsmen patrolling cruise ship pier in Juneau, Alaska (U.S. Coast Guard/Gail Skinner); Marines patrolling in Afghanistan for Taliban insurgents (22^d Marine Expeditionary Unit/Keith A. Milks); and F-16 taking off from Shaw Air Force Base, Operation *Noble Eagle* (20th Communications Squadron/Keri S. Whitehead).

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Editor, *Joint Force Quarterly*
National Defense University Press
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Telephone: (202) 685-4220/DSN 325-4220
FAX: (202) 685-4219/DSN 325-4219
Email: JFQ1@ndu.edu

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Joint Logistics

The U.S. military's logistic capability is unmatched in the world. Our ability to mobilize forces, get to the fight, and sustain operations underpins the national defense strategy and the global basing strategy. Allies, interagency partners, and nongovernmental organizations rely on this logistic support as well. So transforming logistics is an integral and essential part of transforming the Armed Forces.

Joint Force Quarterly

Gen Richard B. Myers, USAF
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The Joint Staff J-4 is leading a broad, far-reaching effort called Joint Theater Logistics to assess our logistics capabilities, identify shortfalls, and create truly integrated solutions. Improving logistics capabilities depends not just on better transportation and information systems, but also on doctrine, processes, training, education, and leadership.

Through Joint Theater Logistics and countless other initiatives, logistic experts throughout the Department of Defense have signed up to provide capabilities that are more responsive, integrated, adaptable, and networked, all with the aim of better supporting operational missions anywhere in the world. They have already accomplished a great deal. Several examples stand out:

■ U.S. Transportation Command led a joint, interagency, coalition effort to provide the combatant commands more efficient, coordinated logistic support in theater by establishing Deployment Distribution Operations Centers. In U.S. Central Command, this initiative has already saved millions of dollars in shipping costs and, more importantly, provides more responsive logistic support for operational commanders. U.S. Pacific Command employed the concept in the aftermath of the tsunami disaster, speeding the delivery of food, water, and medical supplies.

■ We have doubled the number of direct air delivery hubs in Iraq and expanded intra-theater airlift to reduce the number of convoys traveling through high-risk zones. This is a clear case of joint logistics saving lives.

■ We have delivered to the warfighter thousands of armor kits for vehicles, the most leading-edge body armor, and brand new technology for countering improvised explosives. The ability to adapt faster than the enemy is key to success in this struggle.

These innovations are tied to the reality that joint warfighting now goes beyond the services to include other Government agencies and allies. In logistics, as in everything the Armed Forces do, transformation depends on smart, dedicated people finding ways to cut across old stovepipes and integrate processes, organizations, and systems that once operated in isolation at worst, or were duct taped together at best.

Chairman's Essay Contest

This type of broad, innovative thinking shines in this year's winning essays of the Chairman's Essay Contest. In the first place essay, Marine Lieutenant Colonel Michael Morris examines how we categorize al Qaeda—as an insurgency or a terrorist organization. He considers how our understanding of al Qaeda's extremist ideology should define the threat and shape the strategy for countering it. Understanding the threat at the



U.S. Air Force (Elren Lopez)

ideological level is key to the Nation's strategy for the war on terrorism. The most important pillar of our strategy is creating a global environment that does not encourage young Muslim men and women to resort to violent extremism.

In the second place essay, an interagency team—Martin Gorman from the Defense Intelligence Agency and Navy Commander Alexander Krongard—argues for legislation similar to the Goldwater-Nichols Act to improve interagency cooperation. They understand that the U.S. military alone cannot win this struggle against violent extremists. If we are to bring all instruments of power to bear effectively, as this conflict demands, our efforts must be better integrated across the Government.

Air Force Colonel Mark Amidon argues for a comprehensive project to develop a new energy policy. He takes a broad view of national security, a long-range outlook, and a global perspective on energy—all of which are essential to the kind of

strategic thinking we need as we prepare to meet future threats.

Australian Army Colonel Gerard Fogarty argues for closing the detention operations at Guantanamo Bay, an issue that has been at the center of much public debate. Because we face a brutally violent, agile, stateless enemy in this conflict, we face new issues in handling those we have captured. Above all, we continue to hold to the principle that America and its allies share—that we will treat each person humanely.

I appreciate all who researched, studied, and debated these and other issues. I thank the faculty and staff of National Defense University and all the military education programs for all they do to mentor servicemen and women and encourage the innovative thinking needed today.

Parting Words

Despite our successes in the logistics arena, throughout the Armed Forces, and across the

Government, we still have much to do. We need to be more agile, more flexible, and faster in responding to threats. We need to be more efficient



1st Combat Camera Squadron (D. Myles Cullen)

and effective in coordinating all instruments of national power and those of our allies. Transformation is hard intellectual work, but it could not be more critical at this high-stakes time in the Nation's history. We must continue the process of transforming with the same outstanding level of energy, creativity, and sense of urgency I have witnessed over the last several years.

I cannot fully express how honored I am to have represented more than 2 million service-members as Chairman for the last 4 years. When I put on the uniform 40 years ago, I never imagined I'd remain more than a few years. I stayed because I believe in our mission, and I can think of no better way to serve than surrounded by this team of dedicated, hardworking professionals. The men and women of the Armed Forces represent the very best of American values: integrity, compassion, commitment, and selflessness.

It has been a privilege to serve beside each of you. After meeting you in the halls of the Pentagon, at war colleges and other military education schools, and at bases and deployed locations around the world, I am fully confident that America's future is in good hands. I thank all of you for your service and your families for their patience and support. I wish you well as you carry on this noble work.

JFQ

GENERAL RICHARD B. MYERS, USAF
Chairman of the Joint Chiefs of Staff

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From the Editor



Chairman of the Joint Chiefs of Staff, General Richard Myers, bids farewell to *Joint Force Quarterly* readers in his column, “A Word from the Chairman.” General Myers’ tour as the 15th Chairman began with 9/11. He announced his priorities clearly on the first page of *JFQ* issue 29, January 2002: “winning the global war on terrorism, enhancing joint warfighting capabilities, and transforming the Armed Forces.”

In the past 4 years, General Myers has continued to focus intellectual debate on these priorities while challenging the defense community with new perspectives, such as the recognition of joint operations as the baseline, the importance of battlespace management and information sharing, and the need for integrated operations, where the Armed Forces work closely with a broad range of new interagency, international, and private sector partners. In addition, he directed *JFQ* to open its aperture and consider a broader range of security issues that cut across traditional stovepipes and involve more than just the military instrument of national power.

General Myers has helped to guide the Nation through one of the most treacherous periods in its history. His successor will face a familiar and challenging strategic environment, but one with promising democratic governments in Afghanistan and Iraq, significant integration among the Armed Forces and our allies, and many transformation programs well under way. But dangers remain, particularly the continuing military and economic threats posed by rogue states and the potential of terrorists using weapons of mass destruction.

As *JFQ* continues to address important security issues, the staff is pleased to provide some exciting new features. This issue marks the first *JFQ* special feature highlighting the winning entries from the 24th Annual Chairman of the Joint Chiefs of Staff Strategic Essay Competition.

Also in this issue, the reader will find a new series: *Interagency Dialogue*. Recognizing that integrated operations require better blending of

America’s instruments of national power, *JFQ* presents this series to promote discussion among security professionals.

The *JFQ* Forum theme in this issue is “Logistics and Support.” Over 2 millennia ago, Xenophon recorded a timeless comment by the Spartan leader Clearchus: “Without supplies neither a general nor a soldier is good for anything.” Senior military and civilian leaders alike recognize this fundamental truth.

Recently, I spoke with an Army Sergeant First Class returning from his second forward tour in Iraq. He emphasized a few issues, crucial from his perspective on the ground, which the Joint Staff fielded months earlier. Uparmored Humvees and new boots were at the top his list, as were 50-caliber rounds. His team considered fully uparmored Humvees critical; most of his comrades thought partial retrofits were worse than no armor at all. And he related that troops still needed new boots at their forward operating base by mid-tour; most of his Soldiers relied on spouses to mail replacement boots.

Macro-level logistic decisions can directly influence the combat capability and survival of individual Soldiers. Strategic decisions on basic transportation, body armor, and clothing impact those executing at the tactical level in the field, and complicated systems require more and more acquisition lead time. However, for the Sergeant, killing brutal terrorists went hand in hand with helping Iraqi villagers obtain clean water. The quality of the entire mass of logistic decisions at all levels, to this Soldier, might be characterized by the availability of good boots and enough 50-caliber rounds for his company.

With the distances, costs, and number of partners involved in post-Cold War defense, the logistic challenge of equipping and supplying troops on multiple fronts across the globe has become even more Byzantine. But history is consistent—the Soldier on the line still depends on layers of support to complete the mission, whether it is to attack, defend, or provide humanitarian aid.

We welcome feedback and are pleased to consider for publication well-written research articles and essays on national security topics. Send an email to JFQ1@ndu.edu or see our Web site to find a simple feedback form and submission guidelines at ndupress.ndu.edu.

Merrick E. Krause, Colonel, USAF
Director, National Defense University Press
Editor, *Joint Force Quarterly*

Letters to the Editor . . .



A Work in Progress

To the Editor—Colonel Matthew F. Bogdanos, USMC, of the National Strategic Gaming Center is to be congratulated for writing, and *JFQ* for printing, his article entitled “Joint Interagency Cooperation: The First Step” (Issue 37, 2d Quarter 2005). It is detailed, thoughtful, and enlightening. However, in the interest of historical accuracy and to encourage continued discussion on the subject of interagency coordination and the role of the Joint Interagency Coordination Group (JIACG) concept, I submit the following comments.

1) Central Command’s (CENTCOM’s) request to the Secretary of Defense in October 2001 to establish an interagency coordination cell was one of three from the Regional Combatant Commands (RCCs). Admiral Dennis Blair, USN (Ret.), then-Commander, U.S. Pacific Command (PACOM), had been exploring the idea of an interagency unit prior to 9/11. All of the regional combatant commands then created JIACGs, albeit of very different compositions.

2) The original idea for a JIACG (or as it was first named, JX) arose at the U.S. Joint Forces Command (JFCOM) annual exercise in June-July 2001. JFCOM later expanded the concept and published its White Paper in March 2002. This White Paper contains the concept of a “small interagency coordination staff element,” which Colonel Bogdanos so cavalierly dismisses. However, it was then and remains today only one of the possible types of JIACGs, as is CENTCOM’s. The JIACG concept is still in development and many of us working in the field believe it should remain open-ended so as to be adapted to differing situations. PACOM’s area of responsibility, for instance, is substantially different from CENTCOM’s, and the CENTCOM model is manifestly inappropriate—in size, scope, and mission—for PACOM.

3) All of the regional combatant commands have organized JIACGs, each very different, and the learning curve is high and productive. Many observers and participants believe that there are important distinctions—each equally valid depending on the situation—between different possible types of JIACGs. The most important are those between “full spectrum JIACGs” and “subject specific or focused JIACGs” such as those designated to work on the war on terror. Another distinction is between policy JIACGs and operation coordination (functional) JIACGs. The JIACG role in campaign planning can vary: PACOM’s JIACG, for instance, was tasked to be the primary drafter for the Command’s Campaign Plan for Combating Terrorism. Obviously there are conceivable variations on these themes, including combinations. The appropriate location and reporting responsibilities of a JIACG within an RCC will depend on the answer to these considerations.

In sum, the subject and the concept are much more open to discussion and exploration than Colonel Bogdanos’ article implies. The JIACG concept is not a

panacea for solving the interagency coordination question: it is an organizational innovation for improving the ability of the Regional Combatant Commands to reach out to the other agencies, improve its “situational awareness” with respect to other departments, improve its ability to coordinate internally (an often overlooked matter: stovepipes exist within the RCCs), and better manage operations for which it has the lead—for example, wars and humanitarian operations. The trickier question is how to improve interagency coordination within the interagency community situations where the RCC is a supporting player to another agency or only one player in the larger U.S. Government interagency community, for instance in the war on terror in the Asia-Pacific area, and how to structure and use JIACGs for that purpose.

I must also disagree with Colonel Bogdanos in his statement that one major challenge facing JIACGs is the lack of a single, national-level organization issuing guidance, managing competing policies, and directing agency participation in the JIACGs. That organization exists and is called the National Security Council, as the author himself implies later in his article by calling on the council to enforce interagency coordination.

With these caveats in mind, Colonel Bogdanos’ article is recommended to all as an important contribution to the ongoing experiment in interagency coordination called the JIACG concept. For those interested in the subject, I suggest they review the history and subsequent development of Presidential Decision Document 56, signed in 1977, on managing complex emergencies, U.S. Joint Forces Command White Paper “A Concept for Improving U.S. Interagency Operational Planning and Coordination” and subsequent JFCOM documents, and the PACOM-authored article in *JFQ* issue 32, Autumn 2002, “The Global War on Terrorism: A Regional Approach to Coordination.”

—Ambassador (Ret.) Edward Marks
Contractor, Camber Corporation
State Department Consultant
J3-JIACG-CT
U.S. Pacific Command

To the Editor—I have been on active duty in the Air Force for almost 17 years. My family and I have traveled all over the world and made sacrifices that no one but the military community can understand. It wasn’t until I started working at the FSC (Family Support Center) that I realized how much this organization contributes to military retention every day. I wish Ms. Leyva would have talked to family members here at Laughlin or any of the FSCs throughout the world that have taken advantage of the many programs/events we provide to support our troops and their families.

For example, periodically the bases hire a contractor to perform a community needs assessment to gauge the climate within the base community. Our last assessment showed a dissatisfaction with local (Del Rio, TX) employment for spouses. We advocated/garnered funds (an approximately \$4K grant) from the AF Aid Society and bought over 150 Staffcentrix Virtual Assistant kits to battle the spouse employment problem. The FSC

sent a staff member to Staffcentrix training and began to train spouses on starting their own businesses over the Internet.

In another example, the FSCs are mandated to provide transition assistance to individuals who are within 180 days of separation or retirement. We, like many other FSCs, have exceeded this function by adding a course that targets individuals within 4–5 years of retirement or over 180 days of separation. We bring in subject matter experts from the Veterans Administration, TRICARE, financial institutions, and other organizations to provide assistance and advice during the transition from military to civilian life.

Still another example: Our FSC started a VIN Etching Program to protect/deter would-be thieves from choosing Laughlin AFB's vehicles. The results have been spectacular; many personnel have saved 15–20 percent on their automobile insurance.

One more example. Too often the base welcome videos located at the FSCs are outdated. We are currently developing a simple PowerPoint Relocation "Welcome to Laughlin Presentation" with Voice-over. This presentation will provide up-to-date information and assist families during future relocations to not only Laughlin, but many other DOD bases.

I hope I have given you enough information to print some great stories of what the FSCs can do. I think I can speak for many of the FSCs when I say that we will continue to challenge ourselves every day and tell ourselves, *we can do more!*

—MSgt Rufino Gonzalez, USAF
Superintendent, Family Support Center
Laughlin Air Force Base, Texas

MSgt Gonzalez has provided some useful examples of his Family Support Center helping the military community at Laughlin Air Force Base in creative ways. As he writes, however, we can do more.

—Editor, JFQ

To the Editor—I am appalled. My major concerns with "Transforming the 'Retention Sector'" by Meredith Leyva (*JFQ* issue 38, 3d Quarter 2005) are:

■ She uses Employee Assistance Program (EAP) references in line with Family Support Center operations.

■ She does not refer to the Air Force web site www.afcrossroads.com that has monitored chat rooms for spouses and youth and military members to network globally on all military life issues. The website has outstanding relocation support and links.

■ She speaks of hiring spouses to work in the Family Support Centers because they know the lifestyle. As a 12-year Human Services professional in the civilian non-profit agency realm and in the Civil Service serving U.S. Air Force Family Support Centers, I know people closest to a problem or situation or lifestyle are *not* the best people to provide objective, educated service.

■ The author does not mention "Heart Link," an Air Force program in operation since 2001 that educates new spouses on the military, accessing services, and understanding mission requirements.

I would urge Ms. Leyva to contact some of the Family Support Center personnel who have successfully implemented Virtual assistant training, small business seminars, resume classes, Federal job Info, job boards, customer service training, etc.

I will be the first to say there are areas where Family Support Centers need to improve their knowledge and services. I am proud to serve my country by utilizing my professional education, training, and experience to strengthen the military member and family's life coping skills.

—Vicki Jay Lokken, DAFC
Community Readiness Consultant
Family Support Center
Grand Forks Air Force Base, North Dakota

The Commentary article by Ms. Leyva may have some controversial points, but the impact of families on recruiting and retention—in America's all volunteer force—cannot be denied. JFQ will certainly consider for publication research on quality of life, retention, and readiness issues that directly impact professional military and security studies.

—Editor, JFQ

New in JFQ

The NDU Press staff will use this information block to inform readers of particularly noteworthy features or new items in each issue of *Joint Force Quarterly*.

This issue is replete with firsts. The first is the topic of the forum, "Logistics and Support." This is a subject never before emphasized in a *JFQ* forum. The theme cuts across service, interagency, and international stovepipes. Readers will find a wide variety of useful subjects, from industry, to tsunami relief, to acquisition, to strategic gaming.

Winners of the 2005 Chairman of the Joint Chiefs of Staff Strategic Essay Contest are showcased in this issue for the first time. The goal of publishing the winning essays in a special feature is to enhance debate on strategic security issues while giving wider access to some of the best research by senior officers and civilians in the U.S. Armed Forces joint professional military education system.

Another prominent first in this issue is the premiere of the Interagency Dialogue series. Although *JFQ* has published articles on subjects of interest to a broad interagency community as well as essays by authors employed by various Government agencies, there has been insufficient emphasis on information sharing among agencies in creating and executing the Nation's security policy and strategy. The Interagency Dialogue series will feature articles written by and for the interagency community every quarter. Its goal is to foster interagency understanding and situational awareness and to elevate the debate over blending instruments of national power in the defense of America, its interests, and its allies.

The *JFQ* staff welcomes feedback on these new features. Please send an email to JFQ1@ndu.edu or see our Web site to find a simple feedback form at ndupress.ndu.edu.

JFQ

22^d Marine Expeditionary Unit is resupplied on the march in Afghanistan, Operation *Rio Bravo*

Logistics and Support

It is no secret among professional military officers and senior leaders across the spectrum of America's Federal agencies that deploying and supporting operations are among the most challenging of all the tasks required to employ any instrument of national power—particularly the military instrument. Challenges are environmental and manmade, from

nontechnological to high-tech—from weather and solar activity disrupting transportation, navigation, and communications to suicide bombers, snipers, and bandits targeting convoys and distribution points.

Logistics is certainly not a modern invention, and supply lines are not modern contrivances. Hannibal marched elephants from Africa over



22nd Marine Expeditionary Unit (Keith A. Mills)

the Alps and fought a war of attrition for years, living off the Roman countryside. Conquistador supply lines stretched from South America to Spain, across rain forests and oceans. And Britain's sea lines extended to far-flung but powerful colonial garrisons in Hong Kong, India, and North America.

President George Washington recognized the need for (and difficulty

of achieving) reliable supply lines through hard experience in the French and Indian War and the Revolution. In 1776–1777, the Continental Army was well stocked with some supplies, such as gunpowder, but had tremendous shortages in uniforms, blankets, and footwear. Supplies for both the American militia and the British troops were imported from Europe, but the Americans were forced to run a blockade by the most powerful naval force of the era. One observer noted in late 1776, as the Army was driven back by advancing British redcoats, “If the War is continued thro the Winter, the British troops will be scared at the sight of our Men, for as they had never fought with Naked Men.”¹

After winning the battle for independence, President Washington made his famous first annual address on January 8, 1790, calling upon Congress early in his administration to adequately fund and supply a military for the fledgling United States of America in order to maintain its hard-won liberty:

To be prepared for war is one of the most effectual means of preserving peace.

A free people ought not only to be armed, but disciplined; to which end a uniform and well digested plan is requisite: And their safety and interest require that they should promote such manufactories, as tend to render them independent of others, for essential, particularly for military supplies.

*The proper establishment of the Troops which may be deemed indispensable, will be entitled to mature consideration. In the arrangements which may be made respecting it, it will be of importance to conciliate the comfortable support of the Officers and Soldiers with a due regard to economy.*²

Today, America's military supports humanitarian operations in Africa and, recently, international tsunami relief in the Pacific while deterring an invasion by North Korea and conducting simultaneous combat operations in Iraq and Afghanistan, among other interagency and international efforts in the war

on terror. These rapid but distant extended actions occur during a period of revolutionary military transformation, continual acquisition of new systems, and unprecedented threats posed by Islamic extremists armed with readily available weapons capable of creating global economic chaos and huge loss of innocent life. The necessity of and problems associated with logistics and support of troops have always been—and always will be—factors for commanders and statesmen. And today, logistic and interoperability issues complicate operations for first responders, allies, and the U.S. military alike. Thus, the *Joint Force Quarterly* staff designed this premiere “Logistics and Support” Forum to introduce a broad spectrum of strategic issues relating to a Department of Defense, interagency, and international audience that relies on but does not always consciously consider the necessity of support—the shaft that supports the tip of the spear. Although less experienced professionals might take the shaft for granted, all understand that without it, the spear is much less effective as a weapon or tool.

M.E. Krause

NOTES

¹ David Hackett Fisher, *Washington's Crossing* (New York: Oxford University Press, 2004), 154–157; Margaret Morris: *Her Journal with Biographical Sketch and Notes*, ed., John W. Jackson, (Philadelphia, 1949), 55; Thomas Anburey, *Travels Through the Interior Parts of America*, 2 vols. (Boston, 1923), 1:102.

² George Washington, First Annual Message to Congress, New York City, January 8, 1790; available at <<http://gwpapers.virginia.edu/documents/union/state1.html>>. Transcriptions of Washington's message are adapted by the George Washington Papers Web site from *The Papers of George Washington, Presidential Series*, ed., Dorothy Twohig, vol. 4 (Charlottesville, VA: University Press of Virginia, 1993), 543–549.

Tsunami!

Information Sharing in the Wake of Destruction

By DAVID J. DORSETT

Crew from USS *Bonhomme Richard* unloading relief supplies in Sumatra, Indonesia, Operation *Unified Assistance*

On December 26, 2004, an earthquake of 9.0 magnitude jolted the Banda Aceh region on Indonesia's Sumatra Island. The quake generated a tsunami that exploded across the Indian Ocean at 500 miles per hour. The tidal surge brought death and destruction to Banda Aceh and India's Nicobar Islands 16 minutes after the quake. Within 90 minutes, the tsunami engulfed Sri Lanka's coastal areas, and within 7 hours its waves crashed into the far shores of Somalia. The ensuing catastrophe seized the attention of the world. Over 295,000 people died and 5 million were left homeless.

U.S. Pacific Command (PACOM) rapidly responded to this humanitar-

ian disaster by initiating Operation *Unified Assistance*. The command deployed 25 ships, 45 fixed-wing aircraft, 57 helicopters, and 16,000 personnel to assist stricken countries. This force delivered over 16 million pounds of supplies and flew helicopter operations totaling over 4,000 hours. It also employed a unique command and control structure. Commander, PACOM, initially designated the commanding general of 3^d Marine Expeditionary Force as commander of Joint Task Force-536. Within days, it became apparent that a traditional military command structure was not optimal for this nontraditional mission. The ensuing operation involved over 90 nongovernmental organizations (NGOs) and military forces from 18 nations. Though created as a traditional joint task force, PACOM modified JTF-536 after other countries such as Australia, Singapore,

Rear Admiral David "Jack" Dorsett, USN, was the Director for Intelligence, U.S. Pacific Command, during the tsunami relief operations and is now the Director for Intelligence, Joint Staff.



U.S. Navy (Bart A. Bauer)

Russia, France, and Malaysia joined it. At this point JTF-536, as a sole U.S. endeavor, became Combined Support Force (CSF)-536.

The PACOM mission during *Unified Assistance* was to support the U.S. Agency for International Development (USAID) Office of Foreign Disaster Assistance, other national forces, and international organizations in providing disaster relief to the governments of Indonesia, Sri Lanka, Thailand, and other affected nations to minimize loss of life and human suffering. This article examines the need to embed national agency representatives within theater intelligence commands to facilitate passing of timely and accurate information from the agencies to the operating forces. Although it focuses on information-sharing, which was critical to the overall operation, this piece presents a successful model of transforming U.S.

forces to become more agile, adaptable, and responsive to emerging crises.

Early Challenges

Operation *Unified Assistance* was unique on many levels. Diplomatic and cultural hurdles had to be overcome before aid could be delivered to Indonesia. Suspicion of Western military forces quickly receded as Indonesians saw the sheer magnitude of aid and the genuine concern of other nations for their welfare.

The damage and loss of life were extreme by any standard. The area of operation covered the entire Indian Ocean, with the most severe destruction in remote parts of Indonesia's

the tsunami presented exceptional challenges, the first of which was to acquire information to assess the extent of the catastrophe

Aceh region. Although the PACOM intelligence team played an important role in the early planning and intervention of military and humanitarian actors, the tsunami presented exceptional challenges, the first of which was to acquire information to assess the extent of the catastrophe.

Weather, outdated geospatial encyclopedic data, lack of boots on the ground, and the sheer magnitude of the devastation hampered early efforts to assess the damage. Fortunately, 4 months prior to the tsunami, the Joint Intelligence Center Pacific (JICPAC) created the Contingencies Operational Intelligence Cell as a fully manned, all-source operational intelligence capability specifically structured to respond quickly to emerging crises within the theater.

During the initial days, the PACOM intelligence staff, supported by JICPAC, retained operational intelligence planning, tasking, analysis, and reporting responsibilities. Doctrine calls for the transfer of many of these duties to the JTF (in this case, CSF) intelligence staff once it has been es-

tablished and has the ability to manage intelligence operations. Since this was a nontraditional crisis with limited intelligence collection available within the combined operating area, it required several days before the CSF was prepared to take over. In the interim, the JICPAC Contingencies Cell performed superbly by managing the finite intelligence collection resources, coalescing disparate information to create situational awareness for all interested parties. At the height of the operation, over 100 JICPAC operational intelligence specialists were involved.

The JICPAC Contingencies Cell commenced nonstop intelligence operations within hours of the disaster. It developed intelligence collection and production requirements. National intelligence agency representatives embedded in the contingency team reached back to their agencies for additional support. This

interagency partnership between the theater intelligence center and national intelligence agencies ultimately resulted in the highly successful delivery of information to forward-deployed forces.

Human intelligence and counterintelligence requirements increased as the U.S. military relief operations footprint grew in Aceh. Of critical concern was the need to discover the activities of terrorist groups and radical factions. The JICPAC Transnational Threats Operational Intelligence Cell, which is responsible for analysis of terrorist activities in the theater, also worked around the clock to assess threats and provide force protection reporting to U.S. forces. Personnel from JICPAC also deployed to the region to work with host nation military forces and U.S. commanders to ensure comprehensive synchronization and flow of threat information.

Despite the JICPAC focus, it took several weeks rather than hours or days to attain a reliable picture of the situation on the ground. For example, traditional damage assessment methods using airborne imagery failed to present the true nature of the destruction.



Relief supplies for tsunami victims being unloaded in Banda Aceh, Indonesia, as part of Combined Support Force-536

1st Combat Camera Squadron (Jeromy K. Cross)

Although “order of battle” descriptions were provided of the damage in towns and along roads, the PACOM commander commented during a visit to Banda Aceh that the real extent of the devastation could only be understood by seeing the damage firsthand.

Information Sources

Operation *Unified Assistance* presented unusual challenges for the intelligence team, specifically with sources. Traditional outlets of information

boots on the ground early in a humanitarian disaster are critical to developing situational awareness

(military human, airborne imagery, and technical) had limited value in illuminating the situation. New sources had to be acquired and exploited. For example, the handful of U.S. military representatives in affected nations was insufficient to perform their array of crisis responsibilities, which included

developing a solid understanding of conditions on the ground. These small offices and detachments were quickly inundated with requests for assistance from the host nations and spent much of their initial time in capital cities working with their counterparts and in communication with PACOM headquarters, the Combined Support Force commander, and U.S. national agencies. They faced the dilemma of either assessing damage or assisting in the transit of follow-on U.S. personnel to host nations to provide humanitarian support. As a result, PACOM deployed additional personnel to affected nations to assist U.S. Embassy military personnel mere days after the tsunami. The lesson is clear: boots on the ground early in a humanitarian disaster are critical to developing situational awareness.

Two nontraditional sources of information—open source and commercial imagery—were critical to Operation *Unified Assistance*. Open source, un-

classified reporting from host nations, NGOs, and non-Defense U.S. agencies, provided a wealth of knowledge. In particular, USAID, the Office of Federal Disaster Assistance, and the United Nations Joint Logistics Center maintained outstanding home pages that provided timely, reliable information on the extent of damage and the status of humanitarian relief activities. USAID Disaster Assistance Response Teams included advisers, water and sanitation experts, and field and information officers. Teams were located in each of the affected countries and provided key on-the-ground insights on conditions. The Center of Excellence in Disaster Management and Humanitarian Assistance also maintained a world-class home page. The expertise and contacts of this latter organization (a DOD-supported center in Hawaii) proved crucial for PACOM throughout *Unified Assistance*.

Commercial imagery was also a linchpin. The importance of sharing imagery with host nations, NGOs, and

other international aid organizations was vital. Although the United States and allied nations flew reconnaissance aircraft to assess the damage, some of the best early assessments were provided by commercial imagery organizations. In particular, Digital Globe furnished comprehensive imagery coverage of the devastated areas in Banda Aceh within days of the disaster. These first-rate products were unclassified and were quickly shared with host nations and NGOs.

Although commercial imagery was vital to the intelligence operation, U.S. P-3 reconnaissance aircraft and helicopters using cameras deployed early to provide detailed photography of key ports, towns, and lines of communication. Not only was this unclassified and releasable intelligence valuable in ascertaining damage, but it also helped early efforts by selected nations to plan reconstruction of their coastal regions.

Information Flow and Cooperative Activities

Significant advances in bilateral communications with allied nations have emerged in recent years, enabling increased speed of delivery of information to other nations participating in these largely unclassified military operations. Yet many difficulties remain in disclosure of information, as not all participating nations practice the same level of information sharing with the United States. Therefore, in any international, interagency disaster relief operation, considerable effort must be applied to coordinating the flow of information among all participants.

Fortunately, the many successes during this operation have helped overcome perceptions that intelligence support for disaster relief has not been commensurate with customer needs. For example, during *Unified Assistance*, intelligence products were developed at the lowest possible classification to

allow wide release, facilitate maximum distribution of threat data, and share other details with those trying to ease the suffering. These disclosures improved trust and collaboration across civil-military and international lines and enhanced humanitarian assistance accordingly.

As the operation progressed, the number of nations involved and the United Nations/NGO footprint continued to grow. PACOM found itself in the unfamiliar territory of a predominantly unclassified environment, with 95 percent of the data used by the intelligence professionals used being unclassified.

Intelligence professionals worked closely with the PACOM chief information officer to develop an unclassified tsunami Web page. As the operation continued, the command's Asia-Pacific Area Network unclassified commercial Web site became a primary source for NGOs, vital for involving nontraditional security partners, who are essential in humanitarian assistance operations that cover a broad area and cross national borders.

The unique nature of *Unified Assistance* created extensive and urgent requirements for commercial satellite imagery. With the help of the National Geospatial-Intelligence Agency and its imagery and geospatial analysts embedded within JICPAC, PACOM supported operational forces, allies, and affected nations. The command pushed

the limits of the commercial imagery support infrastructure, revealing shortfalls in the tasking and requirements management process. For example, the end-to-end process from tasking, through collection, to exploitation and dissemination took about 5 days. Additional effort is needed to refine processes and shorten timelines.

The command also discovered shortfalls in the dissemination infrastructure that inhibited the electronic distribution of large file formats associated with geospatial products. Intelligence teams often had to send JPG files on classified networks to regional U.S. Embassies. The Embassy teams had to download the information and disseminate hard copy materials to host nations. Certain large format geospatial products had to be printed at PACOM and express-mailed or hand-carried to affected countries because host nations, U.S. Embassies, and deployed U.S. ships and operating bases lacked adequate printing capabilities. One key product had to be hand-carried to Jakarta for a high-level meeting hosted by the government of Indonesia on the issue of long-term reconstruction of the Aceh region. This geospatial product provided details on damaged lines of communications, which greatly enhanced the government's ability to assess damage and direct reconstruction. In addition, during operational intelligence briefings at command

International forces meet in U Tapao, Thailand, to receive information on Operation *Unified Assistance*



1st Combat Camera Squadron (Sarayu Phinrong)

1st Combat Camera Squadron (John M. Foster)

Army engineer in Meulaboh, Indonesia, as part of Combined Support Force-536, one of over 18,000 U.S. servicemembers working with international militaries and nongovernmental organizations to aid tsunami victims

headquarters, current intelligence products were also provided to regional Consul Generals to facilitate international dialogue and improve the momentum of humanitarian relief.

Partnerships

Operation *Unified Assistance* confirmed the value of the strategic partnerships established among the governments and international agencies in the theater, U.S. intelligence agencies, and the operational forces.

Combined Support Force (CSF). Partnerships were critical to leveraging finite intelligence resources throughout the DOD/national intelligence community and avoiding duplication. Foremost was the symbiotic relationship between the theater Joint Intel-

ligence Center and theater operating forces. JICPAC Operational Intelligence Cells established constant, collaborative information sharing with the CSF, which benefited all participating agencies and nations. The past paradigm of producing intelligence on a daily basis is grossly inadequate for today's operational requirements. Constant dialogue and exchange of data by email and video teleconference are the current media for providing near real-time intelligence.

Armed Forces Medical Intelligence Center (AFMIC). AFMIC established round-the-clock communications between its operations center and JICPAC contingencies cells to rapidly provide medical intelligence regarding the spread of infectious disease and

vector-borne illnesses. It also deployed liaison personnel on short notice to the PACOM area of operations. One officer deployed to U Tapao, Thailand, in direct support of the Combined Support Force, another officer was embedded in the command surgeon general's office. These medical intelligence professionals coordinated with the U.S. Centers for Disease Control and Prevention and Department of Agriculture and ensured consistent flow of information across agencies, commands, allied nations, and NGOs. AFMIC assisted Pacific Command with assessing infectious disease and environmental health risks in the disaster areas and the status of medical facilities. It also generated over 100 products, to include assessments of bed-down sites for deploying

forces and Web sites that served as one-stop resources for medical intelligence.

National Geospatial-Intelligence Agency (NGA). The embedded NGA team, operating at JICPAC and within

strategic partnerships were critical to leveraging finite intelligence resources and avoiding duplication

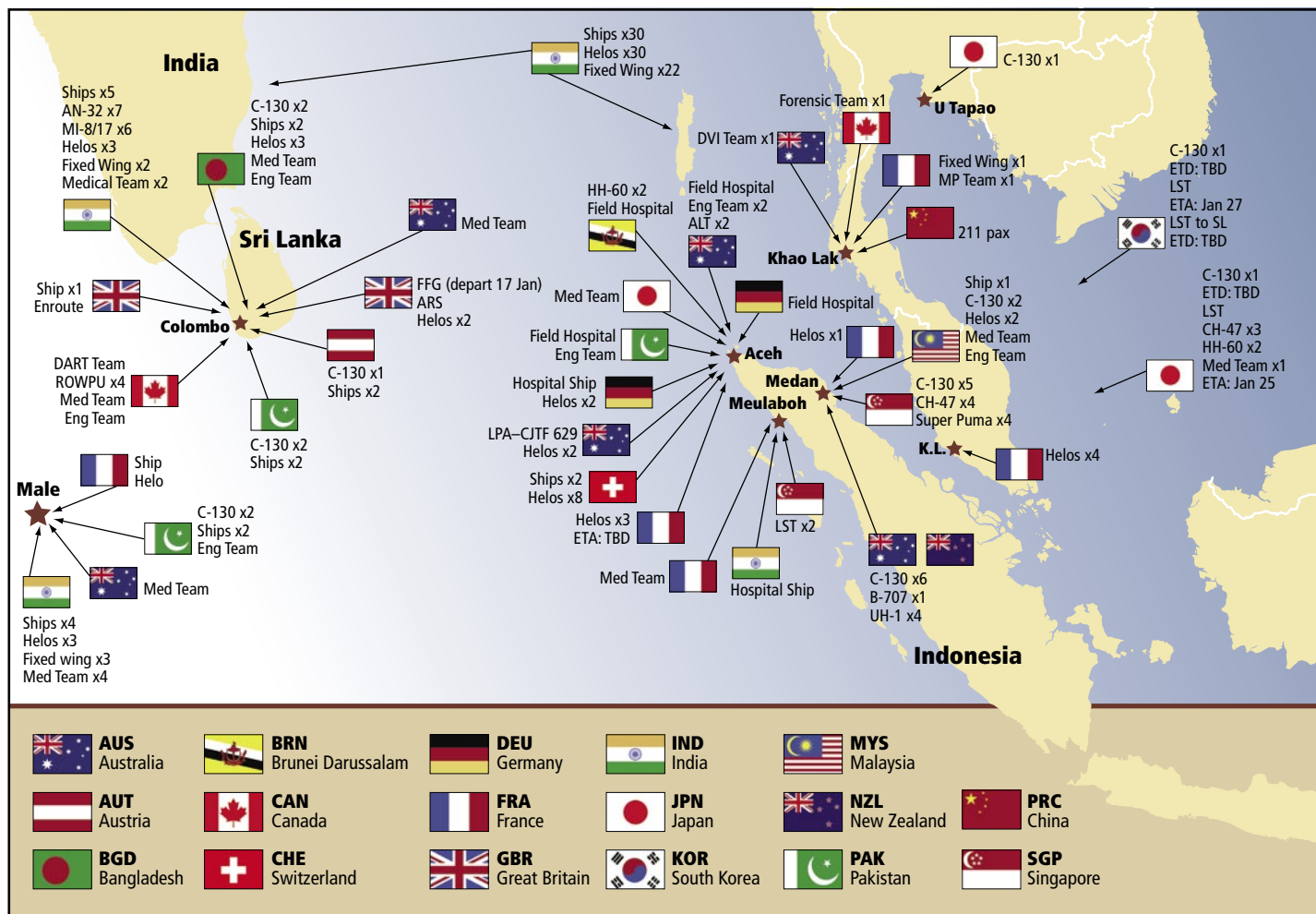
PACOM headquarters, was vital in coordinating engagement and delivering commercial imagery and geospatial products daily throughout the operation. NGA output helped the command assess the damage. As much information as possible was shared with other government organizations, such as USAID. The bulk of the products

provided to host nations and NGOs consisted of commercial satellite imagery to show the scope of damage and assist PACOM in assessing priorities for emergency relief. Maps of affected areas were updated daily. Archive commercial and national technical means imagery was overlaid with the latest updates to determine coastal changes.

Another product use was finding safe helicopter landing zones and sites for displaced person camps. *Unified Assistance* showed the need to embed national agency representatives with theater intelligence commands to coordinate timely, responsive provision of information from the agencies to the operating forces.

Defense Attaché Offices. Defense attachés provided brilliant responsiveness and engagement with allies in Indonesia, Thailand, India, and Sri Lanka. At the outset of the relief effort, offices in affected countries were passing information to PACOM to assist in situation awareness and host nation military coordination. At the height of the crisis, 18 nations had military forces either on the ground or at sea. Several nations were on the scene prior to the arrival of U.S. forces. The Indian and Pakistani navies provided almost immediate help to Sri Lanka. In addition, a transiting Japanese Maritime Self-Defense Force task group supported victims in Thailand. U.S. Defense attachés and Embassy country teams coordinated early interaction with these regional partners

Non-U.S. Participants in Military Operations



to deconflict American operations. As a result of the extensive tasking on attachés, it was important to instill discipline in communicating with Defense Attaché Offices so as not to overwhelm their relatively small staffs with duplicative information and requirements. The solution was creation of a dedicated, round-the-clock Support Element Cell to act as the single point of contact for PACOM, the country teams, and partner nation militaries.

PACOM Center of Excellence in Disaster Management and Humanitarian Assistance. The Center of Excellence provided a crucial capability not resident in the intelligence structure: a standing organization of professionals networked with the necessary information resources and capable of compiling information from NGOs, the United Nations, and open sources to describe the situation on the ground. This was a key enabler in *Unified Assistance* and will be a center of gravity for future PACOM humanitarian assistance and disaster relief operations. Experts from the center deployed to the three countries hardest hit—Sri Lanka, Thailand, and Indonesia—and provided on-site reporting and coordination. The center's Web site provided insights not attainable by traditional intelligence collection and exploitation.

Foreign partnerships. Together, PACOM and its foreign partners were able to seek innovative, secure, and practical solutions to myriad problems. This cooperation did not come without challenges. The command had to embrace the military contributions of other nations and coordinate with nontraditional partners, which was accomplished by leveraging experience built through multinational training and exercise programs. Expanding, maintaining, and improving regional relationships are vital to dominating the battlespace.

New Operating Concepts

The success of Operation *Unified Assistance* was due, in part, to the ability of the U.S. Intelligence Community

to adapt and respond with agility. The operation validated concepts and initiatives that have been implemented in PACOM in recent months.

Operational Intelligence Cell. Foremost among the new concepts was the establishment of the Contingencies Support Operational Intelligence Cell within JICPAC. This all-source operational intelligence cell was formed into a holistic structure to integrate analysis, collection, information management, intelligence campaign planning, targeting development, intelligence operations, and production. The cell is composed of foreign disclosure and dissemination experts, intelligence planners, and analysts of every discipline and representing, for example, imagery, ground, and political functions. Within hours

the success of *Unified Assistance* was due, in part, to the ability of the U.S. Intelligence Community to adapt and respond

of the tsunami, JICPAC commenced round-the-clock intelligence operations to ascertain details on the magnitude of destruction, establish situational awareness for the theater commander and his operational forces, and lay the foundation for international and interagency information sharing. The Contingencies Support Cell synchronized intelligence functions and provided “one-stop shopping” for Combined Support Force operational units that required intelligence associated with disaster relief. Equipped with advanced intelligence, surveillance, and reconnaissance (ISR) management and analytic tools and processes (for example, trend analysis, battlespace visualization, data/content marking, collaboration, multilevel security), the cell established a solid understanding of the most devastated areas.

ISR Battle Management Center. The ISR Battle Management Center in PACOM provided a focal point for monitoring and managing ISR assets employed in *Unified Assistance*. This cell

permitted end-to-end synchronization of theater intelligence reconnaissance operations and was fully integrated with the command's Joint Operations Center, the JICPAC Contingencies Support Cell, and the combined support force commander's intelligence staff. The center, located at command headquarters, was electronically linked to other commands and agencies to permit near-instantaneous awareness and management of theater and national ISR resources.

Linked with the JICPAC Operational Intelligence Cells, the ISR Battle Management Center shared a common operating picture and allowed collection managers to monitor national and tactical ISR missions, adjust collection requirements, and provide near real-time feedback to the CSF and the combatant commander. The PACOM Collection Management Board conducted daily video teleconferences with the Combined Support Force and components to ensure synchronized collection operations. The need for a dedicated ISR Battle Management Center was revalidated and is now entrenched in theater operational doctrine. This center will become the focal point for engagement with the joint force component commander for ISR when that national management entity achieves initial operational capability.

It is critical that U.S. intelligence teams learn the lessons of Operation *Unified Assistance*. We must be continuously alert to nontraditional missions requiring unique intelligence support. We must continue to strengthen partnerships across the national intelligence community with both allies and nongovernmental organizations. We must place national agency representatives in theater intelligence commands to ensure that information is passed quickly from the agencies to the operating forces. In sum, we must continue to transform our intelligence organizations so they become more agile, adaptable, and responsive to emerging crises.

JFQ

Health Service Support from the Sea Base

By DAVID A. LANE



Hospital ship USNS *Mercy* en route to Papua New Guinea to provide medical care for tsunami victims

U.S. Navy (Dennis C. Centrell)

Sea basing has been called a “critical future joint military capability for the United States” because it offers a mobile, reliable, and secure environment from which to operate when suitable fixed bases are not available, providing the joint task force commander with unprecedented offensive power and operational independence.¹ The main conceptual difference between sea basing and current amphibious doctrine is that the former exploits the advantages of rapid movement directly from the sea base to the objective (for example, ship-to-objective-maneuvers, or STOM) without the need for a buildup of combat power, materiel, and reinforcements on a shore beachhead, with the sea base itself providing support and sustainment until ports

and airheads have been secured and adequately defended.² The lack of a logistic beachhead and the small logistic footprint inherent with sea basing and STOM present major challenges to providing health services support (HSS), particularly combat care. This article argues that these challenges could preclude military medicine from providing combatant commanders and subordinate joint task force commanders with adequate casualty care in the field and at the sea base during expeditionary operations with high casualty rates.

Health Services Support Primer

Joint doctrine provides that battlefield casualties flow through five phases of treatment: first responder, forward resuscitative surgery, theater hospitalization, en route care, and care

outside the theater. The HSS infrastructure is therefore structured with five echelons of care which Joint Publication 4-02, *Doctrine for Health Service Support in Joint Operations*, lists as:

1. self-aid, buddy aid, and emergency lifesaving skills
2. physician-directed resuscitation, stabilization, emergency procedures, and forward resuscitative surgery
3. advanced resuscitative care requiring hospitalization, including surgery, postoperative management, and initial restorative procedures
4. rehabilitative and recovery therapies
5. definitive care, including the full range of acute, convalescent, restorative, and rehabilitative services.

From an operational commander's perspective, tactical mobility decreases substantially as HSS capability increases from level 1 to level 5. Level 1 care, for

Captain David A. Lane, USN, is group surgeon with Third Force Service Support Group, Marine Forces Pacific.

example, is provided at mobile battalion aid stations ashore and in sick bays aboard most ships, while level 2 care is provided at transportable (not mobile) medical/surgical companies ashore and aboard designated large-deck casualty receiving and treatment ships (CRTSs). Massive fleet and field hospitals, deep draft T-AH class hospital ships, and fixed base medical treatment facilities (MTFs) in the communications zone have level 3 capabilities. By doctrine and practice, level 4 and 5 capabilities are normally available only at military and civilian medical centers in the continental United States (CONUS).

In contrast to decreased mobility, the patient-holding capacity and logistic footprint of HSS increase as casualties advance through the levels of care. A battalion aid station is an integral part of the unit it supports and is staffed with one or two medical officers and a team of hospital corpsmen or medics. It can be set up in moments and is immediately capable of providing emergency care. But because it has no holding capacity, patients must be returned to duty or evacuated to a higher echelon of care. A surgical company, on the other hand, takes about a day to set up, can perform initial resuscitative surgery

the deployable fleet or field hospital takes a week to construct and is larger than a football field

ies and administer blood products, and has a holding capacity of 50 to 60 patients.³ At the other end of the spectrum is the deployable fleet or field hospital. It takes a week or more to construct the 250-bed variant, which is larger than a football field and has more than 550 medical and support personnel. It can provide major surgeries, postoperative care, and intensive/critical care for relatively large numbers of casualties.⁴

Although advances in HSS have generally kept pace with advances in medicine, the current continuum that moves a patient from the point of wounding to a final medical disposi-

tion has its roots in the clinical practices and evacuation methods of World War II. Moreover, a casualty's length of stay at a given level is determined more by the combatant commander's theater evacuation policies and the availability of evacuation resources than by clinical factors or bed capacity.

During Operation *Iraqi Freedom*, for example, the theater evacuation policy was 1 week, even though there was ample bed capacity in the combat and communications zones to care for patients longer. Casualties were light, and the system had considerable excess capacity. Over 90 percent of patients evacuated to MTFs in the communications zone were further evacuated to CONUS on the next available evacuation flight, with no apparent direction from the combatant commander to return any of the wounded to combat duty.

A Smaller Logistic Footprint

Sea-based operations and operational maneuver from the sea will require a smaller, more mobile logistic footprint ashore. In turn, expeditionary medical assets will have to be smaller, more agile, and "able to operate from austere sites at sea or on shore and to smoothly transition between the two."⁵

In response to these requirements, planners envision that medical personnel will provide only *essential care* in theater, using specially trained nonphysician medical personnel (for example, hospital corpsmen and medics) at the site of injury or wounding, followed by forward resuscitative surgery as close as practical to the battlefield, followed by rapid evacuation out of the theater for more definitive care.

Additional HSS footprint reductions could be achieved by placing an Army rotary wing air ambulance detachment under the tactical control of each future medical battalion to provide dedicated aeromedical evacuation support because, in a sense, a large number of beds ashore during sea-based operations reflects inadequate patient movement capacity.

Evolving joint medical doctrine specifies that *essential care* will be restricted to "resuscitative care and en route care as well as care to either return the patient to duty (within the theater evacuation policy) or begin initial treatment required for optimization of outcome and/or stabilization to ensure the patient can tolerate evacuation to the next level of care."⁶ In effect, this doctrine will trade the excess capacity of the current system for rapid stabilization and increased reliance on aeromedical evacuation. One unintended consequence will be "stabilized—but not necessarily stable—patients being evacuated" outside the theater for definitive treatment.⁷

This change in HSS doctrine will require casualty care innovations—including some that are, at best, under development. The innovations will need to be implemented along the entire casualty care continuum, from the point of wounding to MTFs in the United States. The remainder of this article critically examines three innovations that will serve as vital operational nodes in the delivery of HSS: forward resuscitative surgery, evacuation of casualties to and from the sea base, and in-theater care.

Forward Resuscitative Surgery

For reporting purposes, Joint Publication 4-02 categorizes casualties according to type and status. The major headings include: killed in action (KIA), died of wound(s) received in action (DOW), wounded in action (WIA), and disease and nonbattle injury (DNBI). Casualties are considered KIA if they are "killed outright" or die "as a result of wounds . . . before reaching a medical treatment facility." Since 90 percent of battlefield deaths are classified as KIA, most due to uncontrolled hemorrhage, minimizing the time to treatment is critical. A delay of minutes in receiving care can mean the difference between life and death.

First responders and level 1 aid stations cannot provide adequate care for most wounded patients with active

bleeding. These patients need immediate surgery. This statement is more controversial than it appears. At least one published report reviewed survival data from more than 10,000 casualties from recent wars and concluded that many patients “even with severe injuries do not necessarily require surgery” for many days or even weeks to survive.⁸

Until recently, Marine Corps surgical companies, elements of a medical battalion staffed by Navy medical personnel, were the only source of organic expeditionary medical support for Marine forces above the battalion aid station level and the most forward-deployed source of level 2 surgical capabilities. Because they have limited holding capacity and are vital links in the medical evacuation chain, Marine Corps doctrine states that these companies should be located close to an airfield that can evacuate casualties using fixed-wing aircraft. While this doctrinal policy may be necessary to prevent saturation of a unit's bed capacity and ensure adequate force protection, it is counter to both optimal medical management, as noted above, and the emerging doctrine of health service support for sea basing and STOM.

Naval Medicine's Forward Resuscitative Surgery System (FRSS) and similar Army units called Forward Surgical Teams (FSTs) have been deployed to take *essential* level 2 surgical care as close to the forward edge of the battle area (FEBA) as possible. The greatest challenge, however, is keeping it close despite the rapid tactical advances of expeditionary maneuver warfare elements. Six FRSS teams provided trauma care for the Marines during the major combat operations phase of *Iraqi Freedom*, and the Army deployed about three FSTs per combat division. Outcome data from clinical experience is statistically inconclusive compared with earlier conflicts, including Mogadishu in October 1993, and older, more robust data from Vietnam. In both Somalia and in Iraq, for example, the KIA rate was 18 percent, suggesting



Patient is carried to UH-60 for treatment in Baghdad, Operation Iraqi Freedom

U.S. Marine Corps (Tasha M. Fontaine)

that the proximity of forward surgery systems or teams to the FEBA (often within 5 kilometers) and rapid evacuation from the point of wounding to the FRSS (typically 30 minutes) were not enough to prevent the death of many severely wounded casualties.⁹ Nonetheless, the mere presence of the FRSS or FST near the front lines probably boosts warfighter morale, an effect that should not be overlooked, even if the clinical impact is marginal and the casualty numbers are too small to be extrapolated to future conflicts.

The FRSS and FSTs are not a health services panacea, however, even if the concept eventually proves to be medically efficacious. If these small mobile teams totally replace surgical companies as the most forward level 2 surgical asset, they will need robust support from dedicated air and ground ambulances

because they lack a significant patient holding capacity of their own. Unlike the Army, the Marines have opted not to use dedicated air ambulances, relying instead on airlifts of opportunity. The existing methods have been sufficient arguably because deployed surgical companies and fleet and field hospitals have had excess bed capacity that could accommodate substantial delays in patient evacuation. In the absence of dedicated air ambulances, the joint force air component commander or Marine aviation combat element commander will need to decide whether to divert scarce aviation resources for medical evacuation or have a substantial number of the “stabilized—but not necessarily stable”—patients die awaiting evacuation. On the other hand, the logistic footprint could actually get bigger than today's HSS package if the FRSS and

sister programs are fully implemented and the organic level 2 holding capacity is retained in its present form.

En Route Care

Expeditionary forces employing ship-to-objective tactics can operate hundreds of miles from the sea base, making en route care back to the base an area of concern. Much has already been learned from Operation *Enduring Freedom*, which approximated the HSS and logistic considerations of sea basing. In his post-operation testimony to the Senate Armed Services Committee, the Central Command Surgeon cited

if small mobile teams replace surgical companies as the most forward level 2 surgical asset, they will need dedicated air and ground ambulances

the life-saving value of enhanced en route critical care capabilities and predicted it would serve as a template for future operations.¹⁰

In this regard, for Operations *Enduring Freedom* and *Iraqi Freedom* and for future sea-based operations, the Marines have assembled a “modular system that includes medical equipment, medical treatment protocols, and consumable supplies necessary for the medical management of two critically injured/ill, but stabilized, casualties during transport onboard [aircraft] from elements ashore” to the sea base.¹¹ The concept of operations for this tactical en route care system is to place it in the aviation combat element for staging at forward operating bases (and/or the sea base):

*when needed, aircrew and a team of medical personnel (flight surgeon, flight nurse, and hospital corpsman) will install the en route care system (ERCS) in an available aircraft within 10 minutes and transit to the site of the casualty needing urgent transport. The ERCS and medical personnel are then expected to provide care for two stabilized casualties for up to a 2-hour transit to the appropriate receiving MTF, most likely aboard the sea base.*¹²

Despite the system's name, the ERCS medical team will not be trained or equipped to provide *en route care* and, in fact, will only perform “clinical interventions per pre-approved protocols . . . necessary to prevent clinical degradation while in transit.”¹³ In contrast, the Air Force can deploy a de facto airborne intensive care unit and Critical Care Air Transport Teams (CCATTs) for long-haul, intertheater/strategic aeromedical evacuations.

Full operational capability of the ERCS is 60 sets, including specialized training for 48 ERCS medical teams. A similar prototype system was employed during Operation *Iraqi Freedom* to evacuate 34 casualties (28 Iraqis and 6 Marines) from forward FRSS units.¹⁴ Two severely wounded patients, in particular, partially validated the ERCS concept. They were intubated, mechanically ventilated, medically paralyzed, and chemically sedated during the 350-mile transport from Baghdad to Kuwait City using a combination of rotary- and fixed-wing aircraft and ground ambulances.

While the anecdotes from *Iraqi Freedom* represent real success stories, two critical patients and otherwise light casualties from a month of combat provide insufficient data to determine whether the ERCS concept can support sustained expeditionary sea-based operations. How stable a “stabilized” patient really is has not been adequately tested. Nor has the need arisen to deny or substantially delay aeromedical evacuation due to a lack of airlifts of opportunity. The post-*Iraqi Freedom* report on FRSS unit activities recorded that the mean delay for an airlift from a FRSS was 8 hours. Survival rates could suffer if casualty rates were higher or airlift delays longer.

Sea-Based Hospital Care

After battlefield casualties have been stabilized for transport and a system put in place to transport them, their survival will depend on having a ready, capable receiving platform, traditionally a deployed fleet or field hospital (or hospital ship) with level 3 capabilities, followed by onward evacuation to level 4 and 5 MTFs in the continental United States. To support



National Guardsman at contingency aeromedical staging facility for evacuation to Landstuhl, Germany, for follow-on treatment

347th Communications Squadron (Rob Jensen)



Army surgeons in Kandahar, Afghanistan,
Operation Enduring Freedom

55th Signal Company, Combat Camera (Johnny R. Aragon)

sea-based operations, however, emphasis will shift from hospitals ashore to an organic sea-based level 3 capability on the sea base itself, which will, perhaps, present the biggest operational challenge with regard to sea-based combat health services support.

The key logistic piece of sea basing is the Future Maritime Prepositioning Force [MPF(F)] with its subordinate Maritime Prepositioning Squadron (MPSRON), which will support, sustain, reconstitute, and redeploy the sea base and the joint force from an advanced logistic base hypothetically located 2,000 nautical miles away. The Future MPSRON—composed of six to eight deep-draft, high-capacity ships of a new class—will be forward deployed to a theater and specifically preloaded to support the full spectrum of sea-based operations. Some scenarios call for multiple MPSRONs. Each squadron will include two ships equipped and staffed to serve as level 3 casualty receiving and treatment ships (CRTS).¹⁵

The medical treatment facility in each CRTS is projected to have six operating rooms and 121 hospital beds, including 38 intensive care unit beds and 83 hospital ward beds. In addition to level 3 hospital care, the ships will also provide laboratory, pharmacy, ra-

diology, blood banking, telemedicine, medical logistic, and mortuary services in support of expeditionary land forces. Moreover, the deployed expeditionary strike group will retain level 2 capabilities in its assault ships. In a worst-case scenario, however, in which logistic footprint constraints preclude a substantial HSS presence ashore, these sea-based hospital beds in the MPSRON and

the Future Maritime Prepositioning Squadron will be forward deployed and preloaded to support the full spectrum of sea-based operations

the strike group could be the only inpatient casualty holding capacity available to the combatant commander for up to 2,000 nautical miles.

Three hundred beds afloat may sound adequate given the low numbers of casualties in recent operations, but continued low casualties cannot be assumed. It is more alarming that an acceptable platform, proposal, or concept does not yet exist to evacuate patients from the sea base to the advanced logistic base. The shore-based system was stressed during Operation *Iraqi Freedom*, even with the low numbers of casualties. Recent wargaming suggests

that clearing the sea base of casualties will require a long-range, medium or heavy lift, sea-based aircraft, and lack thereof has been identified as a critical obstacle to sea base success by the Defense Science Board, along with inadequate at-sea cargo handling (patient handling) capabilities under realistic sea conditions.¹⁶ The difficulties with maintaining throughput may become insurmountable when caring for chemical, biological, or nuclear casualties, or when, as in recent wars, large numbers of noncombatant and enemy casualties are treated in U.S. MTFs.

Counterpoints

The three health service support nodes discussed here—forward resuscitative surgery, en route care, and sea-based level 3 care—have the potential to enhance the health services support military medicine provides combatant commanders by substantially improving combat casualty care.

Although the FRSS teams of Operation *Iraqi Freedom* did not provide dramatically greater clinical outcomes, their concept of operations has validity—putting advanced life-saving care as close to the point of wounding as possible. In *Iraqi Freedom*, the FRSS and FSTs with their governing doctrine and tactical employment were new to U.S. commanders. Consequently, their clinical impact may not have been as significant

as envisioned. Clinical outcomes may improve, however, as warfighters, logisticians, and health care providers gain experience with the concept and apply lessons learned. In addition, the statistical power of analysis will increase as the number of casualties treated by FRSS units grow and their impact on KIA and DOW rates becomes more fully understood at the clinical, tactical, and operational levels.

While the military health system has demonstrated the ability to put advanced medical capabilities virtually anywhere needed and in the harshest environments, providing adequate en

route care remains difficult at best. But forward medical units cannot function in a vacuum, and severely injured or ill patients must eventually be moved to MTFs with adequate and/or specialized resources. The Marine Corps ERCS and Air Force CCATTs appear to be steps toward state-of-the-art care during en route phases of casualty management. Issues need to be addressed, however, especially the limited availability of ERCS equipment and shortage of dedicated aeromedical evacuation platforms and personnel in order for these innovations to become the ultimate solution.

maintaining bidirectional throughput at the sea base to clear it of casualties while sustaining the force ashore is perhaps the biggest challenge to the sea-basing model

However, the fact that the ERCS concept is being driven by line warfighters who recognize it as a vital unmet need for conducting extended-range STOM bodes well for this program.

As mentioned, sea-based operations have been labeled a critical future military capability. Unfortunately, maintaining bidirectional throughput at the sea base to simultaneously clear it of casualties while sustaining the combat force ashore is perhaps the biggest challenge to the sea-basing model, in general, and to sea-based HSS. This obstacle is common to all potential users of future sea bases, allowing military medicine to benefit from the concerted effort of the entire Department of Defense toward solving this future logistic quagmire. Several platforms are already being studied to help clear the sea base MTF, for example, including evacuation connector ships and high-speed vessels. Moreover, much attention is being directed toward a heavy lift, sea-based aircraft because the success of all sea-based logistic sustainment innovation relies on its development.

Military medicine is working on innovative strategies to meet the mission of providing health service support and casualty care to joint forces operating

from a sea base. FRSS units, ERCS equipment sets and personnel, and level 3 hospital care aboard MPSRON ships are examples of these strategies. To best exploit the opportunities they offer while mitigating their risks, Navy Medicine and its equivalent medical departments in the Army and Air Force will need to maintain level 2 surgical capability and a holding capacity ashore. In other words, some version of today's medical/surgical battalion must be adapted for future use to provide inpatient casualty care and holding even in the era of sea-based operations, because U.S. inability to assure rapid evacuation when and where needed is the Achilles heel of all three innovations on the horizon. The medical battalion of the future and its service equivalents will need to be smaller, lighter, and more modularized to better support maneuver forces, but this should be readily achievable using available, advanced commercial technologies and transformed evaluation and procurement processes.

Dedicated medical airlift support—when combined with the appropriate reengineering of the medical battalion to judiciously reduce its capacity, weight, and footprint—will enhance casualty care for future warriors wounded on the battlefield and have synergistic effects with the innovations described here. The key will be to maintain a buffer—or capacity safety valve—until newer technologies come on line, such as a heavy lift vehicle for moving the wounded from the hospital at sea to a more capable facility. These adaptations to present plans for sea-based operations will ensure that military medicine remains the expeditionary maneuver element's medical force in readiness. **JFQ**

NOTES

¹ Defense Science Board, *Final Report of the Defense Science Board Task Force on Sea Basing* (Washington, DC: Defense Science

Board, August 2003), vii–viii; Vern Clark, “Sea Power 21 Series—Part I: Projecting Decisive Joint Capabilities,” *U.S. Naval Institute Proceedings* (October 2002).

² Defense Science Board, 16–22.

³ Blood products are specifically mentioned as a metric of logistic complexity. They must be kept continuously refrigerated, in which case they have a limited shelf life, or frozen, so they require special handling during reconstitution and thawing. Blood products are a critical component of level 2 HSS and are rapidly consumed when caring for battlefield casualties.

⁴ Depending on their configuration, fleet hospitals have the capacity to hold 116, 250, or 500 patients. The 116-bed version is more correctly called an expeditionary medical facility.

⁵ Navy Warfare Development Command and Marine Corps Combat Development Command, “Concept of Naval Force Health Protection for the 21st Century” (Newport, RI: draft dated November 6, 2003), 2.

⁶ Joint Chiefs of Staff, “Force Health Protection in the 21st Century Capstone” (Washington, DC: draft July 3, 2003), 42.

⁷ *Ibid.*, 28–32. Emphasis added.

⁸ R.M. Coupland, “Epidemiologic Approach to Surgical Management of the Casualties of War,” *British Medical Journal* (June 25, 1994), 1,693–1,697.

⁹ In Vietnam, 75–80 percent of KIAs died within 5 minutes of wounding. To make a significant intervention within this narrow timeframe would require that first responders be able to immediately intervene with high volume fluid and blood product replacement or with surgery.

¹⁰ Ronald A. Maul, “Statement of Command Surgeon, U.S. Central Command,” Senate Armed Services Committee Subcommittee on Personnel, *Hearings on Medical Support of Forces Participating in Operation Enduring Freedom*, 107th Cong., 2^d sess., March 13, 2002, 2.

¹¹ K.J. Glueck, Jr., to Chief of Naval Operations (N931D), “Training for the En Route Care System,” Marine Corps Combat Development Command letter 1500/C39, October 8, 2002, Quantico, VA.

¹² Marine Corps Combat Development Command, “Draft Operational Requirements Document for the En Route Care System,” March 17, 2003, Quantico, VA.

¹³ *Ibid.*

¹⁴ Corley E. Puckett, “USMC En Route Care System,” brief preceding *En Route Care Wargame*, Navy Warfare Development Command, Newport, RI, March 9, 2004.

¹⁵ Navy Warfare Development Command and Marine Corps Combat Development Command, “Draft MPF(F) Concept of Operations,” Newport, RI, March 8, 2004.

¹⁶ Defense Science Board, 91–94.



Airman uploading armored Humvee onto C-130E for delivery to Iraq

375th Communications Squadron (Alfred A. Gerbitt)

Development of the Joint Logistician

By RANDALL M. MAULDIN

Since the war on terror began on September 11, 2001, the Armed Forces have deployed around the world, conducting operations in Afghanistan, Africa, the Balkans, Iraq, the Philippines, and South Korea. Operation *Iraqi Freedom*, in particular, has tested the concept of *maneuver warfare*, which focuses on

the weaknesses of the enemy and uses speed as a primary weapon. Throughout this operation, units moved faster than planners could anticipate, so critical preparation lagged behind the troops; thus, an operational pause was required to allow supplies to catch up. In addition to rapid tempo, combat information systems failed to integrate logistic

planners into the real-time information used by operators, leading to uncoordinated and ineffective logistic planning. Although logistic systems have evolved over the years, logisticians must be educated and professionally developed to manipulate the various logistic systems the Armed Forces use and to take advantage of corporate business practices.

Problems in Iraq

Considering the movement of material to Iraq before major combat operations began, logistic systems used during Operation *Iraqi Freedom* have been effective. Logisticians moved 1.2 million tons of equipment over 8,000 miles and drove over 2,000 trucks a day to transport supplies from Kuwait to northern Iraq. Additionally, these systems provided over 2.1 million gallons of water to 307,000 troops and

Captain Randall M. Mauldin, USMC, is a supply officer for the School of Infantry at Camp Lejeune, North Carolina.

"delivered enough meals-ready-to-eat to feed the population of Spokane, Washington, for over a year."¹ But these successes have been overshadowed by the realities of supporting a large organization that stretched the logistic system to the limit and exposed many deficiencies:

- a large backlog of supplies throughout the supply chain
- wasted funds paid to owners of the containers holding the nonmoving supplies
- a \$1.2 billion discrepancy between material received and material shipped
- cannibalization of vehicles because parts were not available
- amassing excess supplies without documentation
- circumventing the supply system
- duplicated requests for material
- poor physical security for material.

Lieutenant General Claude V. Christianson, USA, Deputy Chief of Staff, G-4, identified reasons for these deficiencies before Congress in 2004:

- communication between the supply depots and troops on the ground were insufficient to ensure seamless operation
- the distribution system within the theater was redundant and unconnected
- logistic units were not organized to run distribution centers on the ground
- moving material from the U.S. to overseas theaters required containers
- management system suited conflict operations instead of peacetime operations
- operational units did not adhere to supply policy and procedures, which disrupts any system and demonstrates poor discipline.

The deficiencies and the reasons for them indicate a lack of communication, a difference in logistic concepts according to service, and the inability of the services to merge logistics efforts to streamline the supply chain. These issues could be addressed through education and development of joint logisticians, with a focus on working in a joint logistic theater instead of in individual stovepipes for each service. Before developing an approach to educating and developing joint logisticians, it is important to review how services train logisticians and to consider the shortcomings of this system.

Current Training

The Focused Logistics Campaign Plan, developed by the Department of Defense (DOD), calls for cooperation between logisticians and operators on an equal basis in joint warfighting. The plan recognizes that this cooperation is critical to meet present and future commitments, which require efficiency and effectiveness as well as a timely response. The results of focused logistics are faster deployments, properly sized combat service support units, reduced cost, more responsive support, more accurate and timely logistic information, and a more reliable and user-friendly system. Although focused logistics increases confidence in the support element and reduces sustainment requirements, current training and education of logisticians in the Armed Forces remain service-specific and specialized in functional areas.

The Joint Logistics Warfighting Initiative (JLWI) was enacted in fiscal year 1998 to:

conduct a review of the organizations and functions associated with . . . acquisition activities and of the personnel required to carry out those functions. In his report back to Congress in response to [JLWI], the Secretary of Defense committed to changing the logistics focus of DOD from managing supplies (i.e., buying and managing inventory) to managing suppliers and fundamentally reengineering DOD product support practices.²

As a result, several efforts to improve joint logistics have been undertaken by removing legacy systems, developing cross-service information systems, and implementing new business processes. Despite many advances in technology and implementation of better practices, the Armed Forces still require better education and training of logisticians to manipulate and exploit the systems and processes to provide a coordinated effort.

In addition to specific plans and policies, training occurs within the services, though it is inadequate for cur-

rent joint and interagency needs. For example, the Army sponsors a 2-week course called Logistics Support of Joint Operations at Fort Lee, Virginia, in addition to the Combined Logistics Captain's Career course, which provides cross-functional training. The Marine Corps University sponsors cross-functional courses to company and field grade logisticians with courses in tactical logistics operations and advanced logistics operations. Both services have sought education from civilian universities as well, with the Marine Corps Logistics Education Program at Pennsylvania State and the Army's LogTech program at the University of North Carolina. These examples, however, illustrate a continuation of stovepiped, service-specific training and education that fails to integrate the services in logistic efforts.

Integration

Today's capabilities for maneuver, strike, logistics, and protection will become dominant maneuver, precision engagement, focused logistics, and full dimensional protection. The joint force, because of its flexibility and responsiveness, will remain the key to operational success in the future.

— Joint Vision 2020

Recent operations capitalized on the different attributes provided by the joint force and commanded by a regional combatant commander. The joint task force (JTF) may include an air component from the Air Force, ground component from the Marine Corps, and special operations component from the Army. Mission requirements and available forces would determine the components used. Once part of a JTF, the components rely on the JTF commander to provide logistic support, which typically includes service-specific support systems, a sister service system, or logistic capabilities of joint, interagency, and multinational activities. An information system does not exist to support joint logistic operations to provide accurate, real-time

information for planning or procurement. For example, the Marine Corps must submit a supply request to a chain that extends back to the United States even though an Army unit in the same area of operation or an alternate source of supply could supply the same material without having to reach back to the states.

Joint Logistics

The development of integrated training will enable all logisticians throughout the Armed Forces to operate from the same base of knowledge. For example, J. Reggie Hall compares the training of Air Force logisticians to the other services to determine how best to train future logisticians to operate

successes have been overshadowed by the realities of supporting a large organization that stretched the logistic system to the limit

in fully integrated environments. The basis of training within the services is doctrine, which contains “fundamental principles by which the military forces or elements guide their actions.”³ Doctrine develops warfighting tactics, techniques, and procedures applied with cognizance from lessons learned and “provides the framework for organiz-

ing, training, and equipping forces to defend the Nation and support national objectives.”⁴ Each service has a separate logistic doctrine, but cross-functional, interservice, and perhaps interagency training needs further emphasis.

Logisticians often believe they were not adequately trained and had to learn cross-functional logistics in a deployed environment. Training should move along a pyramid-like continuum that provides skills at the beginning of a career, then provides more education as personnel become senior. The continuum must include officers, enlisted, and civilians from all services to provide a foundation from which to conduct operations. For example, company grade officers and junior government service workers focus on learning techniques, tactics, and procedures required to manage material at the tactical level, and field grade officers and senior government service workers develop a foundation grounded in theory, operations, and strategy. Additionally, logistic training needs to remain flexible to capitalize on the best and latest practices.

To integrate the education of the different services, combined training of logisticians is needed at all levels. Hall identifies the need to create interservice training for Air Force logisticians,

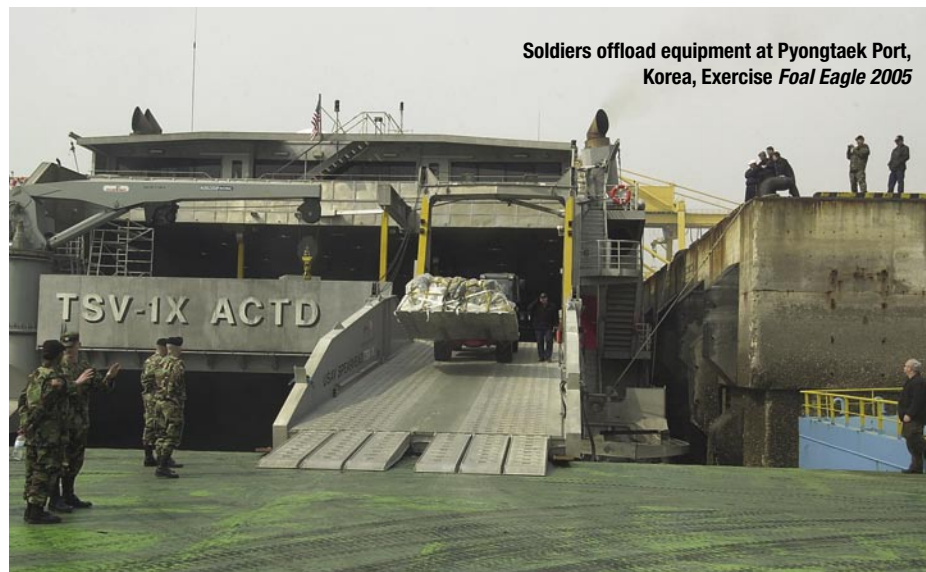
but such training would benefit each service. Army and Marine Corps career-level schools allow students from other services to attend in an attempt to broaden experiences, but a bolder approach is needed. Integrated training throughout DOD will establish a foundation for streamlined logistic processes, because supply-chain managers will have a common foundation.

In addition to education in modern business practices, logisticians require a leadership style that is influential, assertive, and credible so they can be effective in a joint environment with different cultures. Transformational leadership will be the most effective for the modern supply chain, where leaders manage processes from the center and balance the needs of the supply chain to accomplish organizational objectives through inspiration. The foundation of such leadership is an understanding of organizations, cultures, and individuals, which allows those in charge to motivate people to perform to high standards. Transformational leaders will enable joint logistics to work throughout DOD because they can influence others to accomplish the mission regardless of service culture bias.

In addition to education, training, and leadership, a cultural shift must emerge that encourages officers to expand their knowledge into unfamiliar areas that will make them more effective as logisticians and more competitive for promotion. The archaic practices of trial by fire and on-the-job training are no longer acceptable for professional development of combat arms officers in the areas of aviation, infantry, artillery, and armor, nor should they be acceptable for officers who provide the supplies and material the combat occupations use to accomplish national objectives. Therefore, logistic training needs to be formalized to include cross-functional training, service-specific requirements, and joint-service needs.

The Transformed Logistician

The future challenges of joint logistics require a new type of officer to



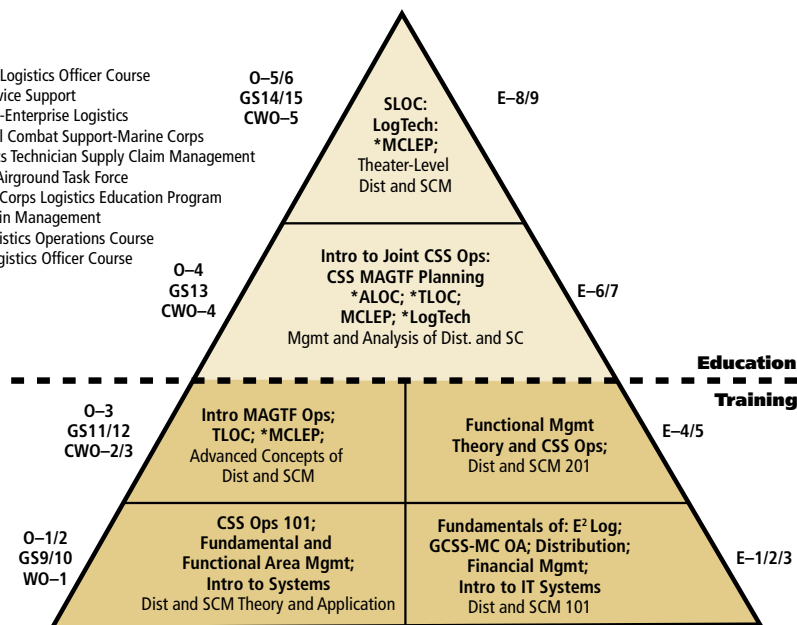
Soldiers offload equipment at Pyongtaek Port, Korea, Exercise Foal Eagle 2005

Fleet Combat Camera Group, Pacific (John J. Platone)

Proposed Training and Education for Logisticians

Key:

ALOC - Advanced Logistics Officer Course
 CSS - Combat Service Support
 E²E - Enterprise-to-Enterprise Logistics
 GCSS-MC - Global Combat Support-Marine Corps
 LogTech - Logistics Technician Supply Claim Management
 MAGTF - Marine Airground Task Force
 MCLEP - Marines Corps Logistics Education Program
 SCM - Supply Chain Management
 SLOC - Senior Logistics Operations Course
 TLOC - Tactical Logistics Officer Course



lead, manage, and control people and processes. *Supply-chain management* is defined as “those activities associated with moving goods from the raw-material stage to the end user; this includes sourcing and procurement, production scheduling, order processing, inventory management, transportation, warehousing, and customer service,” according to James W. Hopp, who analyzed the requirements for future supply officers by comparing Air Force needs to those of private industry.⁵ He found that military logisticians are similar to civilian supply-chain managers, because many servicemembers’ duties include supply, maintenance, and distribution, with the added responsibility of combat duties. Civilian supply-chain managers must understand business functions, purchasing, sourcing, production, marketing, sales, promotions, and customers. The Armed Forces have no position that incorporates all these functions, but they do have separated positions that manage one or two. To develop joint logisticians, the military must take note of Hopp’s suggestion to create supply-chain managers instead of specialists in each functional area.

Jointness, interagency coopera-

tion, and increasing reliance on e-commerce require logisticians to be enablers who accomplish the mission through facilitation and integration of processes to obtain and distribute material. For example, supply officers must acquire material by manipulating various processes within DOD, which include procedures from their own services, other services, DOD, and civilian vendors.

Integrated training will enable all logisticians throughout the Armed Forces to operate from the same base of knowledge

Leadership will be essential to negotiate these processes to meet service needs while maintaining rapport with suppliers and transporters. Transformation of the Armed Forces focuses on using technology and advancing current service doctrines. New concepts include joint sea-based capabilities, high-speed support vessels, floating forward staging bases, and maritime prepositioned force-future ships. These initiatives will enable joint forces to meet their equipment in the area of operations at a safe distance over the horizon. The force

can then move to a position that is vulnerable to the enemy in coastal areas and eliminate the need to establish a logistic footprint ashore before commencing offensive operations. Since operations already consist of joint forces, logisticians need to establish a common understanding of logistics and common language to cross cultural boundaries and exploit the most advantageous logistic solution, regardless of the owning service.

Other initiatives to improve logistics include electronic commerce, performance-based contracting, distribution process ownership, and proven solutions from the corporate world. For example, the Defense Logistics Agency (DLA) developed E-Mall to provide one-stop shopping for over 17 million line items via the Internet. The benefits of E-Mall include faster delivery with a transaction cost of \$11, compared to \$146 for hand-processed orders and \$25 for government purchasing card orders. E-Mall permits logisticians to procure material from any vendor in the system, no matter what their service.

Performance-based contracts were used to support the Navy’s more than 9,000 flying missions over Afghanistan during the first phase of the war on terror in March 2002. A critical part for the jets was tires, which were manufactured by Michelin but delivered by a private logistic company, Lockheed Martin Naval Electronics and Surveillance Systems. The contract required that Lockheed deliver tires on time for 95 percent of all requisitions. Failure to meet this metric affected profits, which provided the Navy leverage to enforce contract standards.

A joint initiative assigned U.S. Transportation Command as the DOD distribution process owner. Accordingly, the command has the authority and accountability for Defense distribution and integrates structure and people to form a Deployment and Distribution Operations Center (DDOC), which was sent to U.S. Central Command to serve under a single

commander to support operations in the Middle East and Asia. The group consists of personnel from the Defense Logistics Agency, Army Surface Deployment and Distribution Command, Air

initiatives to improve logistics include electronic commerce, performance-based contracting, distribution process ownership, and proven solutions from the corporate world

Force Air Mobility Command, Navy Military Sealift Command, Army Joint Munitions Command, and the services' respective logistic commands. This group has streamlined the DOD logistic process with fiscal improvements, electronic-to-electronic distribution architecture, direct vendor delivery processes, and time-definite delivery.

Corporate solutions contribute to military logistics because they allow the services to benefit without going through debugging. For example, the Air Force adopted a corporate concept, Advance Planning and Scheduling Pathfinder, to:

provide an automated, alerts-based capability to identify, examine, and resolve logistics system constraints by exception (parts availability, physical capacity, and financial restrictions) before they impact production and establish a mechanism for sharing information and supporting collaborative planning capabilities across the extended supply chain (for example, DLA and original equipment manufacturers).⁶

This program identified vulnerabilities in the Air Force supply chain and proved a valid replacement for military software. The modules in the program allow flexibility in planning, collaboration, and execution of logistics.

The joint initiative also discussed consolidated logistic efforts across cultural boundaries and allowed for efficient logistic processes. Logisticians from all services will have to exploit these initiatives and break down cul-

tural barriers between the services. The DDOC demonstrates how a single organization can combine infrastructure and personnel from different services to be an effective unit for worldwide support. Analyzing business practices helps identify systems and processes used by the business world, which consistently tries to improve efficiency while decreasing costs. Although the military services are not focused on profits, they are

focused on efficiency to accomplish the mission within the financial constraints established by Congress.

The challenges of joint logistics will increasingly require officers who can lead, manage, and control people and processes. Operations throughout the globe during the war on terror have strained resources and tested the capabilities of logisticians. In addition, reduced budgets and an emphasis on fiscal responsibility have forced the services to operate as a joint force. Transforming logisticians must complement the overall transformation of the Armed Forces. Logistic personnel must undergo reengineering of training and

education to focus on logistic concepts across functional areas and services, analyzing and adapting business practices, and developing transformational leadership. Initiatives must focus on consolidating logistic efforts across cultural boundaries and promote an efficient process. Logisticians from the four branches need education and training to capitalize on these initiatives and break down cultural barriers to improve support throughout the Department of Defense.

JFQ

NOTES

¹ Claude V. Christianson, congressional testimony to the House Armed Services Committee, "Future of Military Logistics," 2004.

² Paul Balash III, "Joint Logistics Warfighting Initiative: A Catalyst for Change," *Marine Corps Gazette* (December 2001), 49.

³ J. Reggie Hall, "Expeditionary Airpower: The Need for an Integrated Logistics School," *Air Force Journal of Logistics* (Spring 2001), 18.

⁴ Ibid.

⁵ James W. Hopp, "The Supply Officer of the Future," *Air Force Journal of Logistics* (Fall 2000), 21.

⁶ Maryann Kaczmarek et al., "Advanced Planning and Scheduling," *Air Force Journal of Logistics* (Fall 2002), 21.

Airman moving relief supplies to Navy helicopters at Sultan Iskandar Muda Air Force Base, Indonesia, Operation Unified Assistance



U.S. Navy (Travis M. Burns)



M-1A Abrams tanks, Exercise *Ready Crucible*, Germany

The Defense Readiness Reporting System

A New Tool for Force Management

By LAURA J. JUNOR

Ten years ago, the growing U.S. involvement in Bosnia engendered discussions on how the Department of Defense (DOD) measures the ability of the Armed Forces to execute a broad range of missions. Many recognized that readiness reporting systems needed to reflect a continuum of possible operations. Today this question takes on new significance as DOD wrestles with both the enormity and uncertainty of the present operational environment. The sustained demand for forces in

Iraq and Afghanistan makes it challenging to find units that are both suitable and available for deployment. It also underscores the importance of understanding residual force capability should another crisis occur.

The new environment requires both a thorough understanding of what military forces can do and the ability to adapt quickly to emerging requirements. The pressure of current operations is forcing unprecedented changes along these lines. In the spring of 2002, the Office of the Secretary of Defense

formally announced plans to create the Defense Readiness Reporting System (DRRS), with the promise that it would promote a real change in how DOD thinks about, plans for, and assesses the ability of the Armed Forces to conduct operations. Today, the system is evolving to meet the need of force providers such as U.S. Joint Forces Command (JFCOM) to identify units that have, or can quickly develop, the capabilities requested by theater commanders. The DRRS is designed to track detailed information on what forces, and even individuals, can do on a near-real-time basis. When complete, DRRS will be a network of applications that provides force managers at all levels the tools

Laura J. Junor is Defense Readiness Reporting System director and scientific adviser for the Office of the Secretary of Defense Readiness Programming and Assessment Division.

and information to respond to emerging crises and the ability to assess the risks of conducting such operations.

The DRRS is a major transformation, moving the focus of force managers from reporting unit readiness to managing force capabilities. Specifically, it represents a shift from:

- resources to capabilities—inputs to outputs
- deficiencies to their implications
- units to combined forces
- front-line units to all units contributing to front-line operations.

Force Management Challenge

Today's force managers understand that uncertainty is unavoidable but not unmanageable. The question is not just what forces are ready for, but how well they can adapt to meet current needs. The approach is very different from the rigid structuring of the Cold War era. Consider that some of the capabilities in highest demand today are truck drivers and civil engineers. Not only did these occupational specialties not make force managers' radar screens 4

the question is not just what forces are ready for, but how well they can adapt

years ago, but they were often targets for outsourcing. To meet these needs, DOD adopted a flexible approach of adapting units with similar skill sets and tailored their training to meet the theater commander's requirements. The point is not to highlight force planning deficiencies, but to suggest the folly of thinking that planning can be done with perfect foresight.

In June 2004, the Secretary of Defense tasked JFCOM to provide operational commanders the capabilities they need. This responsibility means the command must have current information on the location, status, and availability of *capability entities*—any combination of personnel and equipment that provides a recognized operational capability, regardless of size or parent organization—throughout the Department. Capability entities can be as large as a carrier strike group or

as small as a five-man security detachment. Without a system like DRRS, the command would have to query scores of isolated databases throughout DOD for a comprehensive picture of who can do what.

The need to identify residual capability is as pressing as the need to source existing operations. With so many forces either currently or recently deployed, force managers must know what is left in case another emergency develops. They must understand what those forces can do, the limits of flexibility, and what those factors mean in terms of operational risk.

Defining Capability

The key to managing forces is understanding what capabilities DOD has and how they can be tailored and combined to respond to operational needs. During the Cold War, units tended to be sourced (provided) to operational commanders along fairly rigid ideas of capability. Today, the pressure to sustain operations at high levels and

possibly over years requires sourcing flexibility. In some occupational areas, the majority of units and individuals have been deployed at least once, and some are preparing for third tours in theater. To ease the stress, DOD is looking more broadly for units that are capable of relieving forces in theater. As a result, units are often required and trained to conduct missions very different from those they were designed for. Army artillery units trained to relieve Army security forces are an example of sourcing flexibility within a service, while Navy masters-at-arms trained to relieve Army units guarding detainees are a case of flexibility across service lines. This adaptability means that DOD has larger capability pools from which to draw forces.

The DRRS uses two complementary approaches to identifying capability for JFCOM and other force managers. The first is identifying mission-essential tasks (METs), a concept the Army created two decades ago to

manage training and now being used to establish a common language of tasks, conditions, and standards to describe capabilities essential to the completion of almost any stated mission. DRRS uses METs as a vehicle for assessing the capability of all DOD organizations, at all operational levels, to conduct assigned missions.

Under this framework, a capability is the ability of any organization to perform a given task to the standards either prescribed by parent organizations or dictated by operational needs. Monitoring that ability is especially important for organizations conducting missions outside of those they were previously trained and equipped for. Managers can track progress not only in developing new capabilities, but also the potential atrophy of the original capabilities.

The DRRS also allows force managers to trace inventories of individuals in high-demand occupations such as law enforcement and civil engineering or who possess rare skills such as speaking Farsi. This information supports the MET information described above and is therefore helpful in identifying organizations that could reasonably provide needed abilities. For some skills, demand is severe enough to warrant searches for individuals who could be deployed immediately.

Understanding Capability

The detailed information on what individuals and organizations can do—from capability entities up to combatant commanders—resides in the Enhanced Status of Resources and Training System (ESORTS). The goal of any readiness reporting or assessment system is to reveal whether forces can perform their assigned missions. Historically, DOD has inferred that ability from the status of unit resources. That is how the Global Status of Resources and Training System (GSORTS) has been used. But such input-based assessment does not yield direct information on what these forces can actually do. ESORTS provides a more complete readiness assessment

system by directly measuring outputs—the ability to conduct a task or mission to the prescribed standard—along with inputs. The system is designed to come much closer to the goal of understanding “ready for what?”

ESORTS is a secure, Web-based information system describing the status of organizations that contribute to the warfighting system. It is built around explicit measures of performance relative to assigned standards, resources, and force sustainment. The system provides:

- *An evolution of the traditional input view.* ESORTS contains an empirical description of the quantity and quality of resources for all units in the warfighting system. Units that now report in the Status of Resources and Training System (SORTS) will find that ESORTS metrics look much like the information used to assign the SORTS scores of C1 (highest) through C4 (lowest).

- *Mission assessments.* ESORTS provides a vehicle for each organization from individual units to combined forces to report on its ability to achieve the performance standards of its mission-essential tasks under the conditions of the assignments. Commanders can compare their unit's actual performance for each measure with the established criteria. With this information and the resource data discussed above, they can assess the organization's ability to accomplish individual tasks and the task list as a whole.

ESORTS is being developed as a combined effort of the services, defense agencies, Joint Staff, and combatant commanders. Its products (metrics describing various aspects of DOD health and capability, both inputs and outputs, objective and evaluative) will be directly reported throughout the Department and used to support contingency sourcing and adaptive planning.

The Inputs: Building on SORTS

ESORTS begins with the same basic information that underlies GSORTS. However, it more explicitly uses and disseminates detailed measures of the quality and quantity of resources such as personnel, training, ordnance, major weapons systems, and supplies. For example, it lists the rank, skills, and certifications for all individ-



U.S. Navy (Justin R. Blake)

uals assigned to each reporting organization. Users can view this information in aggregate, or drill down to the individual level. Similar data are provided for other resource measures.

The system also contains information on whether individuals meet medical, legal, and administrative deployment criteria. It contains records of past theater deployments (and mobilizations in the case of Reserve forces). This information helps ensure departmental compliance with existing rules governing how often military members can be recalled for the same operation.

ESORTS requires information from each level of the operational hierarchy, not just the basic tactical-level units. For example, Navy aircraft squadrons

detailed information on what individuals and organizations can do resides in the Enhanced Status of Resources and Training System

would report as they always have, but the battle group and any joint task force, standing or ad hoc, would give an accounting as well. These higher-level forces will report on the combined readiness and capabilities of their component units and on the command staff that runs that combined unit.

Support entities and the Defense agencies have not used this type of

reporting system in the past; under ESORTS, they will report information relevant to their mission—the support of the warfighter. The capabilities of these support organizations should be reflected in DRRS because they hold important data on assets or services that are available to sustain operations.

One of the goals guiding development of the Defense Readiness Reporting System is to take advantage of modern information technology to reduce the reporting burden of operational units. Because DRRS aims to take full advantage of existing information systems, it will not require a unit to enter data for ESORTS that it has already entered in another system. It will take what it needs from those ex-

isting data sources, allowing units to double-check the information and write in comments. This relieves the units and serves as a built-in test for accuracy. The DRRS, like many databases throughout DOD, will be accessible on a secure Web site to facilitate reporting and use of these data.

Output Measurement

The most common way to answer the question of whether an organization is capable of doing something

is to avoid the matter entirely and address the easier question of how many resources the organization has. Answering the first question requires the synthesis of complex, sometimes intangible factors that cannot be replicated by a canned algorithm. That is why task and mission assessments in DRRS are the professional judgments of commanding officers and are not algorithmically derived. If leaders are appointed on the premise that they are qualified to create a fit, capable force, they should be qualified to assess the capability of that force, and those assessments should have value.

In simple terms, to assess a task or mission, commanders must judge whether they can perform a particular task today—yes or no. The overall assessment for the mission those tasks comprise is also yes or no. These evaluations will enable force managers to quickly address the status of organizations for use in a variety of operational environments and assist them in choosing which units can be deployed quickly or need immediate training or resources for follow-on mission requirements.

Unfortunately, there will be a fair degree of inconsistency in the assessments—an inescapable characteristic of evaluative judgments. Some assessments will be higher or lower than anticipated (based, say, on seemingly

comparable units). Having higher echelons base their status on lower echelon reports should improve the integrity of

commanders must judge whether they can perform a particular task today—yes or no

individual assessments. Higher levels would naturally reconcile information from subordinate commands in forming a coherent organizational report.

Seeming inconsistencies between mission assessments and resource accounting data may reflect important issues, such as resource stress or negative synergies that tend to be difficult to observe and document. The combination of commanders' assessments and resource data in ESORTS will identify specific deficiencies that could be masked if resources were merely monitored in aggregated bundles, such as equipment and personnel.

Crisis Planning and Contingency Sourcing

ESORTS answers the question of whether forces are capable of conducting assigned missions and tasks, but history tells us that no plan is executed without major revision. Current events add the lesson that the ability to adapt forces quickly is the best strategy for managing uncertainty. DOD must en-

sure that the Armed Forces not only can conduct the operations they regularly plan for, such as those comprising the National Military Strategy, but also that they can respond to severe and unanticipated crises. The Department does not have the option of turning down missions, and that makes preparing for and assessing the risks of tomorrow's force requirements a matter of exploring margins and alternatives.

Currently, the DRRS contains applications that support contingency sourcing. These provide managers a nascent ability to find forces and individuals to meet user-specified requirements. The applications can be used not only to identify forces that are immediately qualified and able to support operations, but also to provide information on forces that are nearly qualified in terms of their current resource status or their possession of similar skills or capabilities. Force providers such as JFCOM are guiding the development of these applications.

Future reporting systems will contain applications that support risk assessments and the adaptive planning process. These applications will provide the means to match available units to plans, monitor unit capabilities, conduct risk analyses, and revise plans—all within days or weeks rather than months or years, the current standard. In other words, these applications will allow force managers to query the forces (and their corresponding capabilities) that have not been consumed by current operations and see how far they go toward meeting the demands of additional operations. Managers will also have the ability to adapt current plans to suit emerging conditions or accommodate a capability deficiency. The common attributes of these applications are that they begin with the current capability profiles furnished through ESORTS and provide the means to evaluate these profiles against alternative demand scenarios in a matter of days.

JFQ



Airmen refuel F-15s at Eielson Air Force Base, joint/combined training Exercise Cope Thunder 05-1

3541st Communications Squadron (Joshua Strang)



National Strategic Gaming Center

Strategic Gaming for the National Security Community

By MARGARET M. McCOWN

Tuesday was a busy day: North Korea tested a nuclear weapon, a biohazard incident shut down I-70 across Kansas and Colorado, and religious strife threatened the stability of the Pan Sahel oil region in West Africa. Wednesday brought an altogether different set of problems.

What frenzied action novel is the above scenario from? While fiction, it is not in the local bookstore; rather, it is a glimpse of the National Strategic Gaming Center (NSGC). Located within the Institute for National Strategic Studies at the National Defense University (NDU) in Washington, DC, the NSGC designs and conducts strategic simulation exercises for diverse audiences. In support of the teaching and policy objectives of

the larger NDU community, the Gaming Center conducts exercises for the colleges and components of National Defense University, the interagency community, Office of the Secretary of Defense, Joint Staff, combatant commands, and Members of Congress.

Wargaming and the gaming of policy problems have been around a long time, and while their forms have changed with the problems of the day, the games' basic benefit remains the same: they provide a self-contained

Margaret M. McCown is a research and policy analyst with the Strategic Policy Forum at the National Strategic Gaming Center, National Defense University.

analytical environment in which players explore the constraints that form current strategic problems, examine issues arising under them, and compare possible solutions. In short, political-military games allow players—policy-makers, civil servants, and warfighters—to examine their assumptions about a problem and its solutions. In the current strategic environment, this is a vital service, for an unexamined assumption can be a critical vulnerability.

This article considers the relationship between audience, objective, and game design while introducing the mission and activities of the NSGC. It begins by proposing a common definition of games, including wargames; identifies the constitutive elements that compose all games; and asserts the relevance of these elements to game design. It then explores how these principles of game design are evident in the exercises constructed by the Gaming Center and argues why such exercises are important to contemporary civilian and military decisionmakers.

What Are Games?

At the most abstract level, all games—whether played with cards, at a computer, or in a military-political planning session—share a focus on strategic interaction under a series of specified constraints. They stipulate a set of “rules of the game” that describe a given analytical situation and demand that participants make choices about their best decisions subject to those constraints, often taking into account the likely responses of actual or implicit opponents. Beyond these shared elements, designers have developed a range of methods for transforming these analytical problems into exercises. The forms that these exercises take range from seminar discussions, to field events, to computer games. Exercises at the Gaming Center are mainly conducted as seminar-based problem environments—the structure best suited to participants’ needs and the problems being gamed.

The seminar games designed

and played in the NSGC often look much like a classroom, albeit one full of diverse and experienced students. In these games, also called *table top exercises* or *free form games*, a set of constraints that limit players’ choices and shape the strategic environment is written into a qualitative and descriptive scenario. Players are directed to react to challenges that arise under the scenario as play advances over moves.

Players gather around a table and are introduced to a problem situation, which game designers convey through such means as a background paper, simulated report of breaking news, or mock briefing. They are instructed to suggest solutions, debate alternatives, and finally settle on a recommended course of action. Typically, some kind of subsequent announcement, such as a simulated news report, will introduce new issues, advancing play to a new move in the game and the next stage in an unfolding situation. In so-called path games, events in later moves are contingent on players’ prior choices. Most often, however, moves reflect the advancement of time. By pressing players during discussion to address the implications of previous choices for

all games share a focus on strategic interaction under a series of specified constraints

remaining decisions and these decisions’ relative payoffs, designers can incorporate a sense of consequentiality to games that progress in a linear fashion.

Seminar exercises are now employed extensively for gaming political-military strategic dilemmas and are useful for audiences ranging from secondary school students to flag officers. They can be designed to educate players about a problem and the constraints shaping decisions about it, or they can facilitate expert discussion at a high level of sophistication. Seminar games can serve as an especially effective experiential learning tool, but they can also be used to gather highly

knowledgeable but diverse players in an environment promoting communication, information sharing, and cross-pollination of ideas.

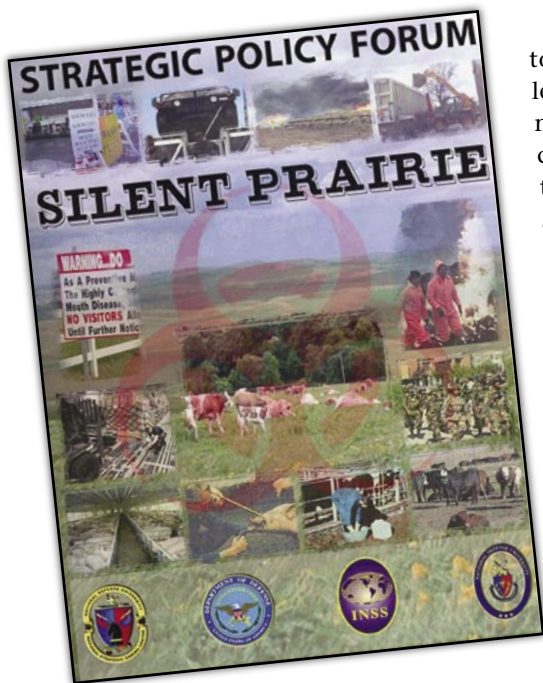
Elements of Games

Any exercise is shaped by a number of elements that influence its design and the form it ultimately takes: the aim, the audience, the level of analysis, and the problem situation being studied jointly guide the construction of an exercise. They determine the scenario crafted for a game and what the best form will be, whether a seminar exercise, field event, computer game, or formal model.

Two aims exist in varying degrees in all games: an *analytical* and an *educational* purpose. Some games focus almost exclusively on analyzing problem situations and weighing available choice-sets, while others are more educational, teaching about a situation or training responses to one often both aims are present. For example, the NSGC’s high-level participants frequently report finding these exercises useful not only for walking through a problem, but also for obtaining input from other senior players. Game design is closely related to the aim of the exercise. Where analytical needs drive development, the tendency is for the game to be specified as formally and parsimoniously as possible, giving

designers the greatest precision in deriving solution sets or collecting empirical data. Where educational aims predominate, an understanding of experiential learning and its role in training inform game design. Seminar games tend to do both: although they neither present nor are based on formal models, scenarios are constructed with enough attention to the abstract constraints and questions shaping a strategic situation that they are useful beyond simply dramatizing history or current events to players.

The audience is critical to the design of games; the experience and needs of participants greatly affect the



aim of the game and the form it should take. Moreover, players can be assets to each other. High-level participants may come to an event hoping to learn more about a subject, but typically they also bring considerable personal expertise, which is of interest to other partici-

the experience and needs of participants affect the aim of the game and the form it should take

pants and which good game design can bring out. An advantage of NSGC seminar games is that they allow for a less-structured discussion than more strictly scripted exercises, making them an effective means of gathering and evaluating information. Where the audience is highly multidisciplinary, games may be designed to obtain and pool information in the most efficient manner.

Thus far in this article, the term *strategic* has been used in the theoretical game sense, meaning a choice situation in which an actor makes decisions seeking to maximize his benefits, subject to a set of constraints and typically anticipating other players' likely responses. In contrast, in the military-analytical context, *strategic* refers to a level of analysis, an issue that is also relevant

to game design. At the strategic level, a military planner considers military and political objectives and challenges at the national and international level. In this context, *strategic* is simply a higher level of aggregation than *operational* or *tactical* analyses. The more theoretical encompassing game sense of *strategic* is evident in all three military levels of analysis.

There is a tendency for *strategic* in the military-analytical sense to be at least partly defined by the potential solutions to a problem, such as the *DOD Dictionary of Military and Associated Terms*, which understands the *strategic level of war* as the "level . . . at which a nation . . . determines national or multinational (alliance or coalition) security objectives and . . . uses national resources to accomplish these objectives."

These national resources are generally understood to be the diplomatic, informational, military, and economic (DIME) means of influence a country or group of countries can bring to bear. Although there are real analytical difficulties with defining a problem by its presupposed solution, this approach does highlight the value in gaming strategic challenges. While it might seem that such a broad focus is difficult to encapsulate in a game because problems must be stated at such a high level of generality, it is an inescapable fact that most of today's political-military challenges play out at this level. The increasing political and military use of solutions employing a combination of DIME assets or demanding joint and interagency coordination point to why it is useful to evaluate these plans in the context of a game before trying them in the field.

As in any game, the problem situations considered in strategic exercises and presented to participants are jointly defined by the constraints elaborated in the game and the set of actors considered to be making decisions under

them. Constraints can be understood to be any factors that affect the choices of players or that otherwise set down in the rules of the game. They can be resource limitations players must take into account, geopolitical facts of life, domestic political processes, or coalitions that should be maintained. How precisely the constraints must be specified impacts the form of a game.

Actors can range from individuals to aggregate bodies such as countries or organizations. In exercises, actors are not necessarily exhaustively accounted for by the game participants, but rather are the agents present in the game scenario who are determined to be taking actions that influence the strategic environment. In many military exercises, players taking the perspective of U.S. actors are called the *blue* team and their opponents are the *red* team. In red teaming exercises, players take the perspective of U.S. adversaries to test American responses and policies. Other types of exercises have players taking both red and blue roles. In most NSGC seminar exercises, players are assigned roles as U.S. actors, whether they are individual decisionmakers or organizations, and focus on the blue team perspective of strategic challenges.

Game Design

Game design begins with specifying the aim, audience, level of analysis, and problem situation and then formulating a structure for the game. Designers identify the constraints and actors, which define the choices players can make throughout. They then decide how many moves or decisions played will advance. In games, moves are synonymous with decisions; at the end of each period, at least implicitly, players must make a choice. Game aims, coupled with these factors, inform the game form selected, which is a major choice in the design process.

Once all the elements of a problem situation are determined, designers must craft an artificial environment in which these dynamics play out. Game

forms vary in terms of how precisely the number of players, constraints, and moves are specified. Computer simulations, on one hand, are extremely specific; there may be a large number of players and possible moves, and, in combination, they may constitute a large though finite number of choices. Likewise, actual field exercises tend to be constrained in terms of time; they operate in real-time, and the consequences of actions, while immediately apparent, are not easily speeded up. Games taking the form of seminar ex-

seminar exercises take advantage of the strengths of a highly interdisciplinary audience

ercises, as those designed by the NSGC, build a rich contextual environment and typically use changes in time to advance play, so they are not restricted to executing the game in real-time. They are structured by the sets of actors and constraints that form the problem space in the game and that govern player choices throughout but can also state them more qualitatively and less precisely.

Seminar exercises relax some of the restrictions that structure other types of games, which offers both educational and analytical advantages (although greater scope comes at the cost of analytical precision). The exercises not only accommodate but also take advantage of the strengths of a highly interdisciplinary audience. They allow designers to build detailed scenarios with the understanding that different participants will draw information and conclusions from different parts of the scenario and introduce these elements into the discussion. They provide an effective environment for analyzing both coordination challenges and such problems as identifying constraints and their implications for different actors. Where more educational goals are intended, games can be designed to provide more comprehensive background and guided discussions and ac-

tive teaching to ensure that the desired concepts are conveyed.

Exercises at NSGC

The Gaming Center comprises three divisions, which design and conduct strategic simulation exercises for rather diverse audiences, including NDU students, flag officers, senior executive branch officials and Members of Congress. The diversity of the participants, problems, and scenarios in Gaming Center exercises highlights the range and flexibility of the seminar game form. The three branches of the center are introduced below with a brief description of recent exercises that concretely illustrate the Center's work and how the main elements of games are instantiated in actual design choices. In particular, the influence of factors such as audience and problem space on the form of games at NSGC is examined.

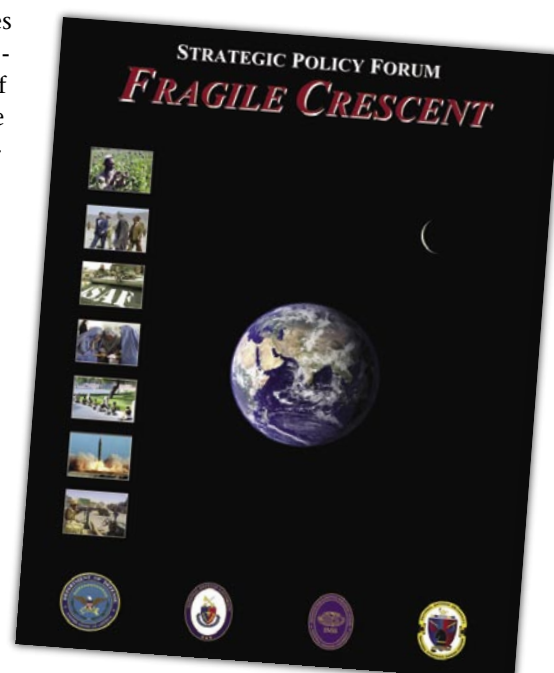
Strategic Military and Academic Support Division

The Strategic Military and Academic Support Division provides gaming, exercise, and curriculum support to NDU colleges and components. Strategic-level seminar exercises form a core component of several classes at NDU, and the NSGC has developed an extensive repertoire of games on relevant issues. These games have an explicitly educational goal of prompting students to integrate and make active use of the information they master in individual classes and in their studies as a whole. The games must be designed not only to enhance participants' knowledge directly, but also to draw out that knowledge that their colleagues bring to the classroom from their career experience.

In the spring of 2005, the NSGC executed the year-end capstone exercise for the National War College's National Military Strategy course. The

game objective was to introduce students to the challenges of formulating security policy, given the diversity of existing U.S. military commitments and global security concerns. Students played the role of members of Federal departments represented on the National Security Council and were told that they had been appointed by the President to serve on a Policy Coordinating Committee (PCC) and make recommendations about several ongoing, simultaneous national security threats. Over the first 3 days, students discussed strategic options with regard to three states posing different threats. They were to consider logistic and resource constraints and political and military challenges. On the fourth day, the committee presented a briefing, making strategic prioritizations and recommendations to actual members of the National Security Council.

In the capstone exercise, the problem space was principally shaped by constraints such as the simultaneity of the problems, finite resources, the immediacy of threats, and the various nonproliferation and regional security challenges specific to each day's scenario. There were numerous relevant actors populating the problem space,



including adversarial states and transnational actors, other regional third party countries and organizations, and U.S. civilian and military actors, including the members of the PCC. The game, therefore, truly depicted strategic-level challenges. Designers used a variety of media to introduce scenarios, including video injects, on-line materials, and computer slides. The seminar format was especially effective because it allowed designers to link coherently the otherwise disparate problem scenarios and convey the game's focus on the multiple, conflicting priorities of an enormous battlespace.

Students can exploit several educational features of such exercises: applying knowledge gained from the course, learning from the experience their col-

leagues bring to the seminar table, and thinking through U.S. policy options, given the strategic constraints identified in the exercise. Many, moreover, will apply these insights directly as they return to duty following graduation.

one of the most popular games posited a release of anthrax in the San Diego metropolitan area

cedures through protracted discussion. In this way, exercises not only identify where better coordination would be desirable, but they also identify partner offices for players and point to assets not immediately apparent within the players' organizations.

A recent example of this work is a game focusing on government transition in Cuba that was conducted for the Department of State's Office of Coordination, Reconstruction and Development. The game sought to test, challenge, and evaluate current American policy and policymakers' assumptions about events following a posited political change in Cuba. Over

30 participants attended a 2-day, multistage game, which focused on the dynamic, strategic, political, and military changes in Cuba subsequent to a change in government. Participants included senior officials from the Departments of State, Treasury, Commerce, and Defense; the U.S. Agency for International Development; and congressional staff and local universities. The exercise concluded with a formal "hot wash" session in which players presented policy recommendations to a panel of experts simulating Cabinet-level decisionmakers. Players' highly positive evaluations of the exercise focused on its utility in highlighting coordination and planning needs. It helped identify a wider range of potential outcomes that would need to be planned for as well as variations in responses to the crisis, both Cuban and American.

Congressional Support—The Strategic Policy Forum

The Gaming Center is also home to the Strategic Policy Forum (SPF). Initiated by the Secretary of Defense, the forum conducts seminar exercises centered on international and homeland security issues for the legislative

branch, bringing together Members of Congress, senior executive branch officials, and military leaders for strategic-level crisis simulations. Designed to enhance understanding of crisis decisionmaking in an interagency setting, the forums allow exploration of emerging national security issues and the capabilities and limitations of instruments of national power in dealing with these challenges.

One of the most popular games, a bioterrorism exercise called *Scarlet Shield*, was revised and executed in early 2005 and illustrates the types of events SPF conducts. Participants included Senators and senior executive branch officials from the Departments of Defense, Homeland Security, and Health and Human Services. Deputy Secretary of Defense Paul Wolfowitz opened the exercise, which posited a release of anthrax in the San Diego metropolitan area.

As play advanced, participants were asked to make policy recommendations about dealing with the California attacks as further cases appeared in the Midwest and intelligence reports indicated the possibility of attacks in Washington, DC. Constraints such as the logistic exigencies of managing multiple dispersed incidents, dealing



with an unprecedented public health crisis on a number of fronts, and coordinating the work of several agencies and levels of government were built into the scenario. All of these constraints shaped the strategic environment in which players could make recommendations. A seminar game structure is useful for such policy problems because players must engage with the multiple demands and goals that exist simultaneously in any strategic scenario. Specialists tend to assign disproportionate importance to issues closest to their area of expertise, but a game setting requires them to identify the range of issues and constraints that concurrently shape a strategic environment and to articulate prioritizations and integrated solutions. To foster open discussion, SPF exercises are conducted as nonattribution events.

On occasion, members of Congress have made public comments about the utility of the games. Their feedback and press releases note that exercises can highlight previously unseen dimensions to problems, assist coordination between agencies, and help identify and explore potential consequences. Members of Congress have specifically attributed several of these benefits to SPF events. For example, Representative Rick Larsen (D-WA) observed, "In any national security crisis, dozens of agencies have to make quick, coordinated decisions. Today's crisis simulation al-

lowed me to better understand that decisionmaking process and to explore response actions and consequences." Representative Frank Lucas (R-OK) asserted, "these simulations are invaluable to helping Members of Congress see the big picture of our Nation's defense and economy after another possible terrorist attack. . . . We can use that knowledge when we're making decisions on what resources are needed in defense of our homeland." The emphasis on the coor-

a useful analytical environment in which to identify and weigh policy options and needs is the goal of good game design

ordination benefits is clear, but the utility of exercises as an environment in which to brainstorm policy solutions, solicit high-level expert feedback, and test notional solutions competitively is also implied.

The seminar discussion form of the exercises provides the structure that facilitates these outcomes; clearly crafted scenarios, rich in contextual detail, but not so overworked as to make scenario-events seem improbable, are months in the making in the SPF. But cleanly constructed scenarios, structured by sets of pre-identified constraints and game goals and augmented by carefully researched detail, create an environment for discussion that facilitates not only learning on the part of

participants but also constitutes a useful analytical environment in which to identify and weigh policy options and needs. This is the goal of good game design.

Game design that reflects the interplay between such elements as aims, audience, and problem situation is vital to determining how useful games are to participants. For the participants for whom the NSGC builds exercises (often diverse and experienced players) and the situations that are being simulated (complex political-military problems) the strategic seminar exercises con-

structed by the Gaming Center seek to match form to needs. They produce tightly crafted but flexible scenarios, describing the constraints and actors that constitute a problem situation. Participants assert that these exercises constitute helpful policy tools.

Current discussions of warfare recognize a dynamic international environment, featuring a battlespace crossing global geographic and cultural boundaries and demanding integrated operations with new partners. Policymakers and warfighters are creating new solutions to new problems, often on the fly and with good results. These problems are not entirely unforeseeable, however. The opportunity to gather in a seminar room and evaluate tomorrow's strategic challenges, which sprawl across borders, issues, areas, and peoples, enables proactive decision-making. It helps individuals and organizations identify solutions, think through consequences, and head off problems before they become crises.

Quality game design and the relevance of the problem being gamed determine how useful exercises are to participants. The National Strategic Gaming Center unites both in the exercises it builds and executes, underpinning its standing as a premier national gaming center.

JFQ

High school students in the National Youth Leadership Forum engage in simulations at the Gaming Center



National Strategic Gaming Center

The Chairman's Strategic Essay Contest

National Defense University Press is pleased to announce the winners of the 24th Annual Chairman of the Joint Chiefs of Staff Strategic Essay Contest, held May 18–19, 2005, at the National Defense University (NDU) campus, Fort Lesley J. McNair, Washington, DC. The purpose of this competition is to stimulate strategic thinking and promote well-written research and a broader security debate among professionals. Students from all services, interagency students, and international fellows attending senior U.S. service or joint professional military education colleges are eligible to compete.

This presentation of the winners marks a first in both the 24-year history of the contest and the 12-year history of *Joint Force Quarterly* (JFQ). Henceforth, the winning essays will be published in a “special feature” section in each 4th quarter issue of JFQ. The publication of the winning essays is



meant to assist the Chairman with the tasks of stimulating critical thinking among security professionals as well as making the research more accessible to a wider readership while publicly honoring the winners and their faculty supporters. Furthermore, NDU Press will consider all semifinalist research papers for publication in future issues of JFQ. This year, all participants will receive a certificate of participation signed by NDU President, Lieutenant General Michael Dunn, USAF, and finalists will receive a certificate signed by Chairman of the Joint Chiefs of Staff, General Richard Myers. Winners also receive monetary gifts provided by the NDU Foundation.

The 2005 contest saw a 25 percent increase in the number of essays judged, making this year's event among the most competitive in its history. The nominated essays represented a wide spectrum of security education

research topics, and the joint, interagency, and international spread of winners was tremendous:

1st place

Lieutenant Colonel Michael F. Morris, USMC, *Al Qaeda as Insurgency* (Army War College)

2^d place

Martin J. Gorman, Defense Intelligence Agency, and Commander Alexander Krongard, USN, *A Goldwater-Nichols Act for the U.S. Government: Institutionalizing the Interagency Process* (National War College)

3^d place (tie)

- Colonel Gerard P. Fogarty, Australian Army, *Guantanamo Bay: Undermining the Global War on Terror* (Army War College)
- Lieutenant Colonel John M. Amidon, USAF, *America's Strategic Imperative: A "Manhattan Project" for Energy* (Air War College)

As in past competitions, each military senior-level school—Air, Army, Marine Corps, Naval, and National War Colleges, and the Industrial College of the Armed Forces—selected its best student essays for the contest. Some service colleges made the decision to accept intermediate and advanced service school essays. Each senior college also provided 2 judges to evaluate the entries at the 2-day finals, held in NDU's Marshall Hall. NDU Press organized and conducted the contest with support from the NDU Foundation.

NDU Press hopes this year's contest and publication of the winning essays in JFQ will continue to inspire senior-level students, faculty, and others to think and write about major national security issues. The success of this year's contest would not have been possible without the support and cooperation of the students and faculty at the U.S. Armed Forces senior war colleges. To learn more, visit the NDU Press Web site at ndupress.ndu.edu.

2005 CJCS Strategic Essay Contest Distinguished Judges

Dr. Chris Bassford—National War College
Professor Charles C. Chadbourn III—Naval War College
Dr. Alan Gropman—Industrial College of the Armed Forces
LtCol Steven Hansen, USAF—Air War College
Col Kevin Keith, USAF—National War College
Dr. Milt Kovner—Industrial College of the Armed Forces
Dr. Larry D. Miller—U.S. Army War College
Dr. James A. Mowbray—Air War College
Professor Paul Romanski—Naval War College
Dr. Joseph L. Strange—Marine Corps War College
Dr. Jon Sumida—Marine Corps University
COL Robert H. Taylor, USA (Ret.)—U.S. Army War College

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Marines clearing a house while searching for weapons caches and insurgents in the Thar Thar Lake area of Iraq

2nd Marine Division Combat Camera (Robert R. Attebury)

Al Qaeda as Insurgency

By MICHAEL F. MORRIS

The *National Strategy for Homeland Security* designates al Qaeda as “America’s most immediate and serious threat.” Conventional wisdom, reflected in news media, public opinion, and government studies such as the *National Strategy for Combating Terrorism*, characterizes the al Qaeda men-

ace as one of transnational terrorism. Recently, however, some analysts have begun to challenge that conclusion. They argue that al Qaeda represents a new type of insurgency.¹ Assessing the nature of the enemy is a critical first step in crafting effective strategy. In the case of al Qaeda, one must answer three important questions to clarify the

Lieutenant Colonel Michael F. Morris, USMC, wrote this article while a student at the U.S. Army War College.

extent of the danger and further hone America's strategic response. First, does the movement actually represent an insurgency? If so, are there indeed new elements that make al Qaeda different than previous insurgencies? Finally, what implications do these answers have for the current war against Osama bin Laden's movement? The analysis that follows suggests that al Qaeda represents an emerging form of global Islamic insurgency, the inchoate strategy of which undermines its potential to achieve its revolutionary goals. Nonetheless, not unlike previous failed insurgencies, it possesses both durability and an immense capacity for destruction. These characteristics mandate a counterrevolutionary response at the strategic level that aims not only to destroy the organization but also to discredit its ideological underpinnings.

Terrorism or Insurgency

The distinction between *terrorism* and *insurgency* is not merely theoretical, as the appropriate responses to the two phenomena are very different. Before addressing preferred strategies to counter each, one should establish how they are alike and how they differ. Unfortunately, existing definitions do more to cloud than clarify the issues. Neither academic nor government experts agree on a suitable definition for terrorism.

The Department of Defense (DOD) *Dictionary of Military and Associated Terms* definition focuses on the type of violence employed (unlawful) toward specified ends (political, religious, or ideological).² This characterization fails to address the argument from moral relativity that "one man's terrorist is another man's freedom fighter." In essence, this objection to a suitable definition submits that while violence may be "unlawful" in accordance with a victim's statutes, the cause served by those committing the acts may represent a positive good in the eyes of neutral observers. To escape this dilemma, the recently recommended (but not yet approved) United Nations (UN)

definition of terrorism focuses on the targets (civilians or noncombatants) of violence rather than on its legal nature or intended objective.³ Still, the UN and DOD definitions both sidestep the notion of state-sponsored terrorism. The DOD definition cites only unlawful violence (thereby making the term *state terrorism* an oxymoron), whereas the UN definition excludes state-sponsored terrorism and deals with state

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violence against civilians as bona fide war crimes or crimes against humanity under the Geneva Convention. More importantly for a strategist trying to characterize the nature of the threat, neither definition conveys exactly what distinguishes the violence of terrorism from that of insurgency.

Definitions of *insurgency* have similar difficulties. DOD defines the term as "an organized movement aimed at the overthrow of a constituted government through use of subversion and armed conflict."⁴ Terrorist organizations with revolutionary aspirations seem to meet that criterion, and thus the insurgent definition fails to help analysts differentiate one from another. Bard O'Neill comes closer to distinguishing the two phenomena by including an overtly political component in his definition of insurgency:

*A struggle between a nonruling group and the ruling authorities in which the nonruling group consciously uses political resources (e.g., organizational expertise, propaganda, and demonstrations) and violence to destroy, reformulate, or sustain the basis of legitimacy of one or more aspects of politics.*⁵

Thus, insurgencies combine violence with political programs in pursuit of revolutionary purposes in a way that terrorism cannot duplicate. Terrorists may pursue political, even rev-

olutionary, goals, but their violence replaces rather than complements a political program.

If definitions offer only a partial aid in discriminating between terrorism and insurgency, organizational traits have traditionally provided another means. Insurgencies normally field fighting forces that are orders of magnitude larger than those of terrorist organizations. Typically, insurgents organize their forces in military fashion as squads, platoons, and companies. Terrorist units are usually smaller and comprised of isolated teams not organized into a formal military chain of command. Insurgent forces are often more overt as well, especially in the sanctuaries or zones they dominate. Terrorist organizations, which tend toward extreme secrecy and compartmented cells to facilitate security, seldom replicate an insurgency's political structure.

One characteristic that does not distinguish terrorism from insurgency is the use of terror tactics. Terrorists and insurgents may employ exactly the same methods and utilize force or the threat thereof to coerce their target audiences and further the organizational agenda. Both groups may threaten, injure, or kill civilians or government employees using an array of similar means. Thus, the use of terror in itself does not equate to terrorism; the former is merely a tactical tool of the latter. Lawrence Freedman suggests that the terror of terrorists equates to "strategic" terrorism, because it is the primary means by which they pursue their agenda. However, the terror that insurgents employ is more tactical since it is but one of several violent tools such groups wield.⁶ This parsing underscores the point that a variety of agents, including states, insurgents, and criminals, as well as terrorists, may employ the same techniques of terror.

Given the challenges of definition and the shared use of the same

tactical repertoire, it is hardly surprising that the terms *terrorism* and *insurgency* frequently appear synonymously. The Department of State register of terrorist organizations lists small, covert, cellular groups such as Abu Nidal and Greece's "Revolutionary Organization of 17 November;" it also lists larger organizations with shadow governments in established zones, strong political components, and well-defined military hierarchies, such as the Revolutionary Armed Forces of Colombia and the New People's Army in the Philippines. Most analysts would characterize these organizations as insurgencies, although they employ strong doses of terror on both opponents and the surrounding populace. Not surprisingly, al Qaeda is on the State Department list of 37 foreign terrorist organizations. To determine if it belongs there, this article will employ a third analytical framework to supplement the insights offered by existing definitions and traditional organizational characteristics.

In the 1980s, the French sociologist Michel Wieviorka conducted research that determined that terrorists are estranged from both the social movements that spawned them and the societies they oppose. He uses the term *social antimovement* to describe the intermediate stage between legitimate social movements and terrorism. Antimovements may employ violence, but they maintain some association with the parent social movement. It is only when that linkage dissolves, a process Wieviorka calls *inversion*, that a militant becomes a terrorist. The violence of terrorist actors is no longer purposeful—in pursuit of a rational political goal—but replaces the parent social movement's ideology. This conclusion underscores a frequent contention in the literature on political violence, that terrorism is the domain of organizations, where the strategic repertoire of violence conflates means and ends.⁷

Wieviorka's construct does not provide a means upon which one can hang a consensus definition of terror-

ism. Instead, it offers another means to distinguish terrorism from insurgency. Specifically, this theory posits that the degree of linkage remaining between a given radical group and its parent social movement determines what Wieviorka refers to as *pure terrorism*. There is a connection between this notion and the broader political nature of insurgency, though it is not an angle Wieviorka himself examines. Organizations that have not yet inverted and that maintain connections to a significant segment of society represent not just social antimovements but potential insurgencies.⁸

The Terrorism-Insurgency Scale

Using the three analytical lenses—definitions, organizational traits, and Wieviorka's inversion theory—where does al Qaeda fall on the terrorism-insurgency scale? Certainly it meets the component tests of the various terrorism definitions: unlawful (a nonstate actor); political/religious/ideological in intent (fatwas calling for the removal of Islamic regimes guilty of religious heresies), and targeting civilians (for instance, the World Trade Center attacks). It also comprises "an organized movement aimed at the overthrow of a constituted government through use of subversion and armed conflict" in accordance with the DOD insurgency definition. In terms of exhibiting a political component, some have called al Qaeda an armed political party and the extremist wing of a political religion. The group's political works include propaganda efforts such as the issuance of fatwas, protection and projection of Salafist religious infrastructure, and mobilization of grassroots sup-

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port through cooperation with Islamist parties as well as orchestration of favorable media coverage in the Islamic press. The al Qaeda training manual

underscores its commitment to both politics and violence as a mechanism for change:

Islamic governments have never been, and will never be, established through peaceful solutions and cooperative councils. They are established as they [always] have been, by pen and gun, by word and bullet, by tongue and teeth.⁹

Finally, the terror tactics employed in pursuit of al Qaeda's ideological goals qualify it for either insurgent or terrorist status.

In terms of traditional characteristics of classic terrorist and insurgent organizations, al Qaeda turns in a mixed score. It is relatively small (perhaps 100 hard-core adherents), but in Afghanistan it did train approximately 18,000 fighters, who have subsequently dispersed around the world in some 60 countries.¹⁰ Of this small army (which is larger than 61 of the world's 161 armies), perhaps 3,000 are true al Qaeda troops, as opposed to mere beneficiaries of al Qaeda tactical training.¹¹ The small, relatively cellular structure of the hard core suggests a terrorist organization, while the scope and scale of its dedicated, deployed militants indicates a significant, if somewhat dispersed, insurgency. When al Qaeda enjoyed political space in which to operate unhindered in Afghanistan, it conducted its business in a relatively overt manner as insurgencies usually do. Under duress since 9/11, it has regressed to a more covert style in accordance with terrorist protocol.

Wieviorka's precepts suggest that al Qaeda has not yet inverted and transitioned to pure terrorism. Osama bin Laden's organization stemmed from the political tradition of the Muslim Brotherhood, which promised an Islamic alternative to capitalist and Marxist models of development. Normally, social movements such as that represented by the Muslim Brotherhood could compete effectively in an environment



AP/Wide World Photo (Abdul Kadir Sadi)

Insurgents fighting U.S. troops in Fallujah, Iraq

of democratic elections. In a Muslim landscape devoid of free elections, however, alternate ideological competitors either die out or become subversive to continue the political fight. Al Qaeda represents a version of the latter. While the group's methodology of martyrdom (reflecting the radical ideology of bin Laden's Palestinian spiritual mentor Abdallah Azzam) is apocalyptic from a Western perspective, it is in accord with at least a version of the Islamic religious tradition of jihad. Thus, it is not

only a war of ideas can confront and defeat ideologies

a complete departure from its own societal norms. Moreover such factors as bin Laden's popularity throughout the Muslim world, the fact that the popu-

lace among which he and his followers hide has delivered neither him nor his chief lieutenants despite the offer of large rewards, and the relative lack of condemnation of the group's activities by Islamic clerics suggest that al Qaeda has not severed its connection with significant segments of its social constituency.

This grassroots support indicates an organization still in the social anti-movement phase rather than a terrorist group divorced from the population it claims to represent. Al Qaeda has radically disengaged itself politically (perhaps inevitable given the autocratic nature of the regimes it opposes), is hyper-aggressive toward those it perceives as responsible for its political weakness (Jews, Americans, and apostate Muslim leaders), and advocates

a utopian dream promising a powerful yet thoroughly isolated Islamic world. Such traits are symptomatic of a social antimovement. Pure terrorism, on the other hand, might exhibit the same radical goals and appalling acts but would result in far broader condemnation of al Qaeda's agenda than has occurred so far throughout the Muslim world. Analysts who conclude that bin Laden is winning the war of ideas between the radical and moderate Islamic religious traditions further reinforce the counterintuitive determination that al Qaeda is not yet a terrorist organization. Such evidence indicates a growing linkage between the purveyors of violence and the polity they claim to represent. Purposeful political violence committed on behalf of a sizable segment of society suggests insurgency. Importantly, the judgment

that al Qaeda has not descended into terrorism is not to sanction the group's horrific conduct or render support for its political objectives. Instead, it represents an effort to assess its current status, accurately portray its nature, and thereby help determine how best to combat it.

Combating terrorism and insurgency requires different strategies. Both pose significant threats to the United States. Terrorists, in an age of transnational cooperation and access to weapons of mass destruction, have the means to unleash catastrophic attacks on modern societies that dwarf even the blows of 9/11. But terrorism, however powerful in a destructive sense, remains the province of the politically weak. Terrorists are physically and psychologically removed from broad popular support. Because they remain isolated from the social movements from which they sprang and their political goals become more and more

war of ideas can confront and defeat ideologies. An integrated counterinsurgency (COIN) program that enables the targeted government to offer more appealing opportunities than the insurgents' (doubtless utopian) vision must peel away popular support. Finally, a successful approach must identify and systematically neutralize the insurgent strategy's operational elements. Al Qaeda represents not terrorism, but an insurgency featuring a Salafist theology that sanctifies terror and appeals to significant portions of Muslim believers. The next section will explore whether the nascent insurgency has the strategic wherewithal to enact revolutionary change.

A Policy-Strategy Mismatch

Islamic insurgency is not a new phenomenon. Nevertheless, historically it has not been successful. Moreover, as Lawrence Freedman notes, revolutions that rely on terror as the primary means of political violence court strategic failure.¹² Does al Qaeda's methodology promise a different outcome? The move-

ment's goals are revolutionary; they envision remaking society such that religious faith is foundational, social stratification is enforced, and the government is autocratic and controlled by clerics. The Islamist governments of Iran, the Taliban in Afghanistan, and the leadership in Sudan illustrate approaches to the ideal. Al Qaeda intends to establish like regimes in lieu of apostate Muslim governments such as those of Saudi Arabia and Pakistan. The new Salafist administrations would strictly enforce sharia law and block the military and cultural inroads of the West. Al Qaeda's political objective, then, remains unlimited vis-à-vis targeted Islamic regimes. It seeks to overthrow their form of government. With regard to the United States, the group's political objectives are more limited: to

coerce America to withdraw from the Middle East and abandon sponsorship of Israel,¹³ although some argue that its long-term objective encompasses nothing less than the destruction of the United States and the West.

While it is important to classify an insurgency's type and understand its goals, the operative question is how the movement uses the means at its disposal to achieve desired ends—in other words, what strategy does it employ? It is not enough to have a guiding ideology and a susceptible body politic with significant, and potentially exploitable, grievances against the existing government. In the operational realm, something must connect the two. Without this linkage, ideologies may produce terrorists and grievances may spawn rebellions. But it is only when ideology and grievances combine that insurgencies result. Understanding how strategy effects that combination provides insight into the best ways to counter a particular insurgency. Current doctrine identifies two basic insurgent strategies: mass mobilization (best illustrated by Mao Tse-tung's people's war construct) and armed action (featuring either rural-based *foco* or urban warfare-oriented styles).¹⁴

Al Qaeda exhibits a blend of both insurgent strategies. Primarily, bin Laden's movement employs the urban warfare version of the armed action strategy. Certainly most of the group's activities have been military rather than political in nature. It has not sought to use rural-based military forces to court recruits and wage a systematic campaign of destruction against target governments. Instead, al Qaeda has employed violence against both government and civilian targets to create instability and undermine the confidence and political will of its enemies. Small, covert teams employing creative suicide techniques planned and executed its attacks against the USS *Cole*, the Khobar Tower barracks in Saudi Arabia, and the World Trade Center and Pentagon.

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divorced from reality over time, it is neither necessary nor possible to negotiate with them. They are a blight, like crime, that cannot be eliminated but that states must control to limit their impact on society. Of course, states must hunt terrorists possessing the means and will to conduct catastrophic attacks not only with national and international police resources, but also with all the diplomatic, informational, military, and economic instruments of national power.

However, states must handle insurgents differently, because they represent both a political and a military challenge. Insurgents combine an ideologically motivated leadership with an unsatisfied citizenry (the so-called "grievance guerrillas") in order to challenge existing governments. Only a

mass mobilization strategy, but it does employ some of Mao's key concepts. The Chinese Communist Party's carefully managed mass line finds its analog in the Islamic *madrassas*, mosques, and media outlets. These forums publicize bin Laden's philosophy, echo the people's complaints, and conjoin the ideology and grievances in a perfect storm of revolutionary fervor. Islamic *madrassas*, mosques, and media also provide a suitable venue for aspects of political warfare. Bin Laden's attempts to communicate directly with and threaten the American people have been neither sophisticated nor effective, but they do illustrate an effort to address his enemy's political vulnerabilities. Al Qaeda has also proven quite willing to cooperate, in a virtual united front, with a long list of otherwise dubious allies, including Shi'ite Hizballah, secular Ba'thist officials, and Chinese criminal syndicates. International support is important. Since the displacement of Afghanistan's ruling Taliban party, primary assistance comes from countries such as Iran and Syria as well as a host of like-minded state and regional insurgencies and terrorist organizations.

Mao's prescription for protracted war is also in keeping with al Qaeda's brand of Islamic revolutionary war. The mujahideen employed long-term guerrilla warfare in Afghanistan to drive out the Soviets; bin Laden looks to replicate that success in a similar protracted campaign against America. In addition to the small unit attacks characteristic of traditional guerrilla warfare, the larger operations conducted by thousands of al Qaeda-trained soldiers in Afghanistan against the Russians (and later the Northern Alliance) indicate that bin Laden does not oppose amassing and employing more conventional military power if time, resources, and political space permit. For example, his May 2001 communiqué calls for the formation of a 10,000-man army to liberate Saudi Arabia.¹⁵

When denied the opportunity to fight conventionally, al Qaeda is willing to fall back on more limited urban

warfare. Such a strategy is in consonance with a protracted war timeline, if not the ponderous methodology of its Maoist antecedent. Urban warfare seeks only to disrupt, not to build a conventional force capable of challenging government forces in pitched battles. It subverts targeted governments in preparation for the day when military action may remove a greatly weakened regime. Regardless of which military strategy al Qaeda employs, it is appar-

in addition to the strategic intent of influencing enemy policy, attacks also serve to mobilize the Muslim world

ent that bin Laden has the long view of history necessary to persevere in a protracted war. His religious faith is unperturbed by short-term setbacks or the lack of immediate progress in unseating target governments. Even death in combat is seen as motivational for those warriors who follow in the footsteps of the martyred mujahideen.

While al Qaeda does not use the same mobilization techniques Mao's strategy employed, it nonetheless benefits from similar operational effects achieved in a different way. The purpose of covert infrastructure is to operationalize control of human terrain. The shadow government provides or controls education, tax collection, civil and military recruiting services, public works, economic infrastructure development and operation, police functions, and legal adjudication. While there is no evidence of an al Qaeda equivalent to a communist-style covert infrastructure as seen in China, Malaya, or Vietnam, the radical Islamic religious movement has developed a construct that militant ideologues could subvert and employ to attain the same ends. O'Neill notes that religious institutions may replicate the parallel hierarchies of covert infrastructure and that religious inducement is more compelling to potential recruits than secular ideology.¹⁶

The militant Islamist construct

that illustrates such a parallel hierarchy is a virtual counterstate known as the *da'wa*.¹⁷ Grassroots social programs comprise this alternate society, which is designed to prove the efficacy of fundamentalist policies and gradually build a mass base that will eventually translate into political power. The *da'wa* includes associations of middle-class professionals, Islamic welfare agencies, schools and student groups, nongovernmental humanitarian assistance organizations, clinics, and mosques.

These venues advance political ideas and sometimes instigate mass protests.

Though this overt nucleus of a parallel government

has developed in nations such as Egypt, Jordan, and Saudi Arabia, it has not yet attained the revolutionary capacity exhibited by Maoist people's war covert infrastructure. Opposition parties such as the Muslim Brotherhood have not been able to leverage this latent source of organizational strength into a successful challenge to sitting governments. Theodore Gurr observes that the existence of options for dissent like the *da'wa* sometimes bleed off revolutionary energy and make successful insurrection less likely rather than facilitating its advance.¹⁸ The *da'wa's* capacity as a conduit for Maoist-style political mobilization is nonetheless striking.

The strategy of al Qaeda is thus a blending of the more familiar mass mobilization and armed action strategies. Some of the factors that made Mao's people's war strategy effective are present in al Qaeda's twist on "making revolution." The religious foundation of al Qaeda's ideology and the devout nature of the societies it seeks to coopt create a novel dynamic with a potentially new way of connecting means to ends. So far this potential is unrealized. In the modern era, radical Muslims have applied the coercive social control consistent with bin Laden's brand of Islam only following the seizure of political power. In Iran, Afghanistan, and Sudan, the *da'wa* did not serve as a virtual counterstate as shadow govern-

ments did in Maoist people's wars. But in the future, al Qaeda may not have to replicate Mao's secular infrastructure because alternate mechanisms of control are already resident in the target societies. The challenge for Islamic insurgents is to transition the da'wa's capacity for social influence into one of alternate political control.

Whether or not such an evolution proves feasible, al Qaeda's armed action approach seeks to achieve its limited political objectives versus the United States through a military strategy of erosion. That is, additional strikes of sufficient magnitude could induce America to reconsider its policy options in the Middle East. In addition to the strategic intent of influencing enemy policy, these attacks also serve to mobilize the Muslim world; generate recruits, money, and prestige; demonstrate the global capacity to disrupt; and provide a forum for a kind of "performance violence" that symbolically underscores the righteousness of its cause. Failure to harness a more potent political component with its military erosion option, however, means that al Qaeda is less likely to overthrow targeted Islamic regimes. The unlimited political objective associated with

the constrained military means creates a fatal policy-strategy mismatch that dooms its insurgency to failure.¹⁹

Thus far, this article has established that al Qaeda's connection to the people in a number of Islamic countries means that its methodology is not terrorism but a kind of insurgency. The strategy of that insurgency, combining a variety of forms and styles in pursuit of both limited and unlimited political goals, demonstrates the ability to disrupt on a massive level, but with less likelihood of actually enacting revolutionary change. The final question is how to modify existing policies to better address the peculiar nature of the emerging al Qaeda threat.

Counterrevolutionary Implications

The insurgent nature of the al Qaeda threat suggests that the United States and its allies must counter the enemy's ideology, strategy, and the grievances he seeks to manipulate. The Army's October 2004 Interim Counterinsurgency Operations Field Manual, FMI 3-07.22, mentions all of these aspects of the struggle. Though the manual recognizes al Qaeda as an insurgency, it does not speak to the

unique challenges inherent in battling the first global insurgent movement. Some of the traditional COIN prescriptions are difficult to apply to a netted, transnational movement like al Qaeda. For example, "clear and hold" tactics do not work when the opponent disperses across 60 nations around the globe. Similarly, sanctuary is no longer a state or even a regional problem; with a global threat it becomes an international issue. The scope of the challenge increases vastly when potential sponsors include not only nations such as Iran, Sudan, and Syria, but also regions in turmoil such as Chechnya and failed states such as Somalia.

Unlike extant COIN doctrine, the *National Strategy for Combating Terrorism* does not recognize the insurgent nature of the threat. Instead the document characterizes al Qaeda as a multinational terrorist network. Nonetheless, the methodology laid out in the strategy incorporates a variety of COIN techniques to include winning the war of ideas, eliminating sanctuaries, interdicting external support, and diminishing underlying conditions. Interestingly, the National War College student report that inspired much of the war on terror strategy paper concluded that al Qaeda represented an evolution of terrorism that the authors dubbed *pansurgency*, defined as "an organized movement of nonstate actors aimed at the overthrow of values, cultures, or societies on a global level through the use of subversion and armed conflict, with the ultimate goal of establishing a new world order."²⁰ That conclusion was the most important idea in the study that did *not* make it into the National Security Council-approved war on terror strategy paper. Doubtless the council preferred the illegitimacy inherent in the terrorist label rather than the ambiguity associated with an insurgent status.

Greater emphasis on COIN methodology, however, would have improved the national counterterrorism strategy's prescriptions for addressing al Qaeda's ideology, strategy, and ex-



20 Marine Division Combat Camera (Jason D. Becksted)

plotation of grievances. Addressing grievances is essentially a tactical response. The current strategy rightly indicates that championing market-based economies, good governance, and the rule of law mitigates the conditions that enemies exploit to recruit insurgents. But experience in Haiti, Somalia, Afghanistan, and Iraq indicates the overwhelming resource challenges inherent in such nationbuilding. "Draining the swamp" as a means of removing grievances based on poverty, lack of education, poor medical care, and culturally induced violence is a generational investment and is fiscally prohibitive even on a state level, much less regional. Thus, the most effective means to resolve grievances is not through development or repair of shattered infrastructure, but via reform of the targeted state's political process. Broadened opportunity to participate in the sine qua non of politics—the decisions about who gets what—undermines radical Islamic movements' protected status in much of the Muslim world as virtually the only available option through which to express dis-

al Qaeda exerts far less control over a targeted population because its strategy establishes no shadow government

sent. Al Qaeda is a religiously inspired revolutionary movement, but fundamentally it is political.²¹ Thus, competitors offering different solutions for extant social, economic, and political grievances threaten the movement's political potential the most. In a largely nondemocratic Islamic world, however, a move to greater electoral participation is as revolutionary as the theocratic vision peddled by bin Laden and consequently remains a diplomatic hurdle of the highest order.

At the operational level, the war on terror strategy identifies a number of useful diplomatic, informational, military, and economic instruments for use against al Qaeda. The paper endorses a military strategy of annihi-

lation, but it does not identify a defeat mechanism. Against mass mobilization-style insurgencies, destruction of the covert infrastructure is the preferred defeat mechanism. Al Qaeda exerts far less control over a targeted population because its strategy establishes no shadow government, but the organization remains much more elusive as a result. Sir Robert Thompson recognized the dilemma posed by insurgencies without infrastructure, noting that either organization or causes are the vital factors behind insurgencies; whichever factor pertains dictates the appropriate strategic response.²²

If Maoist people's war features organizational strength, then the American Revolution illustrates insurgency motivated by an idea. The colonies possessed a degree of local government, but they lacked the kind of pervasive organizational control that would ensure that citizens had to support the revolutionary movement. Instead, the glue that held the insurgency together was the popular idea of political independence. Similarly, al Qaeda's strength lies in the appeal of its Salafist/Wahhabian philosophy, suggesting that it has no structural center of gravity at the operational level. This verdict reflects the amorphous

strategy the group has employed thus far and reflects its lack of success in either toppling Islamic governments or causing the West to withdraw from the Middle East. But it also underscores the tremendous potential energy possessed by a movement whose ideas powerfully appeal to a sizable minority throughout the Muslim world.

The Strategic Challenge

Such an assessment dictates a different kind of response at the strategic level. The conflict is between competing visions of Islam. Moderate Islam is willing and able to accommodate modernism; radical Islam insists that the religion return to the halcyon days of the 7th and 8th centuries. This is a kind

of civil war, and the West is poorly positioned to referee it or encourage its end. The contest is not the venue of an information operation writ large. Rather it is the age-old debate on religion's role in governance. Each people must make its own choice; Madison Avenue marketing and Western-style politics are neither necessary nor sufficient to sway the result. Instead, a sophisticated form of political warfare must support and encourage moderate governments that champion tolerant forms of the Islamic faith while opposing religious fascism. The *National Security and Combating Terrorism* strategies mention but do not stress this war of ideas. It deserves more emphasis and attention because failure in this arena will render moot even the destruction of al Qaeda. Osama bin Laden's movement is merely representative of the threat posed by Salafist theology. Other groups, though less well known, harbor similar political objectives and the conflict will continue until the underlying ideas are rejected by the Muslim *umma*. The threat posed by radical Islam today resembles that posed in 1917 by communism—a bad idea poised to justify the spread of totalitarianism.

The strategic challenge is to discredit a fascist religious ideology before victim states experience a century of social, economic and political oppression and recognize too late that Wahhabism is simply another failed philosophy of government. Key to meeting that challenge is to recognize threats as they are rather than as one wishes them to be. The present *National Security Strategy* fails this charge when it claims the enemy is terrorism rather than the ideology that justifies the terror. This analysis confuses the symptom for the disease. The real problem is a religiously inspired political ideology whose specified endstate is global hegemony. Al Qaeda exemplifies this ideology and represents an emerging danger that demands a clear policy response. Such a policy should promulgate a comprehensive new doctrine encompassing the following elements.



Image from Al-Arabiya television of hooded gunmen threatening to behead a Turkish hostage unless the United States releases all Iraqi prisoners

recognizes and leverages local conditions. Moreover, insurgency is only one way to enact social and/or political change. Revolutions also occur peacefully (as the Shah of Iran learned in 1979), via coup (as Lenin demonstrated in 1917), or by

the ballot box (with the prospect of “one man, one vote, one time” should a totalitarian party win).

Al Qaeda is the most deadly of the more than 100 Islamic militant groups formed over the past 25 years. The danger it poses flows from its willingness to employ weapons of mass effect, its global reach, its focus on targeting America, and most importantly its revolutionary and expansionist ideology. The size of bin Laden’s organization, its political goals, and its enduring relationship with a fundamentalist Islamic social movement provide strong evidence that it is not a terrorist group but an insurgency. Armed action is its primary strategy, but there are aspects of mass mobilization techniques that serve to strengthen its organizational impact and resiliency. Elements unique to its methodology include transnational networking and a multiethnic constituency. Together these factors comprise an evolving style of spiritually-based insurgency that differs from the Maoist people’s war model that underwrites most COIN doctrine.

The disparate nature of the threat—in essence a global but somewhat leisurely-paced guerrilla war—makes it difficult to focus an effective strategic response. But al Qaeda’s organizational and strategic choices also make it difficult for the movement to concentrate power in ways that achieve its political ends. Thus far no targeted Islamic government has fallen to al Qaeda-inspired violence, nor have its

attacks coerced America to alter its policies in the Middle East. The resulting contest of wills is classically asymmetric. Long-term success for the United States will require support for true political reform among autocratic Islamic governments—a revolutionary cause in itself. This path, though potentially destabilizing in the short term, holds more promise in the long run when radical Islamic insurgents are forced to compete with more moderate political rivals in the marketplace of ideas.

A clear policy that identifies Salafist ideology as the problem and enunciates America’s opposition to the politics of jihad is essential. Victory also demands delegitimizing the radical Wahhabian strain of Islam that considers killing civilians not just a useful tactic but also a religious imperative. This goal, though beyond the means of a non-Muslim country to effect independently, is the crux of the issue. The rise of Islamic fascism, championed by groups such as al Qaeda, is the central strategic problem of the age. Only victory in the simmering campaign against the emerging global Islamic insurgency will prevent that challenge from evolving into a much longer and more brutal clash of civilizations. **JFQ**

NOTES

¹ According to this school, much of what Ian Lesser et al. characterize as a new form of terrorism in their study *Countering the New Terrorism* (Santa Monica, CA: RAND, 1999) is in fact a new version of insurgency. See, for example: Anonymous, *Through Our Enemies’ Eyes: Osama bin Laden, Radical Islam, and the Future of America* (Washington, DC: Brassey’s, 2002), xvii, 24, 279; Paul Rich, “Al Qaeda and the Radical Islamic Challenge to Western Strategy,” *Small Wars & Insurgencies* 14, no. 1 (Spring 2003), 46; Thomas R. Mockaitis, “Winning Hearts and Minds in the War on Terrorism,” *Small Wars & Insurgencies* 14, no. 1 (Spring 2003), 21, 37; James Risen, “Evolving Nature of Al Qaeda is Misunderstood, Critic Says,” *The New York Times*, November 8, 2004, A18; Kimbra L. Fishel, “Challenging the Hegemon: Al Qaeda’s Elevation of Asymmetric Insurgent Warfare onto the Global Arena,”

The United States will:

- oppose those nations whose governments embrace Salafist jihadist ideology²³
- seek to contain the spread of Salafist jihadist ideology
- hold accountable those nations that host, sponsor, or support Salafist jihadist groups
- support allies (or nations whose survival is considered vital to U.S. security) if Salafist jihadist nations or movements threaten their sovereignty.

A doctrine such as this, not unlike Cold War-era anticommunist policies, clarifies the national position, while enabling political leaders to protect American interests by selectively supporting authoritarian allies and/or encouraging political reform. This choice, reflecting the persistent foreign policy tension between idealism and realpolitik, remains the essence of effective diplomacy.

Choosing wisely between idealism and realism is vital because the militant Islamic threat that al Qaeda represents is not monolithic. Branches of al Qaeda as well as similar organizations may be different in important ways. In the early days of the Cold War, the West thought the communist threat was monolithic, but time and experience proved that it was not. Neither is the Salafist threat. All politics are local, even the politics of religion. COIN strategists must therefore evaluate each case on its own merits. While Islamic militants may cooperate in a global fashion, the program they craft to topple a particular government requires independent analysis and a counterrevolutionary strategy that

Low Intensity Conflict & Law Enforcement 11(Winter 2002), 286, 290; John P. Sullivan and Robert J. Bunker, "Multi-Lateral Counter-Insurgency Networks," *Low Intensity Conflict & Law Enforcement* 11 (Winter 2002), 353, 364, 366; Rohan Gunaratna, "The Genealogy of Al Qaeda," *Gaiko Forum* 14 (Fall 2004), 16; Michael Vlahos, *Terror's Mask: Insurgency within Islam* (Laurel, MD: Johns Hopkins University Applied Physics Laboratory, 2002), 1–28. Only the last of these studies attempts to establish why the threat constitutes insurgency instead of terrorism. The others simply assert that insurgency is the issue and then prescribe various remedies.

² Terrorism is "the calculated use of unlawful violence or threat of unlawful violence to inculcate fear; intended to coerce or to intimidate governments or societies in the pursuit of goals that are generally political, religious, or ideological."

³ The recommended UN definition reads: "any action, in addition to actions already specified by the existing conventions on aspects of terrorism, the Geneva Conventions and Security Council resolution 1566 (2004), that is intended to cause death or serious bodily harm to civilians or non-combatants, when the purpose of such act, by its nature or context, is to intimidate a population, or to compel a Government or an international organization to do or to abstain from doing any act." United Nations, *A More Secure World: Our Shared Responsibility*, Report of the Secretary General's High-level Panel on Threats, Challenges and Change (New York: United Nations, 2004), 51–52.

⁴ Department of Defense, *Dictionary of Military and Associated Terms*, 207.

⁵ Bard E. O'Neill, *Insurgency & Terrorism: Inside Modern Revolutionary Warfare* (Washington, DC: Brassey's, 1990), 13.

⁶ Lawrence Freedman et al., "Terrorism and Strategy," in *Terrorism and International Order* (London: Routledge & Kegan Paul Ltd., 1986), 58.

⁷ Michel Wieviorka, *The Making of Terrorism*, trans. David Gordon White (Chicago: The University of Chicago Press, 1988), 3–41, 61–77. Wieviorka conducted a comparative analysis of four sets of terrorist groups. He determined that the relationship between a terrorist and his parent social movement has been destroyed. The social movement's radicalized terrorist descendant has abandoned his roots and the people whose message he claimed to champion. Over time, the violence of terrorism tends to become more nihilistic and its perpetrators less lucid.

⁸ Wieworka, in fact, uses the term *insurgency* interchangeably with the term *terrorism* in his sociological analysis. The

author is indebted to Thomas A. Marks for the insights that application of Wieworka's theory provide to differentiating terrorism and insurgency.

⁹ Rohan Gunaratna, *Inside Al-Qaeda: Global Network of Terror* (New York: Columbia University Press, 2002), 5.

¹⁰ Bruce Hoffman, "The Changing Face of Al Qaeda and the Global War on Terrorism," *Studies in Conflict & Terrorism* 27 (November-December 2004), 552; Burke, 10.

¹¹ Gunaratna, *Inside Al-Qaeda*, 8.

¹² Freedman et al., 65.

¹³ Earl H. Tilford, "The War on Terror: World War IV," *ROA National Security Report* (Washington, DC: October 2004), 37–44.

¹⁴ Each style exhibits strengths that make it dangerous and weaknesses that leave it vulnerable. Mass mobilization is best exemplified by the people's war waged by Mao Tse-Tung's Chinese Communist Party. Mao's experience and writings provided, in essence, a blueprint for insurgency that has been the most successful and thus most widely copied strategy. People's war emphasizes politics over military considerations. Accordingly, Mao's strategy is designed to build strength in a gradual fashion rather than seize power in a lightning strike. Mao's thoughts on his strategy may be found in Mao Tse-Tung, *Selected Military Writing of Mao Tse-Tung* (Peking: Foreign Language Press, 1967). General overviews of Maoist strategy are available in John Ellis, *From the Barrel of a Gun: A History of Guerrilla, Revolutionary and Counter-Insurgency Warfare, from the Romans to the Present* (London: Greenhill Books, 1995), 177–199, and O'Neill, 34–41. The armed action option subordinates political to military considerations. Mobilization of the population and patient development of covert infrastructure do not play critical roles in this strategy. Subcategories of this approach include rural-based *foco* insurgencies and urban warfare insurgencies. *Foco* insurgencies are marked by a relatively small force that commences guerrilla operations and recruits members through the success of its military strikes. See O'Neill, 41–45; Regis Debray, *Revolution in the Revolution? Armed Struggle and Political Struggle in Latin America* (New York: Monthly Review Press, 1967), 106. *Foco* strategies have not been particularly successful outside of Cuba; they lack the staying power that mass mobilization provides and have no reserve manpower to tap following catastrophic setbacks. Finally, the urban warfare variation of the armed action strategy features raids, bombings, assassinations, and sabotage against political and economic targets in the target country's leading cities. The goal is to create chaos and discredit the government in the eyes of its people. The population's loss of confidence in the government's ability to provide

the first mandate of its charter—security for its citizens—may lead the citizenry to side with the insurgents. This strategy is clearly at work in contemporary Iraq. See O'Neill, 45–47; Walter Laqueur, *Guerrilla: A Historical and Critical Study* (Boston: Little, Brown and Company, 1976), 343–352.

¹⁵ Jason Burke, *Al-Qaeda: Casting a Shadow of Terror* (London: I.B. Tauris & Co. Ltd., 2003), 128. For al Qaeda's appreciation of the merits of conventional fighting, see *Through Our Enemies' Eyes: Osama Bin Laden, Radical Islam, and the Future of America*, 104–105.

¹⁶ O'Neill, 77, 93.

¹⁷ *Da'wa* is not to be confused with the Islamic al-Da'wa political party in Iraq (a descendant of an Iranian-backed Shiite revolutionary movement founded in 1958). Rather it is what Emmanuel Sivan calls "re-Islamization from below," the long-term infiltration into society's every nook and cranny as a way to gain eventual political control." See Emmanuel Sivan, "Why Radical Muslims Aren't Taking Over Governments," in *Revolutionaries and Reformers: Contemporary Islamist Movements in the Middle East* (Albany, NY: State University of New York Press, 2003), 4.

¹⁸ Ted Robert Gurr, *Why Men Rebel* (Princeton, NJ: Princeton University Press, 1970), 354–355.

¹⁹ Brad McAllister concludes that al Qaeda will fail for another reason: the inherent inefficiencies of its chosen networked organizational construct. Specifically, he posits that the group's size and complexity are disadvantages rather than virtues as usually assumed. See Brad McAllister, "Al Qaeda and the Innovative Firm: Demythologizing the Network," *Studies in Conflict & Terrorism* 27 (July-August 2004), 297–319.

²⁰ National War College Student Task Force on Combating Terrorism, *Combating Terrorism in a Globalized World* (Washington, DC: National War College, 2002), 10.

²¹ Thomas A. Marks, "Ideology of Insurgency: New Ethnic Focus or Old Cold War Distortions?" *Small Wars & Insurgencies* 15, no. 1 (Spring 2004), 125.

²² Robert Thompson, *Revolutionary War in World Strategy, 1945–1969* (New York: Tappan Publishing Company, 1970), 8–9.

²³ "Salafist jihadists" is the term employed by General John Abizaid, USA, to describe the generic militant Islamic threat which al Qaeda exemplifies. See David Ignatius, "Achieving Real Victory Could Take Decades," *The Washington Post*, December 26, 2004, B1.



U.S. Soldiers escort a USAID developer to assess a well in Afghanistan

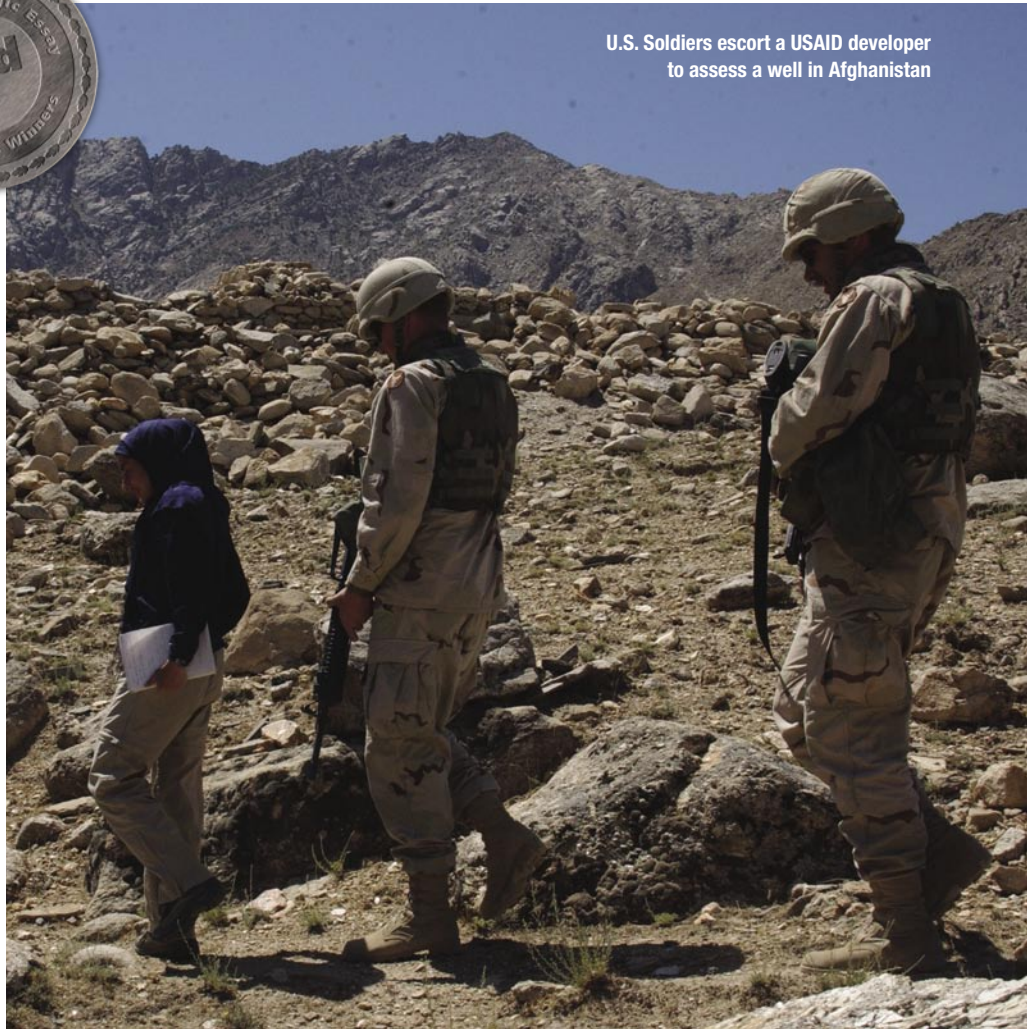
Our political system is too cumbersome to deal effectively with decisionmaking on the complex problems of the modern world. This problem may be irresolvable, but over the very long run, [it] could overwhelm everything else.

— Robert Rubin, 1993¹

However the specific problems are labeled, we believe they are symptoms of the Government's broader inability to adapt how it manages problems to the new challenges of the 21st century.

— The 9/11 Commission Report, 2004²

55th Signal Company (Thomas Bray)



A Goldwater-Nichols Act for the U.S. Government Institutionalizing the Interagency Process

By MARTIN J. GORMAN and ALEXANDER KRONGARD

By enhancing the authority of the Chairman of the Joint Chiefs of Staff and the unified combatant commands, the 1986 Goldwater-Nichols Department of Defense Reorganization Act created a major impetus for the military to operate more efficiently and effectively. There have been broad discussions about similar legislation for the Federal Government over the last year. In September 2004, General Peter Pace, USMC, Vice Chairman of

the Joint Chiefs of Staff, asked whether we needed a Goldwater-Nichols-like change for the interagency process. "Might we, at the national level, ask our Cabinet-level individuals to give up some of their day-to-day prerogatives and authority in a way that they will pick up in spades at the National Security Council level?"³ He proposed a "lead agency concept," in which the President would designate a department or agency that "would have the authority to tell folks in the Government in various agencies to get this job done."

Unfortunately, a Government-wide Goldwater-Nichols Act that

Martin J. Gorman, Defense Intelligence Agency, and Commander Alexander Krongard, USN, wrote this article while attending the National War College.

relies on the lead agency concept would most likely fail in the absence of "joint" organizations throughout the Federal Government similar to the military's Joint Chiefs of Staff (JCS) and the combatant commands that predated the 1986 act. In the absence

rather than seeking to unify knowledge and expertise, the Government as currently structured does the opposite

of organizations that operate jointly and high-ranking government officials dedicated to jointness, the lead agency concept would fall prey to the parochial power of the various departments and agencies, which in the end can choose to cooperate or not.

This article argues that a fundamental mismatch exists between the international threat environment and the current national security structure and that the lack of national-level joint interagency organizations undermines the ability of the United States to develop appropriate policies and implement comprehensive strategies. At a time when threats and problems are merging to develop deep, long-lasting

challenges to national security, America clings to a ponderous and stovepiped decisionmaking process that makes policy difficult to develop and even more difficult to implement. In short, when the Government confronts conflated or melded problems that are beyond the capacity of any single department or agency to solve, it rarely develops comprehensive policies; instead, it poorly coordinates its actions, badly integrates its strategies, and fails to synchronize policy implementation.

Previous reform proposals from the National Commissions on the Intelligence Capabilities of the United States Regarding Weapons of Mass Destruction, on Terrorist Attacks upon the United States, on National Security/21st Century, and on the Roles and Capabilities of the U.S. Intelligence Community essentially retained the current structure of the executive branch. Unlike these proposals, this article examines transformation of the overall national security system. In particular, the decades-long focus on intelligence reform, while well-intentioned and not

without merit, obscures much more elementary flaws in the national security structure. These flaws in essence require passage of a 2005 National Security Act that combines an updated 1947 National Security Act and a Government-wide Goldwater-Nichols Act. This legislation would institutionalize the interagency process by mandating major structural and cultural changes to streamline the decisionmaking hierarchy and establish new methods and organizations that develop policy options, implement strategies, and integrate Government actions.

A Conflation of Problems

The pessimistic observations in the epigraphs above, written in 1993 and 2004, still ring true in examining the national security structure and process. Globalization, technological advances, and even American international preeminence have caused problems to meld and fuse together—sometimes purposefully, other times by chance. While past problems were complex, today, due to globalization, the communications revolution, and the ease of travel, there is an element of time compression that allows for this complexity and conflation to increase much faster. In addition, beyond the speed at which conflation occurs, the consequences of failing to address these problems both quickly and comprehensively are more severe. In today's international environment, the proliferation of weapons of mass destruction (WMD), the potential for economic disruption, the possibility of massive migration, and the rise of cyber threats raise the stakes of the Government's inability to make decisions effectively.

This phenomenon of problem conflation is illustrated by Stephen Humphreys. While outlining the interrelated problems of economic stagnation, weakness in the international arena, political instability, and ideological confusion in the Middle East, Humphreys holds that "each of these problems has its own history and to a considerable degree can be



U.S. Customs and Border Protection (Gerald L. Nino)

analyzed separately. But it is perfectly clear that each is thoroughly implicated in all the others and that no one of them can be solved in isolation.”⁴

Three headline issues of today—global terrorism, the insurgency in Iraq, and the Southeast Asian tsunami—reveal the impact of the conflation principle:

■ The threat of global terrorism goes beyond the ethno-nationalist definitions used in the 1980s. As the United States looks beyond 9/11, it is the linkages of other problems to global terrorism that reveal its complexity: proliferation, technology, corruption, and illegal migration join to cause a security problem unheralded in American history.

■ Iraq was once viewed as a problem stemming from a brutal rogue dictator who needed to be overthrown, with America’s highest priority being the capture of Saddam Hussein and his top 54 leaders. Today, the situation has become much different and increasingly problematic. The linkages of historic ethnic rivalries, religious animosity, regional competition, and global terrorism create a problem of deep, long-lasting complexity that challenges the fortitude and capabilities of the mightiest nation in the world.

■ Even the December 2004 tsunami in Southeast Asia cannot be seen as an exclusively humanitarian tragedy. While the disaster affected many countries, the United States paid particular attention to Indonesia, to include deploying the *Abraham Lincoln* carrier group off its coast to aid in disaster relief. A nation whose populace strongly dislikes U.S. policies on the global war on terror (GWOT) and Iraq, Indonesia is the largest Muslim country. The American response to the tsunami thus went beyond straightforward provision of disaster aid to highlight the larger problems of Indonesian attitudes toward America, international perceptions of American attitudes toward Muslims, and ultimately the implications of these problems for global Islamic terrorism. Indeed, then-Secretary of State Colin Powell openly spoke about this connection when he noted that U.S. aid for tsunami-stricken countries could demonstrate that “America is not an anti-Islamic, anti-Muslim nation.”⁵

Condoleezza Rice, President Bush’s then-National Security Adviser, described the challenges the United States faced in devising integrated strategies to these conflated problems in her testimony to the 9/11 Commission:

*America’s al Qaeda policy wasn’t working because our Afghanistan policy wasn’t working. And our Afghanistan policy wasn’t working because our Pakistan policy wasn’t working. We recognized that America’s counterterrorism policy had to be connected to our regional strategies and to our overall foreign policy.*⁶

Despite the events of September 11, creation of the Department of Homeland Security, reports from both the WMD and 9/11 Commissions, and the recently enacted Intelligence Reform and Terrorism Prevention Act, the United States remains poorly prepared to respond to such complex security challenges.

A Mismatch Between Structure and Threats

America has fundamentally mismatched its national security structure to today’s conflated problems. The mismatch is illustrated by biologist E.O. Wilson, who wrote that humans generally divide knowledge into component parts, using the example of environmental policy, ethics, biology, and social science. While each subject is closely connected, each also has “its own practitioners, language, modes of analysis, and standards of validation,” which results in confusion when people attempt to pass knowledge or inference from one subject area to another.⁷

Wilson postulated a center point where the four quadrants meet, where most real world problems exist, and where fundamental analysis is most needed. He indicated that the most fundamental need in analysis in this intersection of various subjects is imagination—eerily foreshadowing complaints of the 9/11 reports about a lack of imagination in the Government approach to terrorism.⁸ According to Wilson, only with imagination can one move between these disparate topics and develop soundly based policies.

If Wilson’s quadrants are relabeled *economics, diplomacy, military, information, intelligence, law enforcement*, or any other national security-related field,

concentrating analysis on this intersecting area represents a first step in addressing conflated problems. Unfortunately, rather than seeking to unify knowledge and expertise, the Government as currently structured does the opposite, continuing to divide knowledge into component parts by first deconstructing national security issues and then parceling most of the parts to individual departments and agencies. Even before allocating problems, it is clear that some portions of these problems do not neatly parallel the national security structure and, therefore, are not addressed as part of an integrated and comprehensive strategy.

An example of this phenomenon is opium production in Afghanistan. Because this issue was not clearly a defense, diplomatic, or law enforcement matter, it fell between the cracks of U.S. departments and agencies. Hence, it was not addressed in the initial year of Operation *Enduring Freedom*. As a result, despite the threat the opium industry represents to political stability in Afghanistan, production rose twenty-fold since the fall of the Taliban in December 2001 and accounts for 40 to 60 percent of Afghanistan’s economic output.⁹ Yet increased instability in Afghanistan or the failure of the Hamid Karzai government would be a major setback for American foreign policy goals and national security. Nevertheless, once component parts of national security problems are parceled out, the responsible departments and agencies devise separate solutions to their assigned portions.

This stovepiped decisionmaking results in a piecemeal U.S. response to most international issues. Under the current arrangement, these independent solutions vary in sequence and intensity and sometimes conflict. After surviving the intradepartmental process, these separate solutions enter the interagency process and eventually make their way to the highest levels of government. Called “policy hill” by Robert Cutler, President Dwight Eisenhower’s National Security Adviser,

this process means that only at the highest level do actual integration, coordination, and synchronization occur. In testimony before the 9/11 Commission, Secretary Powell, Secretary of Defense Donald Rumsfeld, and Condoleezza Rice testified that it took over 7 months to formulate a coherent, regionally based counterterrorism strategy that was originally scheduled to be briefed to the Principals Committee the week of September 11. This delay occurred despite realization of the urgency for a coordinated, multifaceted strategy to confront the imminent threat posed by al Qaeda.

An additional problem is the governmental culture that rewards parochialism through promotion and opportunity, stovepipes divergent expertise, and wastes resources by producing unnecessary redundancies. The interagency battles that rage today within the national security community often focus more on bureaucratic self-interest and resource allocation than on strategies to combat threats to national security. Security personnel thus operate in a system where cooperation and integration are often not championed and where career development is focused on intradepartmental proficiency rather than more comprehensive or substantive expertise. A byproduct of this culture has been the Government's inability to attract high-level personnel. Polls indi-

dermine America's ability to respond to complex, long-term threats, such as terrorism and other security, economic, environmental, and demographic problems that will increasingly merge. Where once the United States could deconstruct problems and make distinctions between their component parts, it must now look for unifying threads. Only then is it possible to weave strategies to deal with such issues.

Back to Fundamentals

While the 9/11 Commission report clearly identified problems throughout the Government that handicapped the effort to prevent the terrorist attacks, it ultimately failed to address these problems thoroughly because of its focus primarily on the Intelligence Community and the counterterrorism effort. The Intelligence Community is sorely in need of reform, but its reform must start with the broader national security apparatus. As with the 9/11 Commission, the Intelligence Reform and Terrorism Prevention Act did not address the broader problems in the national security structure and process, but focused on the Intelligence Community in isolation.

The 9/11 report recommendations and legislation are not, however, without merit. In chapter 13, the commission gives a glimpse into the solution to this strategic mismatch between threat and structure. While much of

nity, a fatal flaw if the United States is to seriously address the mismatch between structure/process and threat. The recent WMD report, following the 9/11 Commission lead, also recommended creation of a National Counterproliferation Center, but again focused solely on the Intelligence Community.

Rather than retaining the intelligence focus and remaining dependent on the current primacy of the departments and agencies, this paper proposes a new national security structure that makes interagency coordination and integration a daily event. Any proposal that would seriously address the mismatch between conflated threats and current stovepiped structures must push integrated strategy development to lower levels of the executive branch rather than leaving it at the highest levels, such as the Principals Committee or the National Security Council. In addition, such a structure must take an interagency approach to overseeing implementation of U.S. policy and strategy rather than relying on the various departments and agencies to manage their separate pieces. By delegating strategy development to lower levels and taking an interagency approach to overseeing implementation, the Government could become more effective in responding to complex, long-term threats. To accomplish this, the national security structure should be rebuilt as follows:

the Intelligence Community is sorely in need of reform, but that reform must start with the broader national intelligence apparatus

cate that a whole segment of America's most intelligent and capable citizens see Government service as unappealing and that the September 11 attacks did not change this attitude.

Although the current national security structure and culture have remained effective for many decades, they cannot compete with today's more creative, sinister, and capable enemies. Structural and cultural flaws un-

dermine America's ability to respond to complex, long-term threats, such as terrorism and other security, economic, environmental, and demographic problems that will increasingly merge. Where once the United States could deconstruct problems and make distinctions between their component parts, it must now look for unifying threads. Only then is it possible to weave strategies to deal with such issues.

the attention has focused on establishment of the National Counterterrorism Center and creation of a Director of National Intelligence, the 9/11 Commission actually highlighted a broader and more insightful approach to national security reform and restructuring. The 9/11 report proposed the establishment of comprehensive national centers focused "for example, on counterproliferation, crime, and narcotics, and China."¹² Unfortunately, the commission still stovepiped such centers into the Intelligence Commu-

■ The United States should create national-level, joint interagency issue-focused organizations that bring together the relevant policy, military, intelligence, and other parts of the Government (such as law enforcement agencies and the Departments of Treasury, Commerce, and Customs Service). These structures would collocate personnel for specific issues under one organization and one senior leader, prioritize interagency cooperation, integrate comprehensive policy options, monitor corresponding strategies, and focus resources, particularly expertise.

■ The primacy of the current departments and agencies involved in national security should be lowered. These organizations would assume a role similar to the military services and become responsible for training and equipping the personnel



Japanese Minister of Defense speaking about diplomacy and deterrence in responding to weapons of mass destruction in the Asia-Pacific region at conference in Singapore

on developing comprehensive and integrated national-level foreign policy and military planning.

The military also provides models of organizing and operating jointly. Joint Interagency Task Force–South (JIATF–South) provides a model of an interagency construct that fuses military, law enforcement, and intelligence operations into a unified organization under one leader. It has the additional benefit of having strong links to allies in the fight against narcotics. The interagency composition of JIATF–South is apparent by its membership, which includes the Departments of Defense, Transportation (Coast Guard), and Treasury, along with the Customs Service, Drug Enforcement Administration, Federal Bureau of Investigation, Defense Intelligence Agency, Naval Criminal Investigative Service, and National Security Agency. In addition, Britain, France, and the Netherlands provide ships, aircraft, and liaison officers, and the Netherlands commands one of its task groups. Since 1999, Argentina, Brazil, Colombia, Ecuador, Peru, and Venezuela also have assigned liaison officers to JIATF–East. The result is a fully integrated, international task force organized to capitalize on the various agencies and countries involved and with fused intelligence and operations.

In the end, however, Embassies and JIATFs illustrate that the proposed interagency organizations rest on a long American tradition of approaching complex problems in an integrated and comprehensive way. The lack of similar interagency structures at the national level is the vital piece missing from this tradition. This proposal blends the concept of Embassies, which are primarily policy-focused, and JIATFs, which are primarily execution-focused, into issue-oriented organizations in Washington. Such organizations would provide a powerful, synergistic force combining the relevant expertise, integrated

1st Combat Camera Squadron (Cherie A. Thurbay)

seconded to the interagency bodies. Their personnel would rotate between their home organizations and the new organizations just as military officers serve within their own services and also in joint organizations.

■ In the new structure, the National Security Adviser should concentrate on providing separate and independent advice to the President. As currently structured, the adviser has the two often-incompatible roles of supporting the President and being an honest broker among the competing interests of the departments and agencies. Under this proposal, the National Security Adviser would play the former role in the interagency process.

■ A permanent executive or governing board, comprised of the senior leadership (under secretaries and above) from the departments and agencies, should be established. It would be similar to how the service chiefs sit on JCS while retaining their service roles. This board would allow for better policy formulation and strategy implementation by the executive branch—moving away from unity of effort in managing the Intelligence Community toward unity of effort in managing the national security structure.

National Interagency Organizations: A Tradition

While this proposal may sound extreme, it would simply apply to Washington bureaucracies the same organizational principles the Federal Government applies to itself elsewhere. While many think of jointness exclusively as a military concept, it can in fact be considered an American tradition. One of the oldest institutions in

the Government has always operated as an interagency group under the authority of a single, high-level individual appointed by the President and confirmed by the Senate: the U.S. Embassy overseas. The chief of mission heads the mission's country team of U.S. Government personnel. Responsibilities of chiefs of mission at post also include:

- speaking with one voice on U.S. policy and ensuring mission staff do likewise while providing the President and Secretary of State expert guidance and frank counsel
- directing and coordinating all executive branch offices and personnel
- cooperating with the legislative and judicial branches so foreign policy goals are advanced.

Meanwhile, the country team consists of the heads of the principal sections of the Embassy and the heads of all other Government agency offices in the mission. This includes the traditional foreign affairs elements, such as State, Commerce, Agriculture, the Central Intelligence Agency, and all other Government elements, such as the Agency for International Development, military assistance groups, and Peace Corps. In essence, the proposed organizations would become the Washington-based equivalent to country teams, fusing all the relevant players in a topic area into a single organization under a high-level leader. This organization would then focus

intelligence, and necessary policy and operational authorities to approach national security problems holistically and to leverage these disparate groups to develop, propose, and implement integrated, comprehensive strategies on a daily basis at levels lower than the National Security Council.

Reform Models

Significant transformational reform is never easy. As mentioned earlier, the two best models are the 1947 National Security Act and the 1986 Goldwater-Nichols Act. Both confronted many structural and cultural problems similar to today's and faced strident, long-term, parochial opposition from within the Government itself.

A review of the impact of the 1947 and 1986 acts reveals that this proposed reform should be considered seriously. The National Security Act revamped the national security structure, creating the:

- National Security Council and staff
- Department of Defense
- Air Force
- Central Intelligence Agency.

Taking a different approach, Goldwater-Nichols systematically changed the roles and authorities of existing

while many think of jointness exclusively as a military concept, it can be considered an American tradition

institutions while developing incentives and disincentives to alter how the military acts and operates. As such, it:

- empowered the Chairman of the Joint Chiefs of Staff by making him the principal military adviser to the President, the National Security Council, and the Secretary of Defense
- clarified that the operational chain of command runs from the President to the Secretary of Defense to the combatant commanders
- centralized operational authority through the Chairman of the Joint Chiefs as opposed to the service chiefs
- required that forces under the juris-

diction of the services be assigned to the combatant commands, with the exception of those assigned to perform the mission of the military departments

- mandated that the services provide their best personnel to the Joint Staff.

In essence, Goldwater-Nichols legally strengthened the role of existing organizations such as the Joint Staff and combatant commands, lowered the primacy of others such as the military services, and provided incentives such as promotions to those who supported the strengthened organizations.

Congress: A Key Ally for Change

Besides providing evidence from history that significant structural and cultural changes can be implemented in the Government, the 1947 and 1986 acts also show the necessity for Presidential leadership. The President must articulate both the threats to the Nation and a vision of how to respond. Equally important, these models show the need for executive-legislative cooperation for any proposal to change the national security system. Obviously, Congress would enact any legislation, appropriate the funding for new organizations, and oversee implementation. Together, the President and Congress could carefully plan and carry out the above proposal in phases over an

extended time. For example, they could start with an expanded National Counterterrorism Center, followed by a National Counterproliferation Center and perhaps a National Asia Center. While the role of Congress cannot be minimized, five issues stand out for congressional involvement:

- Most importantly, Congress must deliberate carefully over the creation of an executive/governing board and the role of its Presidentially appointed executive director. The Founding Fathers purposely opted not to have a prime minister in the Federal system, believing that one derived from Congress would give the legislature too much power over the executive. Depending on how the role is defined, the executive director could closely resemble a prime

minister. This is not to say such a position should not be established. Perhaps in the modern world, a prime minister-like Federal position would call greater attention to the workings of the government and the development and implementation of strategies in such a complex international environment. In addition, this proposal—which makes the executive director a Presidential appointment versus someone from Congress—may obviate the Founding Fathers' concerns.

- In addition, given that the original role of the National Security Adviser as counselor to the President and honest broker in the interagency would be divided between two positions under this concept, Congress should consider granting the executive director some level of executive privilege to protect the private discussions among the President, the adviser, and himself. While uncommon in positions confirmed by the Senate, limited executive privilege would allow for free discussion on national security issues among these three principals.

■ Separate and appropriate funding of the new interagency organizations is critical. Congress would need to create a system to authorize and appropriate the budgets to make these organizations both successful and relatively independent of the current departments and agencies. As such, the role of the interagency organization leaders requires clarification, and careful consideration must be given to what authorities are granted to the leadership, whether they are confirmed by the Senate, and how they interact with the departments and agencies.

■ Congress must consider establishing and funding a process that bundles together education, interagency rotations, and promotions over the course of a career in national security. Much like career military officers, national security personnel should attend professional education and be assigned inside interagency organizations and outside their departments or agencies. In particular, promotion for certain types of careers should be based on meeting these objectives. In support of this cultural change, a professional education infrastructure for national security professionals must be created—equivalent to the military's professional military education system.

■ Finally, Congress must examine how to adapt itself to the changes proposed here and improve its appropriate oversight of national security so as to be more efficient and effective. While this paper has examined the 1947 and 1986 acts as models of change, the authors are equally aware that the Homeland Security Act of 2002, which created the Department of Homeland Security, and the Intelligence Reform and Terrorism Prevention Act, which created the Director of National Intelligence, might represent

models of less successful reform, particularly in regard to congressional involvement and oversight. In both cases, pertinent questions were left undebated and unanswered, and the burden of legislative oversight of the executive branch increased unnecessarily. For example, according to a joint task force of the Center for Strategic and International Studies and Business Executives for National Security, 79 congressional committees and subcommittees have some amount of jurisdiction over the Department of Homeland Security.¹⁴

Is It Worth It?

At one time, this article was titled "Constant Focus: Institutionalizing the Interagency Process," reflecting the authors' view that the current national security structure undercuts the President's ability to respond quickly

the 1947 and 1986 acts show the need for executive-legislative cooperation for any proposal to change the national security system

and effectively to international threats. The Founding Fathers saw an energetic President as essential to the security of the new Nation. In *Federalist Paper 70*, Alexander Hamilton wrote, "Energy

in the executive is a leading character in the definition of good government. It is essential to the protection of the community against foreign attacks."¹⁵ Given the President's multiple roles in national security, domestic affairs, economic issues, and party politics, he cannot retain constant focus on national security as originally envisioned in the Constitution. Thus, the proposal outlined leverages the long experience of the State Department in integrating policy and experience of the military in planning and operating jointly to help the Presidency recapture the energy the Founding Fathers intended.

This article argues that two things must happen to regain this energy. The first is legislation mandating structural and cultural change: a 2005 National Security Act that equates to a combined updated 1947 National Security Act and an interagency version of the 1986 Goldwater-Nichols Act. This legislation would institutionalize the interagency process through new organizations and reward jointness by selectively promoting those who participate in interagency policy development and

implementation of integrated strategies. The second is an executive/governing board led by an executive director with powers to develop policy, integrate interagency efforts, and monitor implementation of Presidentially approved strategies on a day-to-day basis. This approach would improve national security by:

- *Improving the development of policy.* The new interagency organizations should provide the President, in a timelier and more comprehensive manner, with better policy options, tailored to complex and conflated threats.

- *Enhancing implementation of strategy.* The creation of the new executive/governing board and a Presidentially appointed executive director should allow the executive branch to better implement national strategy.

- *Developing a culture of interagency cooperation.* Accompanying the structural changes would be a more gradual cultural transformation that, over time, creates *strategic practitioners*, a cadre of professionals who combine divergent expertise on the military, economic, diplomatic, information, and cultural aspects of national security that currently resides in separate stove-piped organizations.

- *Achieving better balance between the military and the other instruments of power.* Since the Cold War, America's use of its military has dominated the national security system, particularly given the military's geographic organization into regional combatant commands that cut across nation-state boundaries. Other departments lack such broad reach and equivalent resources, causing overreliance on the Armed Forces to achieve policy goals when other instruments might have been more appropriate. The creation of these new Federal interagency organizations and the executive governing board would provide a similar regional and global structure that could better harness and direct all national power and balance the Nation's use of its diplomatic, military, informational, and economic instruments.

- *Building a partnership between intelligence producers and policymakers.* The implementation of this proposal would improve the cooperation between intelligence producers, policymakers, the military, and other Government officials in devising stronger national security policy and strategy by integrating the pertinent components from across the Intelligence Community into the appropriate national-level interagency organizations.



Defense officials taking questions from the 9/11 Commission on Capitol Hill, March 23, 2004

1st Combat Camera Squadron (Jerry Morrison)

Sailors stack bales of cocaine aboard USS *Crommelin* seized during a drug interdiction mission with a U.S. Coast Guard Law Enforcement Detachment



U.S. Navy (Eric Weber)

Finally, given the reality of future budgetary and fiscal constraints, the new organization provides a framework to eventually streamline the entire national security apparatus. Once expertise is collocated and a new cadre of strategic practitioners is developed, the need to replicate roles across departments and agencies will be reduced and resource sharing will be enhanced.

While this paper has focused on the application of jointness in developing and implementing national security strategy, it is ultimately a model applicable to the wider effort supporting homeland security and to the overall structure of the Government, including its domestic and economic components.

JFQ

NOTES

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Security forces moving detainees to permanent housing at Camp Delta from Camp X-Ray

U.S. Navy (Shawn P. Etzund)

The basic proposition here is that somebody who comes into the United States of America illegally, who conducts a terrorist operation killing thousands of innocent Americans, men, women, and children, is not a lawful combatant. They don't deserve to be treated as a prisoner of war. They don't deserve the same guarantees and safeguards that would be used for an American citizen going through the normal judicial process . . . they will have a fair trial, but it'll be under the procedures of a military tribunal. . . . We think [it] guarantees that we'll have the kind of treatment of these individuals that we believe they deserve.

—Vice President Dick Cheney, November 14, 2001¹

Guantanamo Bay Undermining the Global War on Terror

By GERARD P. FOGARTY

Prosecution of the war on terror has resulted in the detention of some 650 citizens from over 40 countries at military facilities on the U.S. naval base at Guantanamo Bay, Cuba. Although the Bush administration has held firm to the position outlined by Vice President Cheney in 2001, the legality of this position continues to

elicit worldwide commentary and, most recently, the interest of the Supreme Court. While the administration's position has a number of prominent defenders, much international expert opinion, some sharply critical, has weighed in on the other side. Justice Richard Goldstone, for example, stated in a BBC interview in late 2003 that "a future American President will

Colonel Gerard P. Fogarty, Australian Army, wrote this article as a student at the U.S. Army War College.



Soldier standing guard at
Camp Delta, Guantanamo Bay

U.S. Navy (David P. Coleman)

have to apologize for Guantanamo."² The question of how to deal with the detainees in the ongoing war on terror is, however, an extremely difficult issue that has generated deep rifts even within the administration. Following 9/11, the administration invoked extraordinary wartime powers to establish a new system of military justice that would match a very different type of conflict. As the administration sought to apply those powers, it became mired in problems it is still struggling to solve.

This essay assesses the competing positions on the legal status of the detainees. First, it outlines why Guantanamo was chosen as a location for detainee operations. It then outlines the position on the prisoner of war (POW) status of the detainees and competing views on the due process protections that should be provided those charged with war crimes. It then discusses the wider effects the administration's poli-

cies in Guantanamo are having on the war on terror and concludes with recommendations for an alternative approach that would regain the initiative for the administration. It seeks to recapture much-needed international legitimacy, creating greater diplomatic space within which opportunities to harness broader international support and involvement in the war on terror can be pursued.

Why Detain at Guantanamo Bay?

The United States and its coalition partners remain at war against al Qaeda and its affiliates in Afghanistan and around the world. Since Osama bin Laden declared war on the United States in 1996, al Qaeda and its partners have launched repeated attacks that have killed thousands of innocent Americans and hundreds of civilians from other countries. The administration states that the law of armed conflict governs

what it terms "the war between the United States and al Qaeda" and therefore establishes the rules for detention of enemy combatants.³ Congress has not formally declared war; instead, the President has authorized the detention, treatment, and trial of noncitizens under a military order derived from the constitutional authority vested in him as the President and Commander in Chief. To protect the Nation, and for the effective conduct of military operations to prevent further terrorist attacks, the administration states that it is necessary to detain certain individuals to prevent them from continuing to fight and, subsequently, to try those who violate the laws of war.

A report prepared by defense lawyers for Secretary of Defense Donald Rumsfeld in 2003 appears to substantiate the selection of Guantanamo as the preferred detention location. The report cited the long-held view of the legal "advantages" Guantanamo offers the administration because it falls outside the jurisdiction of U.S. courts.⁴ The advantages lie principally in removing the rights of detainees to question the legality of their detention in U.S. courts and to facilitate permissive interrogation techniques that would otherwise be constrained by statute. The report was the outcome of a working group of executive branch lawyers appointed by the General Counsel of the Department of Defense to address, *inter alia*, the legal constraints on the interrogation of detained persons.⁵

Some critics have linked the permissiveness of the legal interpretation for interrogation at Guantanamo that underpinned Rumsfeld's approval of 24 interrogation techniques, including "significantly increasing the fear level in a detainee," to abuses at Abu Ghraib in 2003.⁶ The administration has denied such a link despite the Department of Defense (DOD) investigation into Abu Ghraib, which revealed that some of the techniques authorized for "unlawful combatants" in Guantanamo Bay were used in Iraq.⁷ Seymour

Hersh's *Chain of Command: The Road from 9/11 to Abu Ghraib*, which attributes the abuse in that prison to interrogation policies in Guantanamo, continues to fuel the debate. Hersh's theory resonates with an increasingly critical domestic and international audience and lends credence to the claims of torture by the International Committee of the Red Cross⁸ and four former British detainees who have sued Secretary Rumsfeld and ten others in the military chain of command for mistreatment at Guantanamo.⁹

The administration unsuccessfully argued before the Supreme Court in June 2004 that Guantanamo lies outside the jurisdiction of U.S. courts. The Supreme Court ruled that U.S. law extends to aliens detained by the military outside sovereign national borders.¹⁰ This finding impacts on all detention facilities, including Guantanamo and those in Afghanistan and elsewhere.

Lawful or Unlawful Combatants?

The official U.S. position is that the detainees do not meet the criteria of lawful combatants as outlined in the 1949 Geneva Conventions and are therefore "unlawful combatants" not entitled to POW status. They are not being treated as common criminals to be tried in civil courts, as were previous terrorists in the United States, because criminal law is too weak a weapon. Instead, they are being treated as members of a military force, either al Qaeda or the Taliban, and as combatants in an armed conflict against the United States. Secretary Rumsfeld has advised that:

*the detainees are not being labeled as prisoners of war because they did not engage in warfare according to the precepts of the Geneva Convention—they hide weapons, do not wear uniforms, and try to blur the line between combatant and noncombatant.*¹¹

One of Rumsfeld's legal advisers, Ruth Wedgewood, adds that the detainees are not covered by the Geneva Conventions because they are not

fighting for a state and that there has never been a recognized right to make war on the part of private groups.¹²

The administration has not differentiated between al Qaeda and the Taliban in its position that they are unlawful combatants. Additionally, it has stated since 2002 that no doubt exists as to their status and that, under the law of armed conflict, the detainees can be held at Guantanamo until the conclusion of the war on terror and without the full-dress procedure of criminal trials. Detainees, therefore, have been held since January 2002 without charges, access to lawyers, or, until the Supreme Court intervened, the right to challenge their detention.

The administration announced in June 2004 the release of 26 detainees following an internal legal review conducted by Pentagon lawyers in Guantanamo Bay that determined the individuals had been wrongly held for the past 2 years. The timing was unfortunate since it immediately preceded the Supreme Court hearing at which the administration argued that cases were being properly reviewed. Critics jumped on this fact, suspecting that the administration was releasing some individuals to demonstrate to the court that it was reviewing the individual status of detainees. More recently, the administration announced that it has

the administration states that the law of armed conflict governs the rules for detention of enemy combatants

commenced reviews for all detainees before an administrative tribunal. While the intent of the internal review conducted in early 2004 may be debatable, the individual cases of all detainees are being reviewed as a result of the June 2004 Supreme Court ruling.

The format for these reviews was unveiled in September 2004. The first, called a Combatant Status Review Tribunal, is intended to determine whether each detainee meets the criteria of an enemy combatant. Second is the an-

nual Detainee Administrative Review, which determines the need to continue to hold the unlawful combatant. Following this review, a board will decide whether to release, transfer, or continue to detain the individual.¹³ As of November 2, 2004, a total of 295 Combatant Status Review Tribunals had been conducted. Only one detainee was determined not to be an enemy combatant and was released. But once again, the procedures have attracted the attention of the U.S. Courts. A Federal district court judge ruled on November 8, 2004, that the detainees must be treated as POWs unless a special tribunal described in Article 5 of the Third Geneva Convention determines they are not. The judge ruled that the Combatant Status Review Tribunals do not satisfy the Geneva Conventions and cannot deny POW status.¹⁴

The administration has stated that, despite its determination that the detainees are unlawful combatants, it has treated them humanely at all times and provided privileges similar to those the Geneva Conventions grant to POWs. The principal difference is the more permissible interrogation and a reduced entitlement to due process afforded to the unlawful combatant. POW status under the Geneva Conventions prohibits various methods of interrogation, many of which have been authorized by the administration for Guantanamo, and demands a higher level of due process protection than planned for detainees charged with war crimes.

POW status demands the same due process protections, for example, that a U.S. Soldier would receive under a court-martial proceeding.

In the days following the President's determination that the Geneva Conventions would not apply to detainees in the war on terror, Secretary of State Colin Powell, supported by Secretary Rumsfeld and the Chairman of the Joint Chiefs of Staff, General Richard Myers, asked the President to reconsider applying POW status to the

Taliban fighters.¹⁵ A wide range of critics believed that since the fighters were members of the regular armed forces of the de facto government of Afghanistan, they met the Geneva criteria for

the difference between how an unlawful combatant and a POW must be treated lies in more permissible interrogation and reduced entitlement to due process

POW status. Secretary Powell was particularly concerned about the increased risk for troops in Afghanistan and in future conflicts if the administration disavowed the conventions. Among other things, POW status would entitle detainees to humane treatment during interrogation and different procedural and evidentiary rights from those established for illegal combatants.

Secretary Powell's view about the POW status of Taliban fighters is shared by many U.S. and international experts,¹⁶ including the United Nations.¹⁷ These critics also argue that any al Qaeda detainees who were acting as militia or volunteer corps members that formed part of the Taliban armed forces are also eligible. Moreover, even

if the al Qaeda members do not qualify as members of the Taliban armed forces or of its integral militia, they may still qualify for POW status under the Geneva Conventions if they were part of an independent militia and meet the criteria. Regardless, as critics point out, the Geneva Conventions and U.S. military regulations that precede 9/11 require findings by a competent tribunal. As discussed, tribunals have only recently begun but have been ruled by a Federal district court judge as insufficient to deny POW status.

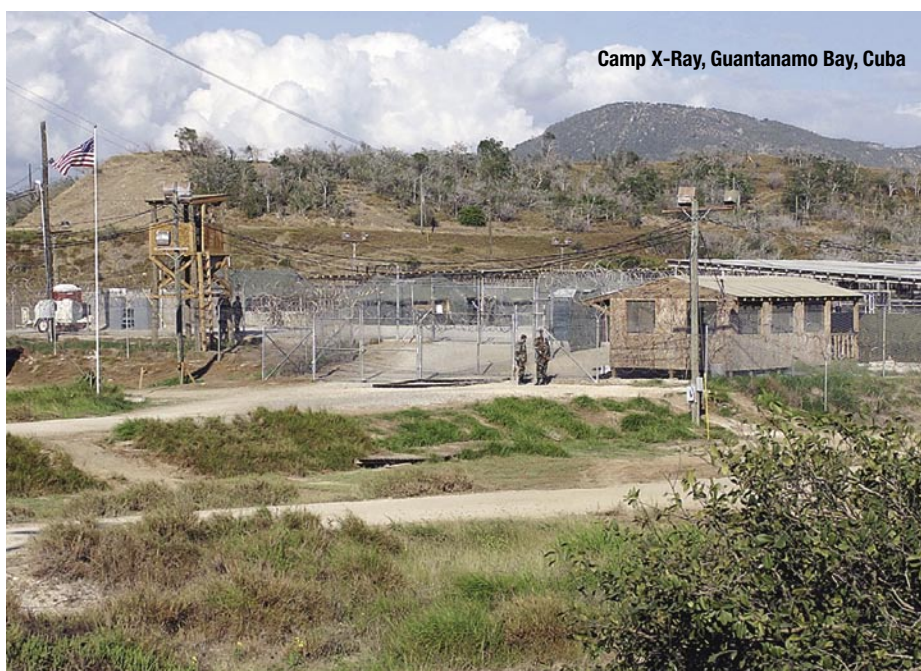
Due Process Protections

The administration believes that civic ideals should not frustrate an effective defense in the war on terror. To overcome the limitations of criminal law, for example, and in keeping with the detainees' status as unlawful combatants, it has established Military Commissions—a type of military tribunal not used since World War II for spies, saboteurs, and war criminals—to try designated detainees. These commissions are applicable only to non-

U.S. citizens and are designed to protect the individual rights of the accused while also safeguarding classified and sensitive information used as evidence in the proceedings. The administration states that the commissions are recognized by the Geneva Conventions and have been used by many countries. However, when Egypt used this form of tribunal in 2000, it was rebuked in the U.S. State Department yearly report on human rights abuses. Presented to Congress, the report stated that this type of military court deprived hundreds of civilian defendants of their constitutional rights.¹⁸

The administration's system of justice for detainees charged with war crimes was crafted by a group of lawyers who in September 2001 held posts at the White House, the Justice Department, and other agencies. The work commenced just over a week after 9/11 under the direction of the Vice President and was coordinated by the White House counsel, Alberto Gonzales. The idea of using Military Commissions had been investigated a decade earlier for trying suspects in the bombing of Pan Am Flight 103 over Lockerbie, Scotland. The interagency group investigated four options: Military Commissions, criminal trials, military courts-martial, and tribunals with both civilian and military members like the Nuremberg trials.

By October 2001, the White House lawyers had grown impatient with the "dithering" of the interagency group and took over the effort. At this stage all options were reportedly abandoned, and planning for Military Commissions moved forward more quickly, but whole agencies, including DOD, were completely left out.¹⁹ The legal basis for the administration's approach was laid out on November 6 in a confidential memorandum from the Attorney General's office to White House counsel Gonzales. Attorney General John Ashcroft had refused congressional requests for a copy, but its contents were leaked by *The New York Times*. The memorandum said that the President, as Commander



Camp X-Ray, Guantanamo Bay, Cuba

U.S. Air Force (Greg Kobashigawa)



**Military Commissions
courtroom at Guantanamo Bay**

in Chief, has “inherent authority” to establish Military Commissions without congressional authorization and could apply international law selectively. In particular, the memorandum outlined the legal precedent under which due process rights do not apply to Military Commissions.²⁰

The administration moved quickly after receiving the Attorney General’s advice, releasing the Presidential Military Order on Detention, Treatment, and Trial of Certain Non-Citizens in the War Against Terrorism on November 13, 2001. Rear Admiral Donald J. Guter, the Navy Judge Advocate General at the time, commented that many Pentagon experts on military justice were kept in the dark until the day before the order was issued. Moreover, their hastily prepared amendments did not appear with the final document. Senior staff from the National Security Council and the State Department were also excluded from the final discussions, with the National Security Adviser and the Sec-

retary of State finding out the details after the order was issued.²¹

In World War II, when the United States last used Military Commissions, the tribunals were fashioned generally on the prevailing standard of military justice. Following 9/11, however, the administration believed a paradigm shift was needed to deal with terrorism. The Presidential Military Order outlined the revised approach, which enabled a lower standard of proof, expanded secrecy provisions, permitted a more liberal application of the death penalty, and denied judicial review of convictions. It announced that the exact rules were to be established later by Secretary Rumsfeld. Criticism, some of which came from inside the administration, was immediate. It was reported that the respective judge advocates general within the Pentagon supported the use of commissions but argued strongly that the system would not be fair without amendment. When Secretary Rumsfeld finally published

the rules for the commissions, it became obvious that he had settled on a compromise. Although he granted defendants a presumption of innocence and set “beyond a reasonable doubt” as the standard for proving guilt, Rumsfeld did not allow judicial review of convictions by civilian courts.

On July 3, 2003, the administration designated six detainees for the first commissions. Two were British. News of their prosecution became public in the United Kingdom just as Prime Minister Tony Blair began a major public relations campaign to gain support for the Iraq war. Under pressure from Parliament, he declared that any tribunals involving British citizens would follow “proper international law.”²² Blair was under increasing pressure from his Parliament to secure custody of nine British being held at Guantanamo. Negotiations involving the British Attorney General, Peter Goldsmith, and officials from the administration were initiated quickly

to find a process for trying the two British detainees designated to go before Military Commissions. Lord Goldsmith would not budge from a demand that civilian courts review verdicts.²³ The administration argued that the change would render the commissions unworkable. During a state visit to Britain in late November 2003, President Bush agreed to shelve the cases of the

following 9/11, the administration saw no reason it could not depart materially from current standards of military justice

two British suspects for the foreseeable future. It appears that most detainees will not face a commission and will either be released when they no longer pose a threat or remain interned for the duration of the war on terror.

The administration's intent to try selected detainees by Military Commissions has received widespread criticism. Spain, for example, has announced that it will not extradite terrorist suspects to the United States if they are to face the tribunals. In essence, the opposing view characterizes the commissions as providing second-class justice. Amnesty International has been vocal in its criticism and has received extensive support from a wide range of scholars and organizations. The critics argue that the commissions are discriminatory because they do not apply to U.S. nationals, they allow a lower standard of evidence than is admissible in ordinary courts, they offer no right of appeal to an independent and impartial court, and they lack independence from the Executive. *The Army Lawyer*, a Department of the Army periodical, published an article that added weight to this view, noting that the commissions are a departure from long-standing military practice and fail to provide the fairness and due process expected in trials conducted by the United States.²⁴

The Constitution is designed to provide a system of checks and balances to prohibit, inter alia, unfettered power by the Executive. The Supreme

Court ruling on Guantanamo is an example of the system working, with the judiciary deciding that the Executive does not have the authority to suspend the detainees' habeas corpus rights. Many believe the proposed commissions provide unfettered and unchallengeable power to the Executive, which contravenes the most basic law principles of independence and impartiality. Since the commissions began, the most ardent critics have been the uniformed lawyers assigned to the defen-

dants. These lawyers have succeeded in halting the first of the commissions, gaining a Federal district court judge's ruling on November 9, 2004, that once again curtails the Executive's attempts to implement its "forward-leaning" system of justice. The ruling, which stated that President Bush had both overstepped his constitutional bounds and improperly brushed aside the Geneva Conventions in establishing Military Commissions, throws the future of the commissions into doubt.²⁵ The administration is appealing the decision.

Consequences of Administration Actions

For the past 3 years, the administration has focused publicly on the operational benefits that detainee operations in Guantanamo have generated while downplaying the cascading problems it has faced: angry allies, a tarnishing of America's image, and declining cooperation in the war on terror.

Operational benefits. The administration believes the interrogation of the detainees has improved the security of the United States and coalition partners by expanding their understanding of al Qaeda and its affiliates. Interrogation has revealed al Qaeda leadership structures, operatives, funding mechanisms, communication methods, training and selection programs, travel patterns, support infrastructures, and plans for attacking the United States and other nations. The administration

states that Guantanamo detainees have also provided information on individuals connected to al Qaeda's efforts to acquire weapons of mass destruction, front companies and accounts supporting the organization, acquisition of surface-to-air missiles and improvised explosives devices, tactics and training, and travel routes to reach the United States via South America.²⁶

Detaining enemy combatants during conflict is not punishment but a security and military necessity. The information obtained is enabling the United States and its partners to be more effective in planning and conducting counterterrorist missions. It is also assisting in the development of countermeasures to disrupt terrorist activities and focusing information collection on al Qaeda financing and network operatives. Perhaps the greatest operational benefit from interrogating Guantanamo detainees, however, lies in the expanded understanding of jihadist motivation, selection, and training processes. This information is essential to identifying the root causes of terrorism, which is arguably the key to winning the conflict. The issue for the administration is whether the benefits are worth the cascading problems that the detainee operations have generated.

Undermining U.S. influence and effectiveness. In March 2004, the Pew Research Center reported that U.S. prestige throughout the world was at its lowest level in history.²⁷ This report was published before the Abu Ghraib incident. The Pew findings are supported by other international opinion surveys. The U.S. Council on Foreign Relations found in 2003 that an important way for the administration to reduce rising anti-Americanism is to "improve its capacity to listen to foreign publics."²⁸ The international community, along with individual rights groups and academics in the United States, believe the administration is ignoring international law in its treatment of the detainees. Critics have referred to Guantanamo as the American Gulag.

The Military Commissions empowered under President Bush's military order are the exact types of trials that the United States condemns in the international community. In today's media environment, such inconsistencies are highlighted, evaluated, and broadcast repeatedly to every corner of the globe. This apparent double standard denies Washington the moral high ground needed to censure other nations for human rights abuses. It could also place the administration at odds with the values of the American people, creating a fault line that could degrade domestic support for a generation-long war on terror. John Gordon, a retired Air Force general and former Central Intelligence Agency deputy director who served as both the senior counterterrorism official and homeland security adviser on President Bush's National Security Council, described the dilemma: "There was great concern that we were setting up a process that was contrary to our own ideals."²⁹

The worldwide promotion of human rights is clearly in keeping with America's most deeply held values. Colin Powell has said, "Respect for human rights is essential to lasting peace and sustained economic growth, goals which Americans share with people all over the world." At the Human Rights Defenders of the Frontlines of Freedom Conference at The Carter Center in November 2003, former President Jimmy Carter was disturbed to find that many participants believed the United States is contributing directly to an erosion of human rights by its policies with respect to the Guantanamo detainees. Moreover, Carter deplored the indefinite detention of the suspects, adding, "This is a violation of the basic character of my country."³¹ The 9/11 attacks were horrific, and it is in the interest of all civilized nations that the perpetrators be tried and punished, but long-held American values on human rights must outweigh the desire for retribution. As General John Shalikashvili, former Chairman of the Joint Chiefs of Staff, has stated,

"The United States has repeatedly faced foes in its past that, at the time they emerged, posed threats of a nature unlike any that it had previously faced, but . . . has been far more steadfast in the past in keeping faith with its national commitment to the rule of law."³² To do otherwise only adds to the growing worldwide anti-Americanism that undermines U.S. credibility, influence, and effectiveness.

Undermining the coalition. The U.S. strategy for winning the war on terror is predicated on creating an international environment inhospitable to terrorists and all who support them. There is a realization that the Nation does not have the option of going it alone. President Bush has stated that the United States will "constantly strive to enlist the support of the international community in this fight against a common foe" because success "will not come by always acting alone, but through a powerful coalition of nations maintaining a strong, united international front against terrorism."³³ A senior official in U.S. Central Command, the regional combatant command responsible for prosecuting Operations *Iraqi Freedom* and *Enduring Freedom*, called coalition support the Achilles' heel in these operations. The command sees the shaping of domestic opinion worldwide as essential to maintaining a strong coalition.

Democratically elected leaders must be responsive to their constituents. The treatment of detainees at Guantanamo, having fostered animosity toward the United States, thus undermines U.S. ef-

a politically viable option would be to seek a UN-authorized U.S. tribunal

forts to gather international support.³⁴ Even governments stalwartly behind the war are under siege from their populations. In Australia and the United Kingdom, for example, the governments are under increasing pressure to withdraw from the coalition because of public belief that America's treatment of

Australian and British detainees violates the principles that the coalition of the willing aims to uphold.

A Modified Means

The reviews of cases that the administration is conducting in the wake of the June 2004 Supreme Court ruling have now been ruled as insufficient and must be modified to determine the POW status of the detainees. The United States cannot proceed with its Military Commissions without first modifying its Combatant Status Review Tribunals. Should a modified tribunal determine that POW status is warranted, then, as already discussed, the Geneva Conventions demand higher levels of due process for POWs than the Military Commissions allow. Given the administration's views on the POW issue, the more likely outcome is that a modified tribunal will determine formally that POW status should be denied and Military Commissions should follow. It appears, however, that the outcomes of any Military Commissions will not be viewed as legitimate in the eyes of a world already skeptical of the detentions in Guantanamo. The United States can preserve the moral high ground by revisiting the initial interagency group's options and moving the trials into the international arena.

As stated previously, the interagency group investigated four options: Military Commissions, criminal trials, military courts-martial, and tribunals with both civilian and military members. Criminal courts would provide insufficient latitude without Congress toughening criminal laws and adapting the courts. This may have been an option in early 2002 when it was advocated by the Justice Department, but

it is now too late given that the detainees have been in custody 3 years. A court-martial offers advantages. Foremost, it safeguards the administration against domestic or international legal challenges attacking the trial process itself. A court-martial meets all current standards of fundamental rights under



Detainee being led into Camp Four, a medium security facility at Camp Delta

U.S. Navy (John F. Williams)

the customary and written rules of law. It also protects sensitive and classified material during the proceedings. The disadvantage, however, is that because the administration has for the past 2 years created an atmosphere of legal ambiguity, the international community is conditioned to being skeptical and is likely to be suspicious of any outcomes from a U.S. military proceeding.

This leaves tribunals as the final option. The United Nations (UN) has established ad hoc tribunals to deal with individual responsibility for war crimes. The tribunals have been empowered to deal with specific crimes during defined periods. Relinquishing control of the trials to the UN is not without risk, however, and may prove politically untenable for an American administration. A more politically viable option would be to seek a UN-authorized U.S. tribunal, similar to the courts established in 2000 to try war criminals in Sierra Leone and East Timor. The respective governments and the UN set up the courts jointly, giving them the mandate to try those charged with war crimes, crimes against humanity, and other serious violations of international humanitarian law.

The courts were international bodies staffed principally from within the respective countries.

The tribunal would be established under special statute, agreed to by the United States and the United Nations. The statute could include, inter alia, the requirement for a balanced membership of civilian and military, U.S. and international, and judicial and prosecutorial members. The advantage of this model, as opposed to the UN ad hoc tribunals, is that the United States has greater control, and it brings the values of U.S. judges and prosecutors into the proceedings. Such action would be viewed as a legitimate form of justice in the international community and would therefore assist ongoing efforts in the war against terrorism. It would also send a message to the international community about U.S. beliefs on collective legitimization versus unilateralism, most notably that the United States believes that the United Nations and the Security Council have not become irrelevant and still have a major role in international relations. It would also do much to negate the pressure many coalition governments face from their

increasingly skeptical domestic populations. The principal benefit for Washington, however, lies in recapturing legitimacy and thereby reducing widespread anti-Americanism. International legitimacy will generate greater diplomatic space for the administration, providing opportunities to harness the broader international cooperation it needs to win the war on terror.

In the prosecution of the war on terror, the administration has sought to redefine the borders between civil liberties and public safety. The official position remains that the detainees are unlawful combatants and not POWs, but that they are being treated in accordance with the law. The unlawful combatant status and the withholding of due process protections to the approximately 500 foreign nationals detained at Guantanamo have attracted domestic and international criticism. The international community and individual rights groups and academics within the United States believe the administration is ignoring international law and in fact is breaking the law. The U.S. Supreme Court, and most

recently a Federal district court, have weighed into the debate with a ruling that curtails the Executive's attempts to suspend selected human rights in its response to 9/11.

In addition to undermining the rule of law, the consequence of the policy at Guantanamo has been to fuel global anti-Americanism, which undermines U.S. influence and effectiveness, degrades the domestic support base, and denies the United States the moral high ground it needs to promote international human rights. It appears that these costs have far outweighed the operational benefits that the detainee operations have generated. The administration must now adjust its approach. The United States can preserve the moral high ground by adjusting its Combatant Status Review Tribunals to adequately determine the POW status of the detainees. It must then move the detainees' trials into the international arena. This adjustment would be viewed as a legitimate form of justice in the international community and would do much to reduce the anti-Americanism that, among other things, could undermine the coalition. Such action is needed because it is in the Nation's and world's long-term interests. In seeking to redefine the borders between civil liberties and public safety, the administration need look no further for guidance than Benjamin Franklin, who said, "They that can give up essential liberty to obtain a little temporary safety deserve neither liberty nor safety."³⁵

JFQ

NOTES

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The *Hamdan* decision was overruled in mid-July 2005, after the Chairman's Essay Contest. —Ed.



Tanker receiving its payload from
Iraq's Al Basrah Oil Terminal



U.S. Navy (Richard J. Brunson)

America's Strategic Imperative

A "Manhattan Project" for Energy

By JOHN M. AMIDON

The American presence in the Middle East stretches back to the closing days of World War II, when President Franklin Roosevelt met King Saud aboard a U.S. warship in the Suez Canal. Through the ensuing 30 years, Washington sought to maintain oil access and contain the Soviet Union by cultivating Persian Gulf allies. The mutually beneficial relationship between the United States and the Middle East oil-producing countries was forever altered by the Yom Kippur War and the subsequent petroleum embargo. The 1973–1974 embargo highlighted

the strategic importance of the Middle East and elevated oil access to a core national interest. The end of the Cold War and the rise of Islamic fundamentalism further shifted the security focus from keeping a mutual enemy, Russia, out of the region to fighting much of the war on terror within the region.

Dependence on imported oil, particularly from the Middle East, has become the elephant in the foreign policy living room, an overriding strategic consideration composed of a multitude of issues. In the short term, U.S. options are driven by the imperative to achieve a favorable outcome in Iraq

Lieutenant Colonel John M. Amidon, USAF, wrote this article as a student at the Air War College.

and Afghanistan and on other battlefields of the war on terror, but we must also find a way to extricate ourselves from reliance on the Middle East and other oil-producing countries.

Current energy strategy assumes that this country can meet its oil needs by managing the oil-producing countries diplomatically and militarily. However, this thinking overestimates the available oil supply, ignores growing instability in the oil-producing countries, and understates the military costs of preserving access.

Today's strategy must adopt a more realistic view of the limited available oil and recognize the diplomatic and military costs of obtaining it. If the strategy were to correctly estimate the remaining supply and recognize the cost to the Nation of accessing that oil, it would encourage users to consume less and accelerate development of alternatives. The United States must embark on a comprehensive plan to achieve energy independence—a type of Manhattan Project for energy—to deploy as many conservation and replacement measures as possible.

Current Energy Policy

In May 2001, the National Energy Policy Development Group published the Administration's *National Energy Policy*, which states:

Extraordinary advances in technology have transformed energy exploration and production. Yet we produce 39 percent less oil today than we did in 1970, leaving us ever more reliant on foreign suppliers. On our present course, America 20 years from now will import nearly 2 of every 3 barrels of oil—a condition of increased dependency on foreign powers that do not always have America's interests at heart.¹

The policy calls for enhanced efficiency in existing domestic oilfields and exploiting heretofore environmentally denied areas such as the Alaska National Wildlife Refuge (ANWR). Although increasing the domestic fraction of our oil consumption is a wor-

thy goal, achieving a meaningful effect will be difficult, given that domestic production is declining at a rate of 1.5 million barrels per day.

The report also urges improved conservation:

A recent analysis indicates that the fuel economy of a typical automobile could be enhanced by 60 percent by increasing engine and transmission efficiency and reducing vehicle mass by about 15 percent. Advanced lightweight materials offer up to 6 percent improvement in mileage for each 10 percent reduction in body weight.

The primary means of increasing automotive economy is through mandated corporate average fuel economy (CAFE) standards.

Responsibly crafted CAFE standards should increase efficiency without negatively impacting the U.S. automotive industry. The determination of future fuel economy standards must therefore be addressed analytically and based on sound science.

Taken in whole, the *National Energy Policy* does not offer a compelling solution to the growing danger of foreign oil dependence. The 2004 Department of Energy budget for all types of renewable energy totaled \$1.3

domestic production is declining at a rate of 1.5 million barrels per day

billion, increasing just 0.1 percent from 2002 to 2004, while lagging the entire Department of Energy budget, which increased 5.9 percent. Even if ANWR were fully exploited, proven reserves total about 7.7 billion barrels of recoverable oil, enough to supply the Nation for just over a year. Although the *National Energy Policy* sets forth a range of conservation and alternative technologies, no meaningful fiscal policy steps have been taken to bring them to the fore.

Dwindling Global Supply

In 1956, geophysicist M. King Hubbert pioneered a model for petro-

leum extraction known as Hubbert's curve. It predicts that early in the life of an oilfield, production will increase rapidly due to infrastructure growth. The field will reach a point where production peaks and, barring new discoveries, no addition of technology will yield further gains. Thus, "Hubbert's peak" marks the onset of decline, a trend that accelerates as the cost of further extraction approaches the commercial value of each barrel pumped.

In many "easy" oil instances, the oil is actually pressurized coming out of the ground, reminiscent of the gushers seen in Hollywood movies. In an oilfield with this so-called high lift, the price of oil at the wellhead is less than \$5.00. Post-wellhead costs are added through royalties, transportation, refining, delivery, and profit. As more oil is extracted, it becomes necessary to pump the oil from the ground; thus the wellhead price rises through the life of an oilfield. Eventually, the cost of extracting the next barrel of oil exceeds the oil's market value, and the well is capped.

Hubbert based his model on oil production within the lower 48 states, the region where oil was first commercially exploited on a large scale. He predicted that within a given oilfield, the peak in new *discoveries* would be followed within a few years by a peak in *production*, and then decline. He also postulated that peak production would occur when approximately half of the total reserves in a given area were depleted. Hubbert forecast in 1956 that lower-48 oil production would reach its maximum about 1970, which has proved true.

The United Kingdom's portion of the North Sea oilfields reveals a similar pattern. These fields reached their Hubbert's peak in 1999 and are now in decline, with production expected to cease after 2020.

Hubbert's concepts might be applied to global oil production as well. Prior to 2000, the majority of studies projected an ultimate recoverable sup-

ply of 2 trillion barrels of oil. In 2000, the U.S. Geological Survey (USGS) forecast a 50 percent increase in estimated world reserves to 3.003 trillion barrels. As soon as it was published, the study came under fire for what many considered optimistic assumptions. Discounting the USGS results, there has historically been broad agreement that the world's ultimate oil supply equaled approximately 2 trillion barrels. In one recent study, the average estimate of 76 studies works out to be 1,930 billion barrels, of which 920 billion (48 percent) have been consumed.

Today, the oil supply prediction camp is divided among the optimists, represented by organizations such as the USGS, and pessimists such as the Association for the Study of Peak Oil and Gas. The optimists agree that Hubbert's peak is coming but will not occur until 2021 at the earliest and 2112 at the latest, with 2037 as the median date. The pessimists believe the USGS study was based on speculative methodology and the peak is as close as 2007. The pessimists cite the growing gap between discovery and production. They say that if the USGS predictions are accurate, the annual discovery rate between 1995 and 2025 needs to average 21.6 billion new barrels. New global oil discoveries over the last 12 years have averaged 7.4 billion barrels annually, far below both USGS predictions and global consumption, which averaged 28 billion barrels a year for the same period. Since 1980, more oil has been extracted than has been offset by new discoveries.

America's Fragile Oil Lifeline

Most of the world's so-called easy oil has already been discovered or extracted, leaving the bulk of the undiscovered or unexploited oil in deep water, or other isolated locales far from transportation infrastructure and markets. The most promising possibilities for discovery are in the Caspian Basin and Russia, areas torn by strife and instability. A prediction of future oil production patterns (produced by the

pessimists) forecasts a peak in global oil production in approximately 2007.

Since the USGS report of 2000, most studies have distanced themselves from its numbers. A summer 2004 report by BP-AMOCO estimated the remaining oil supply at 1,147.8 barrels,² a figure in close agreement with the estimate of the U.S. Energy Information Agency, 1,266 billion barrels.³ These studies buttress the view that we are approaching worldwide peak oil production.

Although the pessimists offer a convincing argument presaging a peak in global oil production, what if they are wrong? What if technology and discovery can delay it far into the 21st century? Assuming the oil is available somewhere on the globe, can we reliably deliver it here? During 2003, the United States averaged imports of 12.2 million barrels per day, representing 62 percent of its total oil demand. Much of this imported oil comes from politically volatile parts of the world.

Saudi Arabia has the world's largest oil reserve, estimated at 250 billion barrels (Gb).⁴ Peak Saudi production will not occur until 2020; thus Saudi Arabia will remain "the indispensable nation of oil." Saudi Arabia is ruled as a feudal monarchy, with absolute authority held by the descendants of Abd al-Aziz ibn Saud, who rose to power in 1932. Its vast oil wealth masks a nation with pressing demographic and political problems. More than half of all Saudis are under 18 years of age. This group is plagued by limited educational opportunities and high unemployment, factors that have made Saudi Arabia fertile ground for religious extremism. The official state religion is Wahhabism, an inimical form of Islam that is the philosophical antecedent for Osama bin Laden and his followers. The government has taken steps to eliminate terrorist funding and curtail al Qaeda recruitment within the kingdom; however, the long-term prognosis for success is not clear. In the meantime, Saudi Arabia remains *the* linchpin of U.S. energy security even

though it is beset by political tension, internal dissent, and a looming demographic crisis.

Mexico is tied to the U.S. economy through the North American Free Trade Agreement (NAFTA), which has been a mixed blessing for Mexicans. Although elimination of all trade barriers led to a flood of foreign investment and industrialization during the 1990s, many of these jobs have since moved to even lower wage countries. NAFTA was championed as a solution for emigration problems, but Mexicans continue to migrate north in search of employment and higher wages. A legacy of political corruption, high unemployment, and the corrosive effects of a burgeoning narcoeconomy represent great challenges.

Mexico has made no major oil discovery since 1980. The pessimists estimate that Mexico has approximately 22 billion barrels (Gb) of oil remaining. Production will peak around 2015. Although Mexico is currently a net oil exporter, growing domestic consumption will exceed production by 2010, closing the Mexican spigot as a source of oil for the United States.

The Venezuelan oil industry was born in 1866, only 7 years after production began in the United States. Venezuela used this leadership in 1960 to midwife the birth of the Organization of Petroleum Exporting Countries (OPEC), going on to nationalize Venezuelan resources in 1976.⁵ The country's history has been characterized by revolution, counterrevolution, and dictatorship. The latest chapter began with the election of Hugo Chávez in 1998. Although Chávez came to power as a populist reformer, an 18 percent contraction in the economy and his dictatorial practices triggered a national work stoppage in 2002, slowing oil production to a trickle.

Venezuela possesses about 50 Gb of conventional oil reserves, with exploitation having peaked around 2003. Venezuela also has a vast reserve of heavier oils, estimated as high as 1,200 Gb, which equals the entire conventional

reserve remaining worldwide. The greatest barrier to exploiting this resource has been the low recovery rate of useable oil (10–15 percent) and the high front-end cost. In the early 1990s, the government set the exploitation tax at 1 percent in an effort to draw the massive foreign investment required to bring heavy oils on-line. In October 2004, Chávez raised these tax rates to 16 percent to correct “foreign domination mechanisms.”⁶ Low internal consumption will place Venezuela at the forefront as a U.S. energy source for decades. But access will hinge on the policies of Hugo Chávez and his successors.

Nigeria was a British colony until it gained independence in 1960. Between 1966 and 1999, it was ruled by a series of military governments and torn by ethnic civil war and religious strife. Nearly 2 million perished from violence, hunger, and disease.

Nigeria today is ruled by a democratically elected government, which has a well-deserved reputation for corruption. “For decades, powerful elites in the capital of Abuja have monopolized the allocation of petroleum revenues, providing relatively little to the ethnic minorities of the Niger Delta region, where most of the oil is buried. These minorities have grown increasingly dissatisfied and have launched armed attacks on oil facilities, causing a sharp drop in exports.”⁷ Nigeria retains substantial oil resources, estimated by the pessimists at 40 Gb, with a production peak forecast for approximately 2009.⁸

During 2003, the worldwide oil industry produced an average of 68 million barrels per day, with every producer but Saudi Arabia operating at maximum capacity. Saudi excess oil production capacity currently stands at less than 1 million barrels per day,

a 0.7 percent world production capacity cushion. The continued viability of the U.S. energy lifeline hangs on political and economic stability in nations such as Saudi Arabia, Venezuela, and Nigeria. Interruption of oil production in any of the teetering countries described here would trigger immediate price rises and economic dislocation. The simultaneous loss of several oil-producing nations due to boycott, sabotage, or war would be an economic catastrophe.

The Military Challenge

Military operations to ensure energy access and price stability have added an invisible subsidy to the true cost of imported oil. From 1991 to 2004, the average cost of a gallon of unleaded gas at a U.S. pump was as high as \$2.28. When the \$2.2 trillion cost of 9/11 and all Middle East/Central Asia operations since *Desert Shield* are factored into the 1.71 trillion gallons American consumers have used since 1991, the cost at the pump rises to \$3.56 per gallon (see table). The current energy strategy understates these costs of seeking energy security through military action. The invisible hand of market forces, which should trigger oil conservation at a price of \$3.56 per gallon, has been disrupted by the externalized military cost.

Future military efforts to secure the oil supply pose tremendous challenges due to the number of potential crisis areas. Besides the nations already mentioned, the bulk of the world’s oil reserve is concentrated in the Middle East and Central Asia. In order of proven resources, these countries are Iraq, Kuwait, United Arab Emirates, Iran, Russia, and the nations surrounding the Caspian Basin. This region, especially the Arab nations, has been referred to as the “gap,” an area characterized by poverty, disorder, and social upheaval.

The Middle East is faced with explosive population growth. By 2020 this area’s population is projected to pass 800 million, a 30 percent increase. This surge will place huge strains on already struggling governments and provide

Costs of Middle East Operations and 9/11, 1991–2004

Total cost of Gulf War I	\$300B
Annual peacetime force structure cost for units tasked for the Middle East (\$60B x 13 years)	\$780B
Annual cost of no-fly-zone enforcement and deployed Army forces in Kuwait, 1991–2002 (\$15.3B x 11 years)	\$168.3B
Economic costs to the U.S. economy of the 9/11 attacks	\$585.2B
Cost of operations in Iraq (based on substantial withdrawal in 2008)	\$308.9B
Cost of Operation <i>Enduring Freedom</i> and follow-on operations in Afghanistan (\$1.6B/month, 2002 + \$1.1B/month, 2003–2004)	\$45.6B
Uzbekistan aid and airfield access payments, 2002	\$320B
Uzbekistan aid and airfield access payments, 2003–2004	\$357B
Foreign aid to Pakistan, 2002	\$696B
Foreign aid to Pakistan, 2003–2004	\$1.2B
Kyrgyzstan foreign aid and airfield access	\$500B
Foreign aid to Tajikistan	\$563B
Foreign aid to Turkmenistan	\$274B
Total U.S. gasoline consumption, 1991–2004 (gallons)	1,716.96B
Hidden fuel price subsidy at the pump (cost of Middle East operations/total consumption)	\$1.276/gal

Sources: Grant T. Hammond, “Myths of the Gulf War,” *Aerospace Power Journal* 16 (November 2004), available at <<http://www.airpower.maxwell.af.mil/airchronicles/apj/apj98/fal98/hammond.txt>>; Amory B. Lovins, “U.S. Energy Security: Factsheet,” *Alaska Building Science News* 9, no. 1 (Fall 2003), available at <<http://www.north-rthn.org/Newsletters/ABSN-Fall-03.pdf>>; U.S. House of Representatives Budget Committee, Democratic Caucus, “The Cost of War and Reconstruction in Iraq: An Update,” 108th Congress, 2003; Robert Looney, “Economic Costs to the United States Stemming from the 9/11 Attacks,” *Strategic Insight* (Monterey, CA: Naval Postgraduate School, August 2002); Dennis Ryan, “Comptroller Tallies Operation *Iraqi Freedom* Cost,” *Pentagram*, November 16, 2004, available at <http://www.dcmilitary.com/army/pentagram/8_15/national_news/22760-1.html>; Lutz Kleveman, *The New Great Game—Blood and Oil in Central Asia* (New York: Atlantic Monthly Press, 2003), 173, 186, 245; U.S. Department of State, “Background Note: Pakistan,” “Background Note: Uzbekistan,” “U.S. Assistance to Tajikistan Fact Sheet,” “U.S. Assistance to Turkmenistan Fact Sheet,” available at <<http://www.state.gov/r/pa>>; U.S. Department of Transportation, “Corporate Average Fuel Economy Standards,” available at <http://www.nhtsa.dot.gov/cars/rules/rulings/CAFE/EnvAssessed/Index.html#_Toc26683550>.

Khawr Al Amaya Oil Terminal
in the Arabian Gulf



Fleet Combat Camera, Atlantic (Aron Ansarov)

a ready source of recruits for grievance organizations such as al Qaeda, for whom dissatisfied young males have been described as a center of gravity.

The last oil frontier lies around the Caspian Sea. Although previous estimates placed its oil resources as high as 110 Gb, further exploration has lowered expectations to 17–33 Gb, well below those of Iraq or Kuwait, but still substantial. Over the long term, natural gas may prove the most valuable resource there.⁹ Four of the six Caspian Sea states are former Soviet republics

and are eager to free themselves of all vestiges of Russian domination. Only two of the four, Azerbaijan and Kazakhstan, have significant oil resources. Turkmenistan and Uzbekistan can only hope to enjoy economic benefits through pipeline transit fees. All existing and proposed Caspian pipelines pass through some of the world's most war-torn real estate, including a proposed pipeline across Afghanistan.

The bulk of demand during the next decade will come from Asia. "In 1993, after decades of self-sufficiency,

Chinese domestic oil production could no longer satisfy demand, which had shot up because of the country's extraordinary economic growth. Since then, China has imported more oil every year, from 6.4 percent of its consumption in 1993, to 31 percent in 2002, to a projected 60 percent by 2020."¹⁰ The Asia-Pacific region's dependence on Middle East oil may exceed 90 percent by 2010.

Military and economic efforts to expand oil access in the Caspian Basin, like our actions over the past 60 years in the Persian Gulf, could bring the United States into conflict with energy-hungry regional powers such as China and India. Played out far from traditional U.S. supply lines, clashes would minimize our advantages in naval and air power and depend largely on ground forces and asymmetric warfare.

The world energy delivery system is incredibly fragile. This vulnerability creates a vast universe of options for hostile nations, terrorists, and anti-globalists to create mischief by sabotage, destruction of key facilities, or interdicting transportation bottlenecks. The giant Ras Tanura loading facility in Saudi Arabia processes half of all Saudi production and thus a tenth of all global production each day. An attack on it could take half of Saudi oil off the market for at least 6 months, triggering a worldwide economic catastrophe. "Such an attack would be more economically damaging than a dirty nuclear bomb set off in midtown Manhattan or across from the White House in Lafayette Square."¹¹

Energy Consumption Patterns

Petroleum provides nearly 40 percent of all energy used in the United States, a share that is forecast to rise over the next 20 years. Increasing reliance on oil coupled with declining domestic production will trigger increasing demand for foreign oil. Today, imports comprise 62 percent of total petroleum consumption, predicted to rise to 70 percent by 2025.

The main users of petroleum are the transportation and industrial sec-

tors. Oil provides 95 percent of the energy for transportation and 20 percent for the industrial sector. Recognition that world oil supplies have reached Hubbert's peak will have major implications in the industrial world. Worldwide consumption is rising 3 percent annually, with the greatest growth in China. The oil energy industry generates annual revenues of \$2.1 trillion. Most transportation technologies have useful lifetimes of 15 years or more. Transition to alternative technologies could thus render part or all of this investment worthless and will not be undertaken until the economic arguments are unimpeachable. Although rising prices and sagging supplies will eventually produce clear incentives to conserve and deploy alternative energy sources, in many cases these signals may not arrive until very late in the supply collapse, minimizing time for classical economic incentives to act.

The first barrier to solving this problem lies in public and policy-maker perceptions. Oil price shocks and fluctuations have been common since 1974, but each time the warnings proved false. For that reason alone, it may prove difficult to convince the public and policymakers that an era of permanently limited oil supplies has arrived. Predicting the shape of the post-peak supply is also hard. Although Hubbert's theory depicted a symmetrical curve of growing and then shrinking production, the actual production pattern is highly dependent on the geology of individual oil fields and the level of investment in production technology. Further, some portion of the production shortfall may be offset by conservation and increased use of other fuels such as natural gas, oil sands, coal gasification, and synthetic oil. During World War II, German engineers discovered that synthetic oils manufactured from coal become viable substitutes at a cost of around \$60 per barrel. The shape of the peak and the impact of "swing" fuels such as synthetic oil are difficult to predict. However, the key fact to remember is

that none of these replacement technologies will happen overnight; rather, they will be the result of deliberate policy and investment decisions with lead times that may approach a decade.

Before discussing what will work, let us remind ourselves of what will not work. Developing additional resources offshore or in the Arctic will not provide the long-term solution. Oil economics have supplied great incentives to discover more sources over the past decade. Despite these incentives and ever more sophisticated technology, new discoveries are not keep-

the continued viability of the U.S. energy lifeline hangs on political and economic stability in nations such as Saudi Arabia, Venezuela, and Nigeria

ing pace with consumption. Alaskan production at Prudhoe Bay peaked in 1988. The much-touted ANWR is estimated to contain about 7.7 billion barrels of recoverable oil, enough to supply the United States just over a year. Although tar sands and heavy oil hold promise, their economics and energy balance are daunting at best. In sum, trying to drill our way out of this crisis will not address the real problem, which is soaring demand and the danger of military conflict over shrinking resources.

Phase I: Conservation

A national energy plan along the lines of the historic Manhattan Project is needed now. America faces a strategic imperative to decisively deploy a range of solutions, both interim and permanent, to address energy security. Such an effort might consist of two phases: conservation and the energy power shift.

The U.S. fuel savings record is not impressive. The aftermath of the 1973–1974 oil embargo saw the establishment of Government-mandated automotive mileage standards. By 1985, the average fuel economy of the U.S. fleet had risen from 12.9 to 27 miles

per gallon (MPG) to 27 MPG. However, since 1985, these gains have remained largely static as economy targets remained unchanged. Improved fuel economy has been thwarted by the policy decision to set separate lower economy standards for trucks. The growing percentage of lower-economy trucks has led to a decline in the overall economy of the automotive fleet.

Even at \$2.25 per gallon, there are few incentives for Americans to conserve. At this price level, the annual penalty of driving a gas-guzzling sports utility vehicle (SUV) instead of a more economical four-door car is about \$500 per year. The dearth of economic incentives coupled with gas prices considerably lower than the highly taxed Euro-

peans pay means that oil consumption per dollar of GDP is now more than 40 percent higher than in Germany and France.

Hybrid automobiles. Hybrids are a revolution in automotive design that combines a conventional gas engine with an electric motor. There are three hybrid cars and three hybrid trucks among the 2005 model year offerings. The three cars, all from Japanese automakers, average over 50 MPG and are mature designs of considerable research and engineering. Replacing every vehicle with a high mileage hybrid would cut consumption in half, nearly eliminating the need for imported oil. Improving the average fuel efficiency of the entire car fleet by just 5.3 miles per gallon could displace all Persian Gulf imports.¹²

Ethanol-based fuels. Expanding production of ethanol alcohol offers a means of replacing imported oil with a domestic agricultural product. All current automobiles can operate on fuels up to 15 percent ethanol. Flexible fuel vehicles (FFV) are designed to operate on mixed fuels up to E85, a mixture of 15 percent gasoline and 85 percent ethanol. Over 4 million automobiles on the road are factory-equipped to

use E85 fuels. Retrofit to FFV capability is a straightforward process that costs about \$50 per vehicle.

Ethanol-augmented fuels are available mainly in the Midwest, where ethanol is made using a corn-based fermentation process. Today, 81 plants around the country are manufacturing corn ethanol with a capacity of 3.4 billion gallons per year; 15 plants under construction will add a further 670 million gallons per year. Corn ethanol critics observe that it takes more energy (in the form of fertilizers, farm machinery, processing into ethanol, and so forth) to grow the corn and distill the ethanol than is available in the final product. The corn ethanol production chain is dominated by corporate producers who have mobilized substantial political support for a corn ethanol tax subsidy regime of \$1.4 billion per year.

Corn is a poor choice for ethanol feedstock since it is the most irrigation- and fertilizer-intensive crop grown in the United States, and corn used for ethanol drives cattle feed prices higher, creating hidden costs at the grocery store. Although a nascent corn ethanol industry has developed, future expansion should be discouraged through a removal of the tax regime. Unsubsidized corn ethanol actually costs \$2.24 per gallon to produce, making it uneconomical except in times of very high oil prices.¹³

The biorefinery and cellulosic ethanol. Instead of valuable corn, the biorefinery produces ethanol using the starches and cellulose present in agricultural waste and byproducts such as corn stalks, rice straw, paper mill waste, recycled urban waste, and dedicated woody stemmed crops.¹⁴ Many of these sources of cellulosic ethanol are considered negative-cost feed stocks, meaning they have no food value and farmers must pay for their disposal. This gives cellulosic ethanol a much higher net energy balance than corn-based ethanol. Studies at candidate biorefinery sites in Indiana and Nebraska found that collocating ethanol biorefiner-

ies with existing power plants would allow production for \$1.05/gallon to \$1.60/gallon depending on the biomass selected. Cellulosic ethanol offers great promise for rural areas that have seen considerable depopulation due to modern farming methods.

*One cellulose ethanol plant would enhance energy security by replacing crude oil imports of 2.4 to 2.9 million barrels per year; increase farm income by \$25 million per year by creating economic value for residues that currently have little to no value or are simply viewed as waste; create economic development by creating over 1,000 new jobs during peak construction, and almost 200 new permanent jobs and about 450 spin-off jobs.*¹⁵

Biorefineries also hold great promise for urban areas. A typical large city has a substantial surplus of yard waste and wood debris, products that can no longer be deposited in landfills. New York and Philadelphia pay \$150 per

recognition that world oil supplies have reached Hubbert's peak will have major implications in the industrial world

ton to dispose of municipal solid waste. Creating a simple urban wood recycling routine of household recycling bins would ensure a steady biomass supply and strengthen the economics of urban biorefineries through proximity to markets. Building an urban biorefinery in the hundred largest metropolitan areas could produce 7 billion gallons of ethanol a year, offsetting imported oil by 5 percent while helping solve urban waste problems.

The biorefinery is not a fanciful dream. In 1975, Brazil initiated a domestic ethanol program based on sugar cane waste. Over its 30-year life, the ethanol industry has produced \$50 billion worth of ethanol while supporting 700,000 Brazilian jobs. Electricity cogenerated at biorefineries provides 9 percent of national requirements. Ethanol supports a fourth of domes-

tic petroleum demand and can be priced more cheaply than gasoline.¹⁶ According to testimony in the Senate, sufficient cellulosic biomass is available in the United States *right now* to displace up to 10 percent of today's oil imports.¹⁷

The first step of implementation will be to emplace economic incentives to conserve fuel. New hybrid vehicles enjoy a tax credit of \$1,500, which is due to expire in 2006. This program must be expanded, and although taxation and incentives are anathema to many politicians, a cost-neutral regime that taxes production and purchase of low economy models and rebates for purchase of hybrids and FFVs must be imposed.

The second step is to resume increasing the CAFE fleet fuel economy requirement. The requirement has remained static at 27.5 MPG since 1985, while light trucks and SUVs have essentially received a free ticket. The CAFE fuel economy requirement must

resume its move upward in a fashion that produces sound public policy outcomes without exceeding the engineering capability of the au-

tomotive industry. The SUV and light truck requirement, set at 20.7 MPG, needs a realistic economic target that balances the needs of the consumer with national energy security.

Step three institutes a crash program to build cellulosic ethanol facilities. Placement studies for ethanol plants designed to consume a mixture of agricultural wastes and grain have estimated a construction cost of \$27 million to build a facility capable of producing up to 15 million gallons of ethanol per year. At a proposed site in North Dakota, suitable agricultural waste and inconsumable grain are already available to produce 12.5 million gallons of ethanol a year at no cost. Many potential sites could solve *existing* waste disposal problems, exploiting negative-cost biomass to turn waste into treasure. National Renewable

Director of Penn State's Energy Institute displays a flow reactor that tests the thermal stability of a coal-blended jet fuel that has been in development over the past 15 years



AP/Wide World Photo (Pat Little)

Energy Lab studies show that an investment of \$31 billion would build 225 plants capable of producing enough ethanol to replace over 10 percent of gasoline consumption.

Farmers need incentives to grow energy crops such as switchgrass, a native plant that does not require fertilizer or irrigation. It is estimated that 15 percent of the North American continent consists of land that is unsuitable for food farming but workable for switchgrass cultivation. "If all that land was planted with switchgrass, we could replace every single gallon of gas consumed in the United States with ethanol."¹⁸ Farm policies that encour-

age energy crop plantations are crucial for creating a firm supply base for cellulosic ethanol.

Expanded use of hybrid cars and biorefineries provides an interim strategy that enhances energy security while

unsubsidized corn ethanol costs \$2.24 per gallon to produce, making it uneconomical except in times of very high oil prices

smoothing the transition to the next phase of an energy Manhattan Project, the "Energy Power Shift,"¹⁹ a move to emerging transportation technologies that offer permanent energy security.

Phase II: The Energy Power Shift

Although the "hydrogen economy" is widely cited in political discourse, its practicality is doubtful. Proponents cite the vast renewable energy from wind, solar, and biomass sources. Massive wind farms, occupying merely a portion of the Dakotas, could theoretically produce sufficient hydrogen through electrolysis to power all domestic transportation needs. Although it is possible to produce hydrogen in this fashion, storing, transporting, and distributing it to markets is problematic. Waiting to transition to the hydrogen economy ignores proven and inexpensive *good* technology in favor of unproven and costly *perfect* technology. Instead of hydrogen, phase II should focus on plug-in hybrid vehicles and optimizing the biorefinery concept.

Plug-in hybrid electric vehicles (PHEVs). The next evolutionary step from the Toyota Prius, PHEVs use the same principle as today's hybrid with the addition of a larger battery and a 120 volt electric wall plug. The PHEV charges its battery at night from the wall socket or even while parked at work. The enlarged battery is capable of driving the PHEV entirely electrically below 35 miles per hour (mph) for about 60 miles, well within the typical commuting range. When the PHEV is driven faster than 35 mph or beyond 60 miles, the conventional motor picks up the load. Fully operational prototypes have already been built using modified Toyota Priuses. These existing PHEVs average up to 180 MPG in typical commuter profiles since most driving is done in electric-only mode. The energy-per-mile cost of electric-

ity is a third the cost of gasoline. PHEVs transfer a large portion of the transportation energy bill to the electric grid,

whose capacity is underused at night and can grow through the addition of existing and proven renewable energy technologies such as wind, solar, and distributed fuel cells.

Oil refinery plant in Basra, Iraq



55th Signal Company (Christopher J. Crawford)

Improved biorefinery. The centerpiece of the second pillar of phase II, improved biorefinery, is the thermal conversion process (TCP), by which the geological conditions that produce oil are recreated. A technology demonstration plant in Carthage, Missouri, is producing 500 barrels of oil a day using turkey manure, bones, paper products, wood, municipal waste, and sewage. The TCP produces usable oil at a cost of 40 cents per gallon using landfill waste as a feedstock.

Although the steps outlined in phase I will offer breathing space against the demise of the oil-based

biorefineries, or other as-yet-undefined technology would seem a policy decision ranking with Thomas Jefferson's Louisiana Purchase.

An ancillary bonus—clean air. Environmentalists have championed many of the above ideas for years but have been largely ignored or grudgingly placated with half-measures. Until now, economic considerations have trumped many of the environmentalists' arguments as cheap gas and lack of government commitment knocked the props out from under the green platform. The Manhattan Project for energy would provide an ideal convergence of interests, bringing the economist, diplomat, soldier, and environmentalist under the same tent. In addition

to girding energy security, PHEVs and TCP biorefineries offer dramatic improvements in the pollution impact of the transportation sector by either eliminating noxious byproducts entirely or transferring to less polluting energy sources.

America's Strategic Imperative

The current world energy situation poses a national threat unparalleled in

225 years. The economy, particularly the transportation component, has become heavily dependent on foreign oil. Concurrent with rising demand are indications that world production may soon peak, followed by permanent decline and shortage. Moreover, most of the remaining oil is concentrated in distant, politically hostile locations, inviting interdiction by enemies.

Over the last 60 years, policymakers have repeatedly applied diplomatic and military triage to the problem of national energy security while generally ignoring the economic prospects for a solution. Today, the Nation is engaged in a global war on terror throughout the same resource-rich area on which the safety of its economy hinges. Economic stagnation or catastrophe lurk close at hand, to be triggered by another embargo, collapse of the Saudi monarchy, or civil disorder in any of a dozen nations. Barring these events, rising world demand and falling production could place the United States in direct military competition with equally determined nations. It is doubtful that any military, even that of a global hegemon, could secure an oil lifeline indefinitely. Failing to take urgent economic steps now will necessitate more painful economic steps later and likely require protracted military action.

Meeting this dilemma with a technical solution plays on America's greatest strengths, those of the inventor and the innovator. Rapid execution of a two-phase Manhattan Project for energy will provide near-term relief measures while laying the foundation for the long-term establishment of an "Energy Power Shift" economy. Reduced dependence on imported oil would also allow the Nation to pursue a more pragmatic foreign policy, freed of the necessity to engage in all episodes of Middle East or OPEC history. This strategy denies al Qaeda and its allies a key argument in their war against the United States; reducing the strategic importance of the Middle East will obviate the need for "us" to be "there" and diminish the cultural friction between Muslims and

the current world energy situation poses a national threat unparalleled in 225 years

economy, rising demand and falling production suggest that a transition to phase II must be defined, capitalized, and executed with rigor. The 2005 Department of Energy budget earmarks \$2.5 billion for all categories of energy research. Given that the United States has spent \$2.2 trillion over the past 14 years seeking energy security through military action, \$50 billion spent to accelerate the arrival of PHEVs, TCP

the West. Absent the plausible charge that the U.S. role in the Middle East is motivated solely by oil, U.S. efforts to nurture democracy, and local perception of those efforts, could result in a new era of good will. Although this problem is daunting, it is not unsolvable; instead, it demands prompt and certain action to ensure an energy-rich and peaceful future. **JFQ**

*When you are drifting down the stream of Niagara, it may easily happen that from time to time you run into a reach of quite smooth water, or that a bend in the river or a change in the wind may make the roar of the falls seem far more distant. But your hazard and your preoccupation are in no way affected thereby.*²⁰

—Winston Churchill

NOTES

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Tanker truck being loaded with ethanol at Golden Grain Energy plant, which generates renewable fuels



AP/Wide World Photo (Charlie Neibergall)

Soldier questions an Iraqi about insurgent activity



Marine Forces, Pacific (JonDior Ferrell)

Center of Gravity and Asymmetric Conflict Factoring In Culture

By JOHN W. JANDORA

John W. Jandora is the supervisory threat analyst at U.S. Army Special Operations Command and the author of two books and numerous articles on warfare and Middle Eastern history.

This essay addresses asymmetric conflict in its current manifestation, which has come to be called *jihadism*. It accepts that the concept of *center of gravity* is applicable to such conflict, as has been argued by many study projects at the U.S. Army War College.¹ These studies, however, do not extend to the resistance struggle in Iraq. Even in their treatment of al Qaeda, they disagree as to what constitutes its center of gravity and reflect questionable assumptions about Islamist militancy. Departing from the conventional systemic approach, the present study focuses on contrast of culture to tie together loose strings and add clarity to the dynamic of jihadism.

To begin with, center of gravity in the context of asymmetry has no correlation with the disposition, maneuverability, or sustainability of a field force or to the capacity of states to mobilize assets of manpower and materiel. Nonetheless, the term remains applicable, particularly as used by Antulio Echevarria. In his treatise on "Clausewitz's Center of Gravity," Echevarria reinterprets Clausewitz's words as advice to look first for unity of effort and then "for connections among the various parts of an adversary, or adversaries, in order to determine what holds them together," as if by centripetal force. "Centers of gravity are focal points that serve to hold a combatant's entire system or structure together and that draw power from a variety of sources and provide it with purpose and direction."²

The term *asymmetric warfare* similarly deserves clarification. The base concept of a weaker adversary using unconventional means, stratagems, or niche capabilities to overcome a stronger power remains pertinent. However, the original hypotheses of rogue states launching chemical, biological, and radiological attacks or millennialist terrorists wreaking havoc in the United States have been supplanted by the realities of the 9/11 attacks, the Taliban/al Qaeda aggression in Afghanistan, and the Sunni resistance in Iraq. The common denominator of these realities is the legitimizing of hostile action through the tenet of *jihad*—the Islamic imperative of fighting infidels to regain independence of action on the micro level or to bring social justice and ultimately salvation to mankind on the macro level. Thus, asymmetric conflict has become associated with jihadism. As any complex word-symbol, *jihad* lends itself to various interpretations, including who may rightfully invoke it and how it may be conducted. Such considerations notwithstanding, jihadism is the hallmark of America's current opponents.

Given this delimitation of asymmetric conflict, jihadism manifests itself to the U.S. military as an array of relatively small-scale, low-level attacks by tribal militias, armed brotherhoods (Sufi militias), factional/party militias, outlaw gangs, and militant cells. This phenomenon is very different from the long-held image of companies or battalions deployed “as two up and one back”—doctrinal, spatially structured combat by state-organized forces. It does not, however, defy analysis of force generation and sustainment. Hence, this essay seeks to expose and explain the centripetal (in-drawing) force that binds the disparate elements in their asymmetric approaches to jihad. The process results in finding centers of gravity.

Tribes and Clients

Two countervailing social forces shape the jihadist community, *tribalism* and *clientelism*. Both are outside the experience of most Americans. Both terms generally evoke disdain, albeit for quite different reasons.³ *Tribalism*, as a derivative of *tribe*, is problematic because many scholars contend that the base term lacks specificity and therefore analytic usefulness. *Clientelism*, on the other hand, evokes images of the old-time, party-linked patronage politics of America’s big cities, which the school of political correctness sees as deserving avoidance if not censure. Disdain notwithstanding, anyone who has lived beyond the Western enclave in most of the Islamic world knows such terms are indispensable.

The scholarly critique of the term *tribe* draws attention to its seemingly arbitrary use to denote groups as small as extended families and as large as nationalities. The head count of a tribe correspondingly ranges from a few score to hundreds of thousands. There is controversy whether the term applies to urban as well as rural populations and where the distinction lies between *clan* and *tribe*. Moreover, genetic linkage may not correlate with tribal alliances and rivalries. However, none of these objections are critical because *tribe* and *tribalism* can indeed be defined in practical terms. According to William R. Polk, a tribe is a kinship group that is optimally sized to its ecologic setting—large enough to accomplish its minimal economic chores and defend itself but small enough to keep members in contact and remain proportional to the supply of food. Thus, history reveals that “clans were constantly splitting apart as they grew beyond their resources or as

their resources contracted in times of drought or seasonal change, [and] some of *us* were periodically becoming *them*.”⁴ This process is depicted in the Bible, when the extended families of Isaac and Ishmael, the sons of Abraham, drew apart, evolving into two distinct and now antagonistic peoples, the Jews and Arabs. Then, too, there is evidence that tribes intermingled for ecologic reasons, yet upheld a myth of common ancestry.

If we accept *tribe* as a valid term of analysis, we can proceed to a meaningful definition of *tribalism*. It is not the antithesis of globalism, as some scholars suggest, nor a primitive form of nationalism. Rather, it is the self-legitimation of the kin group and its intent and endeavor to optimize its collective self-interest. Self-legitimation is conviction that the tribe is the beginning and end of loyalty, identity, obligation, purpose, status, honor, past, and future—*exclusiveness* relative to society at large. Thus, the tribe constitutes its own armed force—a militia consisting of most or all fit adult males. The influence of tribalism may be strong or weak, depending on such circumstances as affronts to honor, threats to security, challenges to livelihood, or summons to jihad. Circumstances may lead to voluntary or compulsory compromises with kin group exclusiveness. (See figure 1 for a depiction of this phenomenon.) Individual tribesmen may be compelled to serve in the state’s military establishment or voluntarily join the party that rules the state. At a higher degree of drift, they may voluntarily leave their homeland at the behest of some militant preacher to join a muja-hideen group. However, the tribal bond remains unbroken except in cases of full self-alienation. Up to that extreme point, the individual expects, and is expected, to serve tribal interests. He will give the needs of his kinsmen priority and respond to the directives or entreaties of the tribal authority.

It is at the point of full self-alienation that clientelism prevails: individuals stop acting as tribesmen and unquestioningly submit to the authority of preachers or operational leaders. This phenomenon, which involves a small minority, has parallels in Western societies, where youths alienate themselves from their families to follow cult leaders. In both cases, the leader (patron) offers the followers (clients) religious salvation in return for loyal service. The comparison has limits because the personality factor—adulation of the leader—seems more significant in the Western case than in Islam. Osama bin Laden himself *seems* to be creating a cult of personality through his media releases, but this may be a hasty

jihadism is the hallmark of America’s current opponents

Figure 1: Compromise of Kin Group Exclusiveness



interpretation. It is noteworthy that his harangues are largely cast in nonegotistical terms, phrasing in grammatical third person (*it, that*) rather than first person (*I, me*). Neither his deputies nor the leaders of allied militant groups seem to exploit a personality factor. In their propaganda, the more infamous actors pledge to cooperate with al Qaeda and recognize bin Laden as head. However, such allegiance is based on volition, not obligation as is the case with tribalism. Hence, it seems that the militant group leaders attract followers from both self-alienated individuals and genuine outcasts by justifying and facilitating jihad.

Coopting Tribal Authority

There is certainly give and take, and even some overlap, between the competing influences of clientelism and tribalism. The Ba'thist resistance in Iraq ostensibly derives motive from old party ideology, yet it must heavily resort to the tribal

environment for manpower, subsistence, weapons caching, smuggling assistance, and safe haven since the party/state structure has been destroyed. The real authority within a tribe might be contested among its nominal chief,

council of elders, or religious leaders. The outcome might determine whether the males of the tribe mobilize together as an integral tribal militia or component of a Sufi militia, or go off individually to a mujahideen camp.

Such variances should not be daunting, however, because graphing them affords the necessary perspective on the adversary. Figure 2 depicts the resistance construct for Iraq, which includes a small foreign component and a much larger native component. The graphing of the native component indicates tribes with members in the

Salafist (religious militant) and Ba'thist arenas as well as the military-security establishment, where they covertly facilitate resistance activity. The tribal leaders have plausible denial insofar as the tribal militias as such are not committed against multinational forces, while the tribe has ostensibly committed assets to the new regime.

In figure 2, space B, at which these various arenas (shown as circles) overlap, is tribal authority, which in this scenario abets the resistance. That space is both physical and moral; it consists of the tribal assemblies where decisions are made as well as the beliefs and rituals that legitimize such decisionmaking. Space B, with its two dimensions, is thus the notional center of gravity for tribally connected resistance. Reversing the scenario perhaps better illustrates the point. Should the tribal authority opt to support the new government, the tribal members in the ranks of the military-security forces would cease their subversive activity, and those acting out Ba'thist or radical Salafist agendas would cease hostilities. From either perspective, the associated critical capabilities of tribal authority are ensuring that the kin group has economic sustenance and security from threats.

Specifying a center of gravity, however, is far from devising an effective strategy. The first relevant consideration is that the two dimensions of tribal leadership are not equally approachable. Addressing the moral dimension would be a generational project and is, therefore, a non-starter. On the other hand, addressing the physical dimension is more feasible and suggests two approaches: removing tribal leadership, hopefully without provoking greater antagonism, or coopting tribal authorities and, through them, their tribes. Still, determining the best course of action requires many other considerations. There are hundreds of tribes in Iraq, as there are in Afghanistan and many other Islamic countries. Within a country, some tribes are more powerful than others, some are bitter rivals, and some have regional dominance without ranking very high in the national pecking order.

These power relations can of course be uncovered and then factored into a counterresistance strategy. The operative questions are:

- Which tribes are most significant in terms of manpower, control of strategic terrain or resources, external influence, and historic role?
- Which tribes will resist cooptation, either as a matter of principle or as a matter of irreconcilable rivalry?

it is at the point of self-alienation that individuals stop acting as tribesmen and submit to the authority of preachers and operational leaders

■ Regarding those tribes open to cooptation, what is the cost of coopting them, for example, in terms of money, official positions, local development projects, or public sector employment? Is the cost bearable?

■ What are the tradeoffs between coopting at the regional or subregional versus the country level?

■ How does the stabilization force contain the tribes that cannot be coopted, for whatever reasons?

These are not questions for the military alone. They require interagency and bilateral coordination to answer and convert into a strategic plan. However, the reality is that the military is engaged and often makes decisions about who is worth training, who cannot be trusted, who gets hired, which areas to cordon and search, or where a project is initiated. The military also regularly gains information on tribal power dynamics and crafts its own ad hoc models to make sense of it. Lastly and perhaps most significantly, the military is sustaining discussion on the potentiality and actuality of coopting tribal leaders. Operational and tactical commanders and their troops must deal with the dynamics of tribalism despite the lack of an integrated strategic plan.

the military is sustaining discussion on the potentiality and actuality of coopting tribal leaders

Critiquing Extremist Doctrine

What of the center of gravity in the clientele version of jihadism? From what has been discussed, it appears that it is neither the person nor the legend of Osama bin Laden. If it were, one would expect to find doctrinal cohesion among the mujahideen in the camps supposedly run or supported by

al Qaeda and between it and those remote groups who are said to respond to bin Laden's direction. Yet one finds evidence of doctrinal discord and of bin Laden's indifference to it—of his willingness to make use of even those he considers beyond the pale of Islam.⁵ If it is not leadership, then perhaps al Qaeda's center of gravity is its aggregated capacity to project terror. However, this recourse leads to consideration of critical capabilities or resources, not center of gravity per se. Besides, al Qaeda's resources are of very low density and of various technological levels and are therefore relatively easy to move, conceal, replace, reschedule, or retool. There is perhaps a more subliminal dynamic at

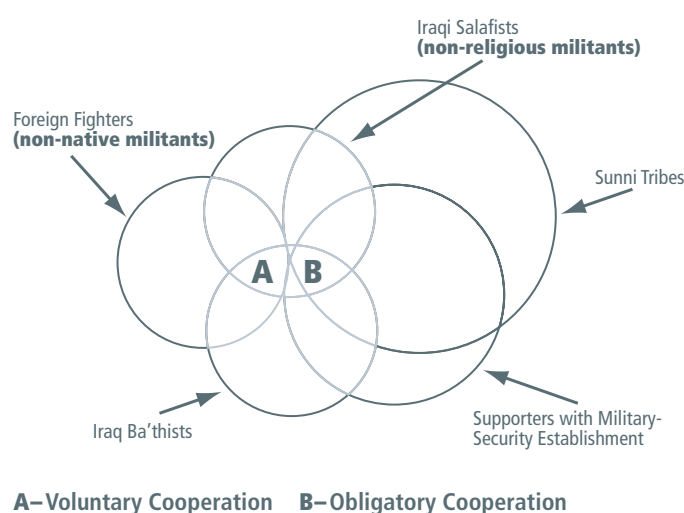
work—the possibility that the center of gravity of bin Laden's network equates to the word *qā'ida* (corrupted into *qaeda*). The Arabic word has numerous meanings—basic and extended,

concrete and metaphoric. It can designate *base* in the concrete sense of foundational or operational base; it can also designate *fundamental principle*. Thus, it connotes the same two dimensions, physical and moral, that were pertinent in the discussion of tribal authority. As a two-dimensional force, al Qaeda's critical capabilities are to uphold radical interpretations of the jihad tenet, inspire complementary actions (strikes), and covertly gain new adherents to Islamist radicalism.

Compared to the tribal case, however, the physical dimension of al Qaeda is diffuse—even more so than it had been—lacking geographic, institutional, or temporal consistency. Prior to the onset of Operation *Enduring Freedom*, the al Qaeda network was present in many countries in the form of mosques creating jihad-adepts and training camps generating jihadist operatives. The command center and main concentration of manpower were in Afghanistan. Consequent to *Enduring Freedom* and regional cooperation in the war on terror, mosque preaching was censured, and camps were abandoned. The militant leaders and their followers went into hiding and changed sites as needed to avoid detection. Nonetheless, capabilities in tradecraft, communications, financing, and arms procurement were conserved through better concealment techniques or modified procedures. Terrorist strikes have continued, and often it is such atrocities that first indicate presence in an area.

So long as any cell can make gain for the whole movement, the effort to stop jihadist terror-

Figure 2: Sunni Resistance Construct



ism demands a long-term, wide-ranging commitment. Here again, formulation of strategy belongs in the interagency arena. The military has already shown that it has suitable assets and techniques to contribute to the cause and will likely remain engaged as long as America's will endures. However, targets such as leadership, weapons caches, and smuggling rings are in the physical dimension of al Qaeda. What of the moral dimension?

Many observers in the governmental, military, and media arenas have already argued for an information warfare campaign. However, the preponderance of advice calls for an external, as opposed to internal, approach—promoting tolerance, freedom, and democracy as countervalues rather than discrediting the tenets of Islamist extremism. The former approach makes little sense when the adversary's propaganda has already distorted Amer-

ican values into licentiousness, irresponsibility, and hypocrisy. This rejection of Westernism

is buttressed by a full complement of extremist treatises and jihad lore (salvation histories, myths, and folklore that portray hero-martyrs, epic struggles, and the sense of Providence). Both sets can be targeted. However, the treatises are more vulnerable in that they lend themselves to critique on points of doctrinal validity. The jihad lore, like American frontier lore, is too embedded in the popular culture to be easily subverted. The doctrinal vulnerability, though, cannot be directly targeted. Few Americans have the knowledge to critique the tenet of *takfir* (as it justifies Muslims

conducting jihad against other Muslims) or Sayyid Qutb's construct of the "universal Islamic concept." Even those who do would have virtually no credibility with a Muslim audience, since they would be immediately dismissed as Westerners and infidels, regardless of their credentials. The task must be shared with Muslim intellectuals who do have the credibility to critique extremist ideology yet need the technical assistance in information warfare America can offer.

One last consideration: how does the Taliban movement fit into the above scheme? The Taliban are adversaries of the United States largely because they have been, and remain, allies of al Qaeda. They are not, however, agents of global terrorism. They are a regional, religious-based faction that gained and lost control of most of Afghanistan. The Taliban have unity of doctrine (Deobandist) and a high degree of ethnic homogeneity (Pashtun). Their profile is a variation of the competing allegiance dynamic graphed in figure 1. The organization, with its hard-core leadership and henchmen, retains residual support among the Pashtun tribes of Afghanistan and Pakistan. However, it continues to lose numbers through members returning to their tribal obligations and primal allegiance. The progress of Kabul's recently initiated "Reconciliation Program" should offer many examples of how wayward kinsmen are coaxed back into the tribal fold.

Afghanistan seems to offer some prospects for Iraq. However, the analogy should not be taken too far. In Afghanistan, the U.S. military had an important advantage in the initial stage of *Enduring Freedom*—the cooperation of a domestic ally, the Northern Alliance. This coalition not only had the necessary military and political organization to take charge of the country; it also had experience with accommodating tribalism. (During the civil war, some militias switched allegiance, according to tribal interest, just as occurred earlier in the Lebanese conflict.) The United States had no such advantage in Iraq—excluding the Kurdish autonomous zone—and thus remains challenged with developing that capacity in a new Baghdad regime. The pacification and stabilization of Iraq may consequently take longer. The bottom line is that leveraging tribalism should be critical to that effort.

There will be ample opportunity to test the above thesis because militant jihadism is likely to challenge America and its allies for some years to come. It may be an allied Muslim state, however,

the Taliban continues to lose numbers through members returning to their tribal obligations and primal allegiance

Marine confirming destruction of hostile vehicle during Operation *Spear* in Karabilah, Iraq



2d Division Marine Division Combat Camera (Neil A. Sorellus)



U.S. Air Force (Jamie M. Shultz)

Security Force Airman speaking to a tribe leader's son through an interpreter

that ultimately leads the way against the jihadists' center of gravity. Regardless of which government leads and whether the requisite interagency approach ever becomes reality, the U.S. military must prepare to factor culture into mission planning at tactical, operational, and strategic levels. Many initiatives have been undertaken—particularly by the Army and Marine Corps, whose missions more directly engage foreign cultures. The increasing inclusion of cultural courses in service school curricula as well as cultural factors in training scenarios is a positive development. However, there are questions of proper focus and effectiveness of instructional time invested. It is important, too, to preclude easy but meaningless fixes, such as casting an exercise opposing force as Maoist-Marxist guerrillas with turbans. But where is the source of authority to rule on such issues? Perhaps the joint military community should establish a clearinghouse and staff it with specialists with genuine knowledge of indigenous customs and social dynamics, Islamic theology and social thought, and related subjects.

JFQ

NOTES

¹ The relevant works, all products of the Strategy Research Project at the U.S. Army War College, are James A. Bliss, "Al-Qaeda's Center of Gravity" (Carlisle Barracks, PA: Strategy Research Project, U.S. Army War College, May 3, 2004); Stephen W. Davis, "Center of Gravity and the War on Terrorism" (April 7, 2003); Joe E. Ethridge, Jr., "Center of Gravity Determination in the Global War on Terrorism" (May 3, 2004); John L. Haberkern, "The Global War on Terrorism: Ideology as Its Strategy Center of Gravity" (May 3, 2004); James Reilly, "A Strategic Level Center of Gravity Analysis on the Global War on Terrorism" (April 9, 2002); Joseph P. Schweitzer, "Al-Qaeda: Center of Gravity and Decision Points" (April 7, 2003).

² Antulio J. Echevarria, "Clausewitz's Center of Gravity: Changing Our Warfighting Doctrine—Again!" (Carlisle Barracks, PA: Strategic Studies Institute, September 2002), vi–vii, available at <www.carlisle.army.mil/usassi/welcome.htm>.

³ Some of that controversy is noted in Howard Handelman, *The Challenge of Third World Development*, 3^d ed. (Saddle River, NJ: Prentice Hall, 2003), 86.

⁴ William R. Polk, *Neighbors and Strangers: The Fundamentals of Foreign Affairs* (Chicago: University of Chicago Press, 1997), 30, 218.

⁵ Various Internet sources allude to doctrinal disagreements among the jihadists. See, for example, the section on Isam al-Turabi's testimonies in "Bin Laden's Life in Sudan—Part One," excerpt from FBIS translation of Arabic text of *al-Quds al-Arabi* (November 24, 2001), <www.fas.org/irp/world/para/ladin-sudan.htm>, 13.

Army tanks pass through the “Arches of Victory” in Baghdad, Operation *Iraqi Freedom*



1st Combat Camera Squadron (John L. Houghton)

“Everybody Wanted Tanks”

Heavy Forces in Operation *Iraqi Freedom*

By JOHN GORDON IV and BRUCE R. PIRNIE

This article reviews the performance of U.S. Army, U.S. Marine Corps, and British armored forces during Operation *Iraqi Freedom*. Although much speculation on the future of warfare tends to downplay heavy forces, this operation shows that close combat remains inevitable and that tanks and mechanized infantry still dominate close combat. Although the focus is on major combat operations in Iraq from March 19 to May 1, 2003, the conclusions have remained valid during the

ensuing counterinsurgency—for example, during combat in Fallujah.

Depending on how the Marine regimental combat teams (RCTs) are counted, heavy forces accounted for either 4 or 8 of the 16 ground maneuver brigades/regiments committed to Iraq before the fall of Baghdad in mid-April. There were four classic heavy brigades (three in the U.S. Army’s 3^d Infantry Division [Mechanized] plus the British 7th Armored Brigade). The Marine RCTs could also be considered heavy forces since

Lieutenant Colonel John Gordon IV, USA (Ret.), is a senior military researcher at RAND. Bruce R. Pirnie is a senior analyst at RAND.

they included roughly 130 tanks and over 450 amphibious assault vehicles (AAV-7s) serving as armored personnel carriers. Of the infantry the Marines initially deployed, all but three battalions rode in AAVs, with the remainder riding in trucks. Three of the Marine RCTs were organic to 1st Marine Division, while the fourth formed the basis of Task Force Tarawa, a brigade-sized force from 2^d Marine Division that was under direct control of 1st Marine Expeditionary Force.

Total coalition tank strength was roughly 450 vehicles at the start of the operation. The 3^d Infantry Division included over 200 M1A1s in its tank battalions and cavalry squadron. The 1st Marine Expeditionary Force had two tank battalions (virtually all the tanks in the active Marine Corps), with some tanks being provided to each of the three RCTs of 1st Marine Division. Additionally, one company of Marine Corps Reserve tanks was activated to support

Task Force Tarawa. The British Army deployed two tank battalions in 7th Armored Brigade with a total of 116 Challenger 2 tanks.¹

The British had about 120 Warrior infantry fighting vehicles in Iraq, comparable to the U.S. Army's Bradley. The Warrior has a 30 millimeter (mm) automatic cannon but does not mount an anti-tank guided missile as the Bradley does. The 3^d Infantry Division had approximately 250 Bradleys in Iraq including the M-2 infantry and M-3 cavalry versions of the vehicle. The AAV-7s of the Marine Corps carry more dismountable infantry than either the Warrior or Bradley (20 troops can be carried in the passenger compartment of the AAV), but the Marine vehicle's armor is closer to that of an M-113. Most of the AAVs mount a side-by-side 50-caliber machinegun and 40mm grenade launcher in the turret. Unlike the U.S. and British armies, where the infantry fighting vehicles are organic to the mechanized infantry battalions, the Marines have a large assault amphibian battalion at division level that attaches its vehicles to infantry regiments based on the mission. Most Marine infantry in Iraq rode in AAVs and were essentially mechanized infantry. The Marines often refer to infantry battalions with attached AAVs as being "mech-ed up," while the version of the AAV that includes the 50-caliber and 40mm weapons is often called "up gun" because earlier versions of the vehicle had only a machinegun.²

High praise for heavy forces appears throughout the written reports and interviews on *Iraqi Freedom*. The 3^d Infantry Division After Action Report states:

This war was won in large measure because the enemy could not achieve decisive effects against our armored fighting vehicles. While many contributing factors helped shape the battlespace (air interdiction, close air support, artillery), ultimately war demands closure with the enemy force within the minimum safe distance of artillery. Our armored systems enabled us to close with and destroy the heavily armed and fanatically determined enemy force often within urban terrain with impunity. No other ground combat system currently in our arsenal could have delivered similar mission success without accepting enormous casualties, particularly in urban terrain. . . . Decisive combat power is essential, and only heavily armored forces provide this capability.³

Tanks

The authors interviewed personnel from the U.S. Army, U.S. Marine Corps, and British army about main battle tanks in Iraq. Without exception or qualification, they praised the performance of tanks, describing them as vital to the quick victory.

The United Kingdom Minister of Defence, Procurement, stated, "Operation Telic [the British designation for *Iraqi Freedom*] underscored the value of heavy armor in a balanced force." He also stated that *Iraqi Freedom* confirmed "protection is still vital" and reemphasized "the effect of heavy armor in shattering the enemy's will to fight."⁴

Tanks were further esteemed during *Iraqi Freedom* for several reasons.

■ *Tanks were highly resistant to fire.* The most common Iraqi antiarmor weapon was the rocket-propelled grenade (RPG), especially the Soviet designed RPG-7. This weapon has both high explosive and shaped charge warheads. The antiarmor shaped charge can penetrate up to 300 millimeters (nearly 12 inches) of solid, rolled homogenous armor plate under optimal conditions, but still failed to penetrate the advanced armor of the Abrams and Challenger 2 in most locations. British army sources stated that one of their Challengers operating near Basra absorbed 15 hits by RPGs with no penetration. The only British Challenger knocked out during the war was accidentally hit by another British tank.⁵ A tank battalion commander in the 3^d Infantry Division stated that one of his Abrams took 45 hits from various weapons, including heavy machineguns, anti-aircraft guns, mortar rounds, and rocket-propelled grenades, with no penetration.⁶ A few Abrams were penetrated by cannons and RPGs, usually in the rear flank or rear of the vehicle. In a few instances, enemy fire

armored systems enabled us to destroy the heavily armed and fanatically determined enemy force often within urban terrain with impunity

broke open the fuel cells of the external auxiliary power unit, allowing fuel to seep into the engine, causing a fire.⁷ No Army or Marine crewman died in an Abrams tank due to enemy fire penetrating the vehicle during major combat operations.

■ *Tanks led the advance.* Almost always, Army, Marine Corps, and British tanks led force movements to contact. Tanks were essential because situational awareness regarding enemy forces was poor at the regimental/brigade level and below. While operational-level commanders often had enough situational awareness to meet their needs, tactical commanders needed a degree of detail that was rarely available. As a result, there was constant danger of encountering the enemy without warning. Since the tanks could survive hits from a concealed enemy, they were the weapons of choice for the “tip of the spear.”⁸ Indeed, this operation demonstrated the inverse relationship between force protection and situational awareness. In circumstances where situational awareness was poor, as it normally was at the brigade/regimental level and below, there was a clear need for strong armor protection.

■ *Tanks immediately took the enemy under fire.* Tanks were immediately responsive when contact was made with the enemy. Compared to artillery that could respond in 2 to 4 minutes, or fighters or bombers that could arrive on scene in 5 to 20 minutes, tanks could open fire within seconds. The 3^d Infantry Division and 1st Marine Division noted that their infantry fired few antiarmor weapons because tanks were almost always in front and engaged the enemy in timely fashion.

■ *Tanks were highly effective in urban operations.* According to conventional wisdom, tanks should be extremely vulnerable in urban terrain, but in fact tanks led most advances into Iraqi cities, most famously during the Baghdad “thunder runs.” This was true in the case of the Army, Marine, and British forces. The Army’s 3^d Infantry Division developed an urban operations technique in which two Abrams would be closely followed by two Bradleys with mounted infantrymen and often an engineer vehicle behind the Bradleys. The tanks would flush the enemy when Iraqi forces fired on the tanks or ran from them, allowing the Bradleys to employ their 25mm cannons and machineguns. The

British used similar techniques in Basra where tanks would lead the advance, often smashing holes in buildings that allowed the infantry to enter and occupy the structure. The Marines also used tanks as the leading element going into urban areas. The most important difference

between Army and Marine Corps urban tactics was that the Marines employed more dismounted infantry who operated close to the tanks. The British also made extensive use of their armored vehicles in urban operations in the Basra area.

■ *Tanks had shock effect.* Some interviewees pointed out that “tanks got respect” and that many Iraqi fighters ran from them. For example, one senior Marine described an intense firefight at a bridge in An Nasiriyah on March 24. The decibel level of the firefight was “about 90.” When two Marine Corps tanks rumbled onto the bridge, the volume of enemy firing “imme-

diately went to about a 20.”⁹ However, some irregular forces pressed their attacks in nearly suicidal fashion.

■ *Fuel supply was less of a problem than originally thought.* The M1A1 has a well-deserved reputation as a “fuel hog.” Nevertheless, in *Iraqi Freedom* both the Army and Marines were able to keep their tanks fueled without undue difficulty. In the case of 3^d Infantry Division, the maneuver brigades were provided with extra fuel trucks prior to the offensive, thus making resupply relatively easy. The Marines had a somewhat greater challenge, but in discussions with all three RCTs in 1st Marine Division, fuel was never critical despite the fact that over 450 miles was covered from Kuwait to Baghdad.

Tanks had a few relatively minor drawbacks. They were a greater maintenance challenge than the lighter armored and wheeled vehicles. By the time they reached Baghdad, most tanks were combat capable but far from fully mission capable, largely due to an overall shortage of spare parts that plagued operations in Iraq. In addition, the tanks needed a better antipersonnel round for the main gun. Most of the threat in Iraq came from light infantry and militia. The most effective tank weapon was the multipurpose antitank (MPAT) round, which was used against enemy infantry, bunkers, and buildings.¹⁰ Several Army and Marine Corps tank units totally expended their MPAT load during the war. Army and Marine officers both stated that tanks need a better weapon to engage dispersed infantry. Coalition tankers expended huge amounts of machinegun ammunition from their co-axial and turret-mounted guns.

In summary, the tank was the single most important ground combat weapon in the war. Tanks led the advance, compensated for poor situational awareness, survived hostile fire, and terrorized the enemy. These attributes contributed much to the rapid rate of advance from Kuwait to Baghdad. A senior Marine Corps infantry officer offered an appropriate summation of what the authors repeatedly heard: “Everybody wanted tanks.”

Infantry Fighting Vehicles

Mechanized infantry worked closely with tanks in small combined arms teams. The Army employed the Bradley (mostly the M-2, but also the cavalry M-3); the Marines used the AAV-7; and the British used the Warrior. The Bradley and Warrior both have stabilized automatic cannons and good protection against light cannon fire and rocket-propelled grenades. Both vehicles carry roughly nine personnel, who may dismount or fire from the vehicle. Exploiting poor Iraqi marksmanship, Soldiers often fired from atop the Bradleys.

The Marine AAV is primarily an amphibious tractor that is optimized for ship-to-shore move-

the tanks would flush the enemy, allowing the Bradleys to employ their 25mm cannons and machineguns

Tanks defending the intersection
of Highways 1 and 27 in Iraq



1st Marine Division (Paul L. Arntine)

ment. It has light armor protection against small arms fire and artillery or mortar fragments. The AAV is a large vehicle that can carry some 20 infantrymen in the rear. Although Marine infantry fought outside their vehicles far more often than the Army infantry, the large number of AAVs in 1st Marine Division meant the Marine rifle battalions were for the most part mechanized infantry.

The Army, Marines, and British forces all employed their armored infantry carriers in a generally similar manner. During movements to contact—the most frequent tactical operation in *Iraqi Freedom*—tanks would almost always lead. Close behind would be infantry fighting vehicles, or AAVs in the case of the Marines. The tanks would usually make contact with the enemy first. When the Iraqis fired on the leading tanks, they would give away their positions, creating targets for the Bradleys, Warriors, and AAVs.

The Marines dismounted their infantry from their vehicles more often than the Army, especially in built-up areas, for several reasons. Marine tactics stress dismounted operations, and the AAV is not as well protected as the Bradley. Importantly, the Marines who rode in the AAVs were essentially temporary passengers since the Marine regiments do not normally have organic infantry fighting vehicles as do the mechanized units of the U.S. and British armies. The Marines believed there were advantages to dismounting their infantry in built-up areas since they could then provide close support for armored vehicles. Officers of 1st Marine Tank Battalion, supporting RCT 7, thought that no tank in their battalion

was hit by rocket-propelled grenades during the campaign because of dismounted infantry support. In contrast, 2^d Marine Tank Battalion's tanks suffered numerous hits while operating with RCT 5. Compared to this dismounted technique that relied heavily on infantry, the Army tended to keep mechanized infantry mounted inside their Bradleys longer than the Marine infantry stayed in their AAVs.¹¹

The weapons of the infantry fighting vehicles (25mm cannon in the Bradley, 30mm in the Warrior, plus machineguns, or the 50-caliber/40mm combination in the “up gun” AAVs) often proved more appropriate than the main guns of the tanks. Because the most frequent targets in Iraq were small groups of infantry dashing between covers, the fast-reacting, stabilized 25mm gun on the Bradley proved highly effective. Its high explosive round was excellent against personnel, while the armor-piercing rounds could easily deal with light armored vehicles. At times, Iraqi infantry approached too close for the Abrams tanks to depress their weapons sufficiently to engage them. In these cases, the following Bradleys would open fire. The automatic cannons and grenade launchers of the infantry fighting vehicles were also excellent against lightly constructed buildings. Against better-built, larger structures, tank main guns, aircraft-delivered weapons, or artillery were more useful. In addition, there were a few tank-on-tank engagements. In those cases coalition tank main guns were the preferred weapon.

The main disadvantage of infantry fighting vehicles was that they had less protection than tanks. While RPG-7 rounds would only rarely penetrate tanks, infantry fighting vehicles were far more vulnerable. That led to the technique of placing tanks in the lead and, in the case of the Marines, the use of considerable amounts of dismounted infantry around vehicles, especially in built-up areas. The high explosive version of the RPG-7 could not penetrate any of the infantry fighting vehicles, but the shaped charge version normally would. Army and Marine personnel cited numerous cases in which external gear on the Bradleys and AAVs (such as sea or duffle bags) often caused RPGs to detonate prematurely, usually negating the shaped charge effect against the hull. Additionally, the front-mounted engines of the Bradley and AAV protected the crew and passengers. If an RPG penetrated the front of the vehicle, the engine would absorb the shaped charge effect. Although the vehicle would then

be a mobility kill, few personnel casualties would result. Although the infantry fighting vehicles were more vulnerable than tanks, there were few catastrophic kills. Probably the worst vehicle loss occurred when a Marine AAV near An Nasiriyah was struck in the rear by an RPG, exploding a large load of mortar ammunition and causing numerous casualties.

Mechanized infantry and tanks formed an inseparable team, with infantry fighting vehicles closely following tanks. For the Army, Marine, and British mechanized infantry and armor played to each other's strengths and compensated for each other's weaknesses.

The U.S. and British armies both augmented their light infantry with armor. The British stated that their light infantry in 3^d Commando and 16th Air Assault Brigades always wanted support from Challenger tanks and Warrior infantry fighting vehicles from 7th Armored Brigade. Challenger 2 tank platoons and companies were attached to light infantry battalions, especially when required to enter urban areas where heavy resistance was expected. Similarly, V Corps withdrew two armor/mechanized infantry task forces from 3^d Infantry Division to provide armor support to 101st Airborne (Air Assault) and 82^d Airborne Divisions as they cleared built-up areas behind 3^d Infantry's advance.

the main disadvantage of infantry fighting vehicles was that they had less protection than tanks

Marine tanks moving along Highway 8 in Baghdad

Insights for the Future

Every operation has distinct features. *Iraqi Freedom* was unusual in that the enemy had large conventional forces, yet fought mostly as smaller unconventional elements that had little antiarmor capability (probably due to the collapse of most Iraqi conventional units). Even so, the operation suggests the following insights for the future.

Heavy forces were decisive. In Iraq, the United States used a full range of land forces—light, medium, and heavy—but heavy forces were the most important ground combat element. They led the ground advance and destroyed the enemy with direct fire. The heavy land forces received excellent support from artillery and tactical air, including help from attack helicopters. Heavy forces broke enemy resistance in the major cities, leading to collapse of the regime. Light and medium ground units also played important roles, but they generally supported the armored formations. Light units occupied areas bypassed by the fast-moving heavy units, while the British and Marine Corps medium elements performed a reconnaissance role.

Until recently, the Army envisioned equipping all its forces with medium-weight combat systems. That concept now appears premature. The Army still needs the full range of light, medium, and heavy forces to accomplish its missions. Trying to prevail with one force type would be difficult and unwise. Heavy forces, developed to fight similarly equipped Warsaw Pact forces, are still dominant in terrain that permits their use, which includes built-up areas. Indeed, most terrain in Iraq was ideal for heavy armor. Since the Army and Marine Corps must be prepared for operations anywhere in the world, retaining a mix of heavy, medium, and light forces will provide commanders with maximum flexibility.

Judging by the Iraq experience, the Army should plan a heterogeneous force that includes light infantry, medium forces (today equipped with combat systems in the Stryker class and later the Future Combat System), and heavy forces, meaning for the foreseeable future the Abrams-Bradley team. The Future Combat System should replace today's heavy forces only if it offers comparable combat power in close combat, including the sort of messy, unpredictable fighting encountered in Iraq. The British army was planning to retain a mixed heavy-medium-light structure before the recent war in Iraq. British army leaders believe the Iraq experience vindicated that decision.¹²



1st Marine Division (Paul L. Anstine)

The Marine Corps should also retain Abrams main battle tanks to give its forces the needed punch. Indeed, Marine infantry were probably more dependent on tank support than their Army mechanized counterparts. The Marines need a better infantry carrier than the AAV-7. During *Iraqi Freedom*, Marine infantry suffered from lack of a vehicle with the firepower and protection of a Bradley. The introduction of the Expeditionary Fighting Vehicle will give Marine infantry a more heavily armed and better-protected vehicle.

Armor compensated for poor situational awareness. The experience in Iraq should deflate expectations for high levels of situational awareness at the lower tactical levels. Army and Marine Corps commanders in Iraq universally agreed that they had poor information about enemy forces. That resulted in U.S. forces usually making contact with the enemy with little or no warning. Eventually, ground units may enjoy much better situational awareness at the tactical level, but only when sensors can penetrate all kinds of cover and concealment, including buildings.

Heavy forces compensated for poor situational awareness by having a high degree of passive protection and overwhelming firepower. It mattered little when Fedayeen Saddam fired first because their weapons only rarely penetrated

using an explosive device, take the convoys under fire for a few minutes, and then recede into the populace. It was during this stability phase of operations that the Army introduced its first Stryker-equipped units into northern Iraq.

Against this tactic, U.S. forces required well-protected vehicles with considerable firepower, especially general-purpose machineguns and grenade launchers. There was less use for the heavy firepower of an Abrams tank and for fixed-wing air support because of the need to minimize collateral damage. However, support units discovered that they needed at least some armor protection for vehicles due to the constant threat of ambushes and roadside mines. Today, heavy forces continue to play central roles in protecting convoys and conducting combat patrols.

Situational awareness at the tactical level will continue to improve as land forces acquire new systems, such as unmanned aerial vehicles, to reconnoiter before contact. But for the foreseeable future, especially against irregular forces, land forces will still need protection against enemies who go unseen until they detonate a device or open fire. Armor will continue to play a key role not only for major combat operations, but also during stability operations.

Some pundits predicted the demise of heavy armored vehicles after the Yom Kippur War in 1973. Advances in shaped charge weapons, including shoulder-fired rocket launchers and antitank guided missiles, were supposed to make armor, including the main battle tank, obsolete. The prediction may come true someday, but 30 years later, heavy armored vehicles still dominate the land battle in most terrain types.

Against a better-armed enemy, armor would be more vulnerable than it was against Iraqi forces in 2003. The frontal arc of an Abrams currently resists almost anything an enemy ground force can throw at it, but other parts of the Abrams and all of a Bradley are far more susceptible to damage. For example, modern top-attack missiles could present a severe challenge. However, armor has survived decades of proliferation of antiarmor systems, and remains irreplaceable. The high protection and awesome firepower of heavy forces was a chief reason for the rapid rate of advance and low casualties during *Iraqi Freedom*.

Warfare is evolving rapidly in the computer age, especially in sensing technology, precision guidance, and control of forces. Heavy forces benefit from these advances while continuing to offer

heavy forces compensated for poor situational awareness by having a high degree of passive protection and overwhelming firepower

an Abrams' armor and the act of firing on U.S. armor invited a devastating response. The Fedayeen should, of course, have allowed armored vehicles to pass and opened fire on thin-skinned support vehicles. However, they would have needed enough popular support to keep civilians from warning U.S. forces of their positions, not a sound assumption during Saddam Hussein's regime. Particularly in the Shi'ite south, many Iraqis initially regarded coalition forces as liberators and willingly provided information about pockets of Ba'thist resistance.

After the fall of the Ba'thist regime, the insurgents became more sophisticated. They learned not to attack in ways that invited devastating responses. They avoided contact by using mortars and improvised explosive devices rather than direct fire. When they did use direct fire, they soon broke contact, having learned that U.S. forces welcomed and always won protracted fire-fights. Their primary tactic was to halt convoys



Marines refueling
Abrams main battle tanks

1st Marine Division (Paul L. Arntine)

the advantage of survivability. They were developed during World War I to solve the problem of crossing terrain swept by enemy fire. Ninety years later, they still solve this problem despite a wide range of efforts to make them obsolete. It should be no surprise that heavy forces are useful in conventional combat. In Iraq, heavy forces have also proven just as useful in combat against irregular forces employing swarming tactics, even in urban terrain. They were the key to a rapid victory over the Ba'thist regime that saved the lives of not only coalition soldiers but also Iraqi civilians. As transformation plans are refined, it is likely that heavy forces will retain an important role. **JFQ**

NOTES

¹ Anthony H. Cordesman, *The Iraq War: Strategy, Tactics, and Military Lessons* (Washington, DC: Center for Strategic and International Studies, 2003), 37–39.

² Insights on the Marines' use of tanks and AAVs were obtained during interviews with 1st Marine Division, Camp Pendleton, California, October 1–3, 2003, and 2^d Marine Division, Camp Lejeune, North Carolina, February 2004.

³ "Operation Iraqi Freedom, 3^d Infantry Division (Mechanized) 'Rock of the Marne' After Action Report," final draft, May 12, 2003.

⁴ "UK Forces' Iraq Lessons Learned Reviewed," *International Defense Digest* (September 2003), 14.

⁵ Interviews with British army officers, British Army Doctrine and Development Command, Upavon, UK, July 2003.

⁶ Interviews with 1st Brigade, 3^d Infantry Division, Fort Stewart, Georgia, October 28, 2003.

⁷ "Operation Iraqi Freedom," 8–9.

⁸ David Talbot, "How Technology Failed in Iraq," *MIT Technology Review* (November 2004).

⁹ Interviews with 2^d Marine Division, February 2004.

¹⁰ Interviews with 3^d Infantry Division and 1st Marine Division, October 2003.

¹¹ Interviews with 1st Marine Division, Camp Pendleton and 29 Palms Marine Base, California, October 2003.

¹² Discussions with British Army Doctrine and Development Command, Upavon, UK, August 2003.



U.S. Soldiers from Task Force Konohiki
with Iraqis they trained for patrols

1st Combat Camera Squadron (Suzanne M. Day)

Cross-Functional Working Groups Changing the Way Staffs Are Organized

By JOHN S. HURLEY

Over the past several years, the Army has been drastically altering the way it organizes and fights. It is transforming divisional organizations into *units of employment* and brigade organizations into *units of action* while revolutionizing the way it thinks about and employs Reserve and National Guard forces. While these changes are critical to the ability to fight in a joint, interagency, and

coalition environment, the Army must seize the momentum and continue to transform. The next area the service must address is how it organizes and aligns staffs.

This article proposes a new method for organizing staff sections. In addition to building staffs around functional areas of expertise, commands need staff sections that are mission-focused and whose members have expertise in a variety of

Lieutenant Colonel John S. Hurley, USA, is assigned to U.S. Army NATO, Allied Joint Forces Command Naples, as the civil engineer on the Joint Forces Command Naples relocation project.

functions. These *cross-functional working groups* (CFWGs) would be more responsive to both customers' and commanders' needs and produce synchronized products more quickly than traditional staff sections. This article cites three examples from both peace and war where CFWGs have been successful.

Organizing by Task

By definition, staff sections are designed to support both the commander and the unit. They help the commander understand the current situation, prepare for future actions, and command, control, and communicate with subordinate units. They assist subordinate units by providing administrative and logistic support, as well as facilitating coordination and synchronization with other units.

Staff organizations, from battalion to Army level, are still rooted in the Prussian system. Each unit has a fixed number of staff sections, each with a unique function. A typical battalion has an S-1 for personnel support, S-2 for intelligence support, S-3 for operations, and S-4 for logistic support, along with maintenance and communications sections. Each section is composed of personnel with particular subject matter expertise. For example, S-1 Soldiers are trained personnel specialists, and the section provides general personnel support to the unit. As a result, each section is homogeneous by design and functionally organized.

The fundamental rubric for staff organization has hardly changed in a century. The Army has added engineer, civil-military, or financial sections, but the idea that commanders and units are best served by homogeneous, functionally aligned staff sections remains.

But given the increase in joint, interagency, and coalition operations, are functionally organized sections the most effective way to fight tomorrow's wars? No longer can a unit expect to perform only a few core competencies when it deploys to theater. The new environment demands that units work with different organizations to perform a wide variety of unique missions and tasks.

Perhaps instead of functional staff sections, it would be more effective to task-organize staffs the same way units are task-organized—that is, to resource and create staff sections tailored to particular assignments or missions rather than using the existing headquarters staff. By tailoring staff

sections, all the benefits of task-organizing units become available to staffs. For example, rather than providing support to all missions a unit performs, the tailored section would support only a specific mission. Knowledge of the mission would thus be more thorough and refined, making the task-organized staff more capable than the traditional staff structure.

Task-organized staffs are not new; they have been used under such names as "tiger teams." Nevertheless, their appearances have been surprisingly rare despite their proven efficacy. For the purposes of this article, task-organized (or tailored) staffs will be referred to as cross-functional working groups, the name used at Joint Forces Command, North Atlantic Treaty Organization (NATO), in Naples (JFCNP). To illustrate the concept, a description of the CFWG will be followed with three examples of successful working groups.

The fundamental principle behind the group is that, rather than being organized around a functional area, it is crafted to solve a particular problem or support a unique mission; it is mission-centric rather than function-centric—for example, the Balkans CFWG rather than the personnel staff section.

The CFWG is composed of action officers from multiple functional staff sections. (In this article, the terms *action* or *staff* officers refer to officers, noncommissioned officers, and enlisted members who serve in staff sections.) Once action officers become members of the CFWG, they take all directions and orders from the chief of the working group, not their parent staff section. The CFWG, in turn, falls directly under the commander or his executive agent—the chief of staff or executive officer. This task organization makes the CFWG fundamentally different from committees, in which staff officers often participate. In a committee, the staff officer belongs to his functional staff section and only occasionally meets with the committee. In a CFWG, he belongs to and works for the CFWG.

An example is germane. A battalion might have ten Soldiers in S-1, five in S-2, ten in S-3, and eight in S-4. They all support the battalion's many missions through their own areas of expertise; but while deployed to Iraq, the battalion may be tasked to collect captured weapons and ordnance. Although the battalion has never trained for this mission, it is a critical task that must be accomplished quickly. Accordingly, the battalion could create a tailored CFWG comprised of six Soldiers—two intelligence, two operations, one lo-

**the fundamental rubric
for staff organization has
hardly changed in a century**

gistic, and one personnel. By focusing exclusively on weapons collection, the group could provide timely support to both the units and the commander, while the units executing this mission would have a customized staff supporting them.

This may sound simple, but a word of caution is in order. The mission would often be best served if a working group was formed that received guidance directly from the commander and whose members answered only to the working group. Those who have been primary staff officers are familiar with attending meeting after meeting, where they gather bits of information and taskers to pass down to action officers. The action officers, in turn, pass their products up through their functional staff section chiefs to be integrated into a master plan. In this mode, the value added by the primary staff officers is questionable.

Not Reinventing the Wheel

Under the CFWG concept, the action officers are removed from the staff sections and are directly integrated into the working group. As a result, the commander's guidance on the project is directly passed to the CFWG chief and then to the action officers. There are three immediate advantages of this task organization. First, each action officer receives identical guidance,

each action officer receives identical guidance, so there is no opportunity for a primary staff section leader to miscommunicate it

so there is no opportunity for a primary staff section leader to miscommunicate it. Second, because the information does not filter down through the staff sections, the action officers, and later the CFWG, can be more responsive and reduce the turnaround time. Third, traditional (functionally aligned) staff section leaders can focus on issues that apply to their functional areas rather than merely acting as conduits for information.

At this point, some may object that this model would remove the traditional staff section leader and his expertise from the product. The concern is valid, but the action officer can and should go back to the functional staff section leader for guidance, mentoring, and quality assurance and control. It is during these interactions that the traditional staff section leader can shape the product. The input given for guidance and mentoring is fundamentally different from input from the one responsible for the project.

Also, some may conclude that a CFWG is reinventing the wheel—that the Army is already

full of working groups. They are correct; one need look no farther than any division's plans section to realize that every division in the Army has a task-organized, multifunctional staff structured to solve a problem (for example, producing plans and orders for the division).

The fundamental difference between existing sections and the CFWG is that the commander creates cross-functional working groups as missions develop, and they exist for the duration of that mission and are then disbanded. For example, to plan and coordinate military and political activities in the Balkans, the Commander of Allied Joint Forces Command Naples, the NATO commander for that area of operations, could create a staff section specifically designed to work issues from that region. Once the mission is complete, the group will be dissolved. Today's multifunctional shops are generally permanent; we can hardly fathom a time when we will not need them. Further, Army doctrine dictates that they will exist and how they will be employed, and they are resourced with manning documents to ensure that personnel are available to fill them.

CFWGs at Work

Three examples will clarify the working of the CFWG: the Base Camp Development Group (the G-8) in the 101st Airborne Division (Air Assault) during Operation *Iraqi Freedom*; the Project Management Office in Allied Joint Forces Command Naples; and the NATO Training Mission Iraq CFWG, again in Naples.

During *Iraqi Freedom*, the 101st Airborne Division (Air Assault) closed on Mosul in May 2003. It became apparent that summer that the initial assumption that the division would quickly depart was no longer valid. Rather, it would remain in Mosul for a year, then replacement units would take over. As a result, the division began to resource and develop base camps to house over 20,000 Soldiers. But first it had to decide who would organize and lead this mammoth effort. Obvious choices included the divisional engineers, an attached engineer group, the G-3 Plans Section, and the Division Support Command (since base camp development includes many service and support requirements in addition to construction). Most units in theater employed one of these courses of action.

There were advantages and disadvantages with each choice. The Assistant Division Commander for Support, Brigadier General Jeffrey Schloesser, the "base camp pasha" for the division,



Fleet Combat Camera Group Pacific (Edward G. Martens)

Army scout platoon investigating possible weapons cache, Operation Iraqi Freedom

concluded that to house the entire division by winter, the organization in charge had to focus solely on that mission and be immediately responsive to subordinate unit housing needs, contractor issues, and his own guidance. He believed the only way to achieve that level of responsiveness was to create a CFWG for base camps.

To demonstrate that the CFWG was independent of other staff sections and units, Schloesser designated it the G-8 (the division does not have a standing G-8 section). The chief was a major, and the G-8 contained permanent logistic, contracting, and engineer personnel. When required, the section received augmentation from G-1, G-4, G-6, and the Staff Judge Advocate. Because the CFWG was independent of other staffs and units, it was able to dedicate itself to base camp development, received guidance straight from General Schloesser, and reported directly to him. The benefits were soon apparent: although the division started base camp development later than any major unit in theater, it was able to house over 20,000 Soldiers by the end of January in containerized units or improved existing structures, an unlikely feat without an improved staff.

The second example of a successful CFWG comes from Allied Joint Forces Command Naples (AJFCN), a NATO command that is building a headquarters costing over \$180 million. As with the previous example, AJFCN could have tasked several standing organizations to execute the

project, for example, J-4, J-6 (because of the complexity of establishing a new communications and information network), or the Support Group (a colonel-level command responsible for current base maintenance and life support issues). But NATO decided to establish the Project Management Office as an independent CFWG. The office is comprised of members from the J-Engineer, J-6, and Support Group. Additionally, there is a civilian project coordinator whose duties resemble those of a contracting officer. Finally, the director answers to the Deputy Chief of Staff for Support, a major general.

The advantage is that since the group works together as an independent organization, it is immediately responsive to issues that develop on the project or requests for information from the command group. For example, as the command refines its guidance for equipping the new facility, the Project Management Office can act immediately. Further, since the action officers are not members of other sections, they can focus full time on the project. As a result, the office can be proactive in managing and ensuring quality control. The importance of this posture can hardly be understated since delays from inefficiencies or lax standards will cost NATO \$10 million per year in lease extensions on the current facility.

An additional advantage of the Project Management Office is that, as a NATO organization, AJFCN is a joint and combined command, so its

staff officers represent all services and NATO nations. Communications among staff officers are thus doubly challenging. Beyond the normal joint difficulties, such as the Army trying to talk with the Navy, there is often a language barrier. One has only to witness a German officer trying to communicate with an Italian civilian in English, the official language of NATO, to appreciate the problem.

In such an environment, the value of habitual work relationships is immense. Over time, staff officers from different services, agencies, and nations learn each other's strengths and weaknesses and develop a common language applicable to the specific working group. It would be hard to fathom the difficulties encountered in the

Project Management Office if staff officers rotated in and out based on work schedules or the whims of superiors. Trying to communicate rather than working issues for the commander is a very real problem that multinational and interagency staff sections face as they coordinate projects.

Lest one conclude that CFWGs are useful solely for niche engineer missions, the final example is more universal. In response to Operation *Iraqi Freedom*, NATO Training Mission–Iraq (NTM–I) was formed to focus on training and advice to the Iraqi Ministry of Defense and the Iraqi Security Forces' middle- to senior-level leaders, as well as on the coordination of equipment assistance for the security forces. Additionally, NTM–I

assists the Ministry of Defense in establishing an Iraqi-led Training, Education, and Doctrine Center near Baghdad. This mission has elements both in Iraq and throughout Europe.

The support for NTM–I includes predeployment training, personnel rotations, equipment contributions, and budget issues and is currently handled by the JFCNP. To ensure that this support is responsive, the commander created a CFWG to handle all issues related to the project. Building on experiences in the Balkans, the NTM–I CFWG is composed of members from nearly every staff section in the command and meets twice daily to handle all staff work and actions required to support the mission. Further, group members have dedicated workspace in the Joint Operations Center, which facilitates coordination and synchronization. Finally, the chief of the NTM–I CFWG is a lieutenant colonel whose singular responsibility is to run the CFWG and who answers directly to the Deputy Chief of Staff for Operations.

Because it is a standing staff that meets daily, direction and guidance from the commander or from Iraq are acted on immediately without having to pass through the functional staff sections. Further, since the staff physically meets and works together in a dedicated office space, its products are consistently more synchronized than products of functional staff sections in the command. Finally, products and solutions are quickly provided to the commander or the field as they are already synchronized across the staff and need only the approval of the Deputy Chief of Staff for Operations before moving to the command group.

As with the second example, the NTM–I CFWG dramatically improves communication within Naples. For other issues, the commander (a U.S. Navy admiral) issues guidance to the deputy and assistant chiefs of staff who, as expected in a joint and allied command, have a variety of national and service backgrounds. This guidance is then passed down to each staff section. However, because these deputy and assistant chiefs of staff have extremely varied backgrounds (to include languages spoken), the commander's guidance can be subtly different between the staff sections. These differences can lead to difficulties when the staff sections try to synchronize their products.

In the case of the NTM–I CFWG, the commander's guidance is given to the Deputy Chief of Staff for Operations and directly to the CFWG, ensuring that each member of the staff gets the same guidance. As a result, staff officers can more easily synchronize the product and, in turn, can

the CFWG was able to house over 20,000 Soldiers by the end of January, an unlikely feat without an improved staff

Marines receiving final instructions to start Operation *Scimitar* in Zaidon, Iraq



2: Marine Division Combat Camera (Matthew Hutchison)



U.S. Navy (Mary Overstreet)

Mobile construction battalion providing security for convoy

the functional staff section must be prepared to handle an increased workload as members depart for work in a CFWG

more effectively and quickly support both the commander and the mission in Iraq.

Based on the success of the CFWG, JFCNP has published a command directive detailing the purpose, techniques, and procedures for working groups. (The command does not formalize and publish staff procedures on a whim; thus, this publication is symbolic of the importance of working groups in the command.) In the future, among other changes, all working groups will be appointed with orders from the Chief of Staff, and the chief of the working group will be an assistant chief of the staff (for example, J-1, J-2, and so on).

Not Perfect Yet

Despite the high marks bestowed on CFWGs, they are not without their shortcomings. First, personnel management using the groups must be flexible. In order to execute this system, action officers will move from their functional staff sections to CFWG and back, creating turmoil not only with transferring work responsibilities but also with counseling, mentorship, and efficiency reporting. Additionally, the functional staff section must be prepared to handle an increased workload as members depart for work in a CFWG.

Second, by definition, these CFWGs are new staff sections that must be integrated into the organization. To improve responsiveness, they should have access to the commander or his representative, but that is a double-edged sword since

an organization can overwhelm a commander with too many sections having direct access. However, burying the CFWG in a staff section could negate the group's inherent responsiveness.

Third, CFWGs will never replace functional staff sections. There will always be a need to handle general personnel, intelligence, or logistic issues. Therefore, while the number of personnel may remain relatively constant, the number of staff sections will increase. In other words, adding a CFWG will flatten the staff hierarchy, testing the commander's span of control of subordinate sections while giving him greater visibility on the issues. Although this will initially be a challenge for the organization, it will increase efficiency overall, which is why many competitive business leaders are flattening their staff hierarchies.

Fourth, the commander must be ready to deal with bruised egos. A CFWG is formed to deal with only the most critical missions. As a result, many functional staff sections and staff leaders might feel that their contributions or their organizations add minimal value. Such attitudes can have severe consequences on the organization overall.

Finally, until the concept of CFWG is fully embraced by the organization, conflicts can arise as young staff officers are pulled between their old functional staff sections and the new CFWG. In short, they will receive guidance and missions from both if responsibilities are not carefully delineated. Also, some functional staff section leaders will still want to influence and control the CFWG product. Since they might not be privy to all the commander's guidance, their control can unnecessarily delay the product.

The noted shortcomings, as well as others that will undoubtedly surface while implementing the groups, are not meant to dissuade organizations from using cross-functional working groups. Rather they are offered as issues that should be resolved before implementation. These few obvious problems notwithstanding, the benefits of CFWGs outweigh their costs. They will allow the command to respond quickly to unexpected missions or tasks while working with unfamiliar units from other services, agencies, and nations. Working groups do not replace existing functional staff sections; rather they augment them and provide adaptability to the command. Army transformation is ultimately about giving the command flexibility to prepare for and wage war most effectively. The cross-functional working group is another way to do that.

JFQ



B-17s bombing Messina, Sicily

U.S. Air Force

Air Support of the Allied Landings in Sicily, Salerno, and Anzio

By MATTHEW G. ST. CLAIR

Lieutenant Colonel Matthew G. St. Clair, USMC, serves with 4th Marine Expeditionary Brigade (Anti-Terrorism).

This study analyzes the operations of the Twelfth Air Force in the Mediterranean theater from 1943 to 1944, specifically in regard to the three Allied amphibious operations at Sicily, Salerno, and Anzio. These landings illustrate a wide range of tactical and operational innovations, doctrine, and coalition air warfare. In the interwar years, the Army Air Corps had given virtually no thought to supporting amphibious operations, yet it had to develop a doctrine for such operations.

Amphibious assaults are the most complex of all military operations to execute because they demand detailed coordination and planning among

the Army, Navy, and Air Force. Allied planners in the Mediterranean had few historical models as examples in early 1943. The large amphibious landings in North Africa in 1942 had experienced only sporadic resistance from the Vichy French both on the ground and in the air, and the defense never mounted a serious air or naval threat.

Many U.S. Army planners were reluctant to embrace the idea of amphibious operations and believed that landings against an opposed shore had little chance of success. The British were not strong advocates of amphibious operations because the failures at Gallipoli in 1915 and Dieppe in 1942

the doctrine and procedures developed by the end of the African campaign served as the model for Sicily, Italy, and northwest Europe

continued to haunt them. Yet amphibious landings would be critical to the operational success of the Allies in the Mediterranean. General Dwight Eisenhower and his commanders had limited experience in their planning and coordination, and Airmen had not developed a doctrine to support them. The learning curve would be steep and innovation was essential.

The story of Twelfth Air Force support of the Allied landings contains valuable lessons for today's coalition warfare environment as well as issues of air-ground coordination, close air support, and the strategic effects of airpower. This study is not intended to be an operational history of Twelfth Air Force; rather, it follows the early evolution of the tactical and operational techniques and procedures used and the development of doctrine that influenced the organization of the U.S. Air Force.

The conclusion addresses some of the more important issues of interest today. Twelfth Air Force entered the war with no combat experience, untested doctrine, and tactics that frus-

trated Airmen and ground commanders alike. As the war in the Mediterranean theater progressed, the Airmen of the Twelfth Air Force developed effective doctrine and tactical innovations that made significant contributions to the Allied strategy and established precedents that are employed in the 21st century. In the end, the study shows the importance of sound doctrine, innovation, and leadership.

Air Operations in North Africa

Operation *Torch* and the eventual Allied victory in Tunisia were executed with considerable friction among the Americans, British, and forces of the Free French. Initial procedures regarding command and control, doctrine, logistics, and employment of airpower were not universally agreed upon, which caused considerable debate between the plan-

ning staffs as well as between air and ground commanders. However, the doctrine and procedures developed by the end of the African campaign served as the basic model for campaigns in Sicily, Italy, and northwest Europe. The airpower doctrine advocated by American Airmen laid the foundation for changes to the U.S. Army Air Forces standing field regulations for air superiority, interdiction, and close air support. Twelfth Air Force and the Royal Air Force (RAF) Eastern Air Command were initially unable to achieve air superiority, and poor coordination of the overall air effort frustrated Allied commanders. It became imperative for Eisenhower to resolve these issues and adopt a doctrine providing for employment of air assets to gain and maintain air superiority and provide close air support to ground commanders.¹

Prewar airpower doctrine for the Army Air Force and RAF focused on strategic bombing and aerial interdiction; thus, both air forces were organized around a substantial fleet of bombers. However, the Mediterranean theater had few strategic—that is, in-

dustrial—targets for Airmen to attack. What it did have were vital transportation centers, especially ports. The long-range American heavy bombers were ideal for striking the vulnerable transportation network the Axis armies required for all their supplies.

What American and British airmen lacked was a well-considered doctrine for tactical support and amphibious operations. Allied planners had to adjust their doctrinal mindset and adopt command and control procedures to allow for the integration of all aircraft. Airmen were required to develop air plans in support of winning air superiority, interdiction, close air support, and strategic bombing not just in North Africa, specifically Tunisia, but also in the central Mediterranean.² The British Desert Air Force had been operating in the Middle East since 1940 and gained combat experience, but the American Twelfth Air Force arrived in North Africa as an inexperienced and hastily organized unit.

Major General Carl Spaatz, commander of U.S. Eighth Air Force, was directed to organize, train, and equip a new air force, consisting primarily of Eighth Air Force units, to support Operation *Torch*. This force was designated as Twelfth Air Force and given the code name *Junior*. Brigadier General James Doolittle arrived in England on August 6, 1942, to command the new force, which consisted of two heavy bomb groups, two P-38 groups, two Spitfire groups, three medium bomb groups, one transport group, and one light bomb group.³ U.S. heavy bombers in the Mediterranean theater gave Twelfth Air Force the capability to hit vital interdiction targets deep in Italy as well as Axis airfields in southern France.

On October 24, 1942, the headquarters deployed to North Africa with a doctrine well versed in strategic bombing but lacking in tactical support. The Army Air Force had no doctrine for supporting amphibious operations. Issues of command, control, tactics, doctrine, and coordination with the British had been overlooked,



British LtGen. Bernard L. Montgomery and LTG George S. Patton, Jr., USA, study map of Sicily, July 1943

missions, but the procedures identified were not realistic in terms of effectiveness. FM 31–35 was a joint ground and air attempt at stipulating a doctrine for air support. The manual paid only slight attention to the techniques of close air support, ignoring procedures for battlefield operations and prioritization of targets and missions.

FM 31–35 essentially subordinated the role of the air force to the requirements of the ground force commander:

The ground force commander, in collaboration with the air support commander, decides the air support required. . . . The final decision as to priority of targets rests with the commander of the supported unit. The decision as to whether or not an air support mission will be ordered rests with the commander of the supported unit.

British and American airmen advocated centralized command of all air assets by the air commander, while most ground commanders believed they should control all ground support aircraft to prevent airmen from tasking these aircraft with other missions. The air forces supporting the Allied invasion of North Africa had little time to train and prepare for the unique support that would be required during Operation *Torch*. Airmen of Twelfth Air Force and Eastern Air Command would have to develop many tactical and joint procedures, while simultaneously convincing ground commanders of the importance of adopting the principle of a centralized air command.

Operation *Torch*

General Eisenhower, following a course that was consistent with Army doctrine but frustrating to Airmen, did not designate a senior Airman to command the air forces supporting Operation *Torch*. General Doolittle commanded the Twelfth, and Air Marshall Sir William Welsh commanded Eastern Air Command. The headquarters of

and Doolittle and his staff initially embraced prewar tactical doctrine. The Twelfth entered the war with a doctrine that gave the supported ground com-

FM 31–35 essentially subordinated the role of the air force to the requirements of the ground force commander

mander control of air assets assigned to support his maneuver while relegating the gaining and maintaining of air superiority to a lesser priority.

During operations in North Africa, the Army Air Force used three primary doctrinal publications specifying employment of air forces: Field Manual (FM) 1–5, *Employment of Aviation of the Army* (1940); FM 1–10, *Tactics and*

Techniques of Air Attack (1942); and FM 31–35, *Aviation in Support of Ground Forces* (1942). FM 1–5 addressed the major principles of gaining and maintaining air superiority and of centralized command but, did not emphasize air as an offensive weapon, nor did it identify specific procedures and require-

ments for close air support, maritime operations, or air interdiction missions. The manual did stipulate that “combined operations of air and ground forces must be closely coordinated by the commander of the combined force and all operations conducted in accordance with a well defined plan.” FM 1–10 addressed close air support, maritime interdiction, and bomber escort

Courtesy Naval Historical Foundation (Collection of ADM H. Kent Hewitt)

Waiting to load tanks in Tunisia 2 days
before invasion of Sicily, July 1943



NAFIA War & Conflict

the two air forces were not collocated, contributing to command, control, and coordination problems for providing air support. Neither commander was able to develop a clear understanding of events taking place ashore. Eastern Air Command provided air support to Eastern Task Force while XII Air Systems Command provided support to Western Task Force and elements of XII Fighter and Bomber Commands supported Central Task Force.

Subordination of the air assets under the ground task force commanders and lack of unity of command of air assets prevented Eisenhower's air planners from developing a coordinated air plan to support the theater of operations. Individual ground commanders saw the enemy to their front and associated air operations as the most vital area of the campaign and wanted

the air forces in their area to support them exclusively. Ground commanders agreed that gaining and maintaining air superiority, as advocated by Airmen, was essential, but none wanted to give up tactical air support to achieve it.

During the first weeks of fighting ashore, ground commanders continually complained about being attacked by German Stuka dive-bombers and demanded that the air force provide air umbrellas to cover their front. Air commanders argued that the most efficient way to eliminate the threat was to concentrate on gaining air superiority and attack the Stukas at their airfields. Many ground commanders were not familiar with the capabilities of individual aircraft and assigned missions to planes that could not effectively execute them, often suffering severe loss in the attempt. While the Germans

reaped the benefits of air superiority in the winter of 1942–1943, the Allied air forces remained subordinated to the ground commanders executing an uncoordinated air campaign with minimal effectiveness.

Northwest African Air Force

By December 1942, Eisenhower had grown increasingly frustrated with coordinating the efforts of Twelfth Air Force and Eastern Air Command. The time had come to embrace the theory of American and British airmen. He informed General George Marshall, Chief of Staff of the U.S. Army, that in order to better coordinate his air assets, a single air commander was required, and he recommended General Spaatz. On January 5, 1943, Spaatz was appointed Air Commander in Chief of the Allied Air Forces of *Torch*, commanding

Twelfth Air Force, Eastern Air Command, and various French air units.⁴

Also in January, President Franklin Roosevelt and Prime Minister Winston Churchill met at Casablanca to discuss the direction of Allied strategy after the Tunisian campaign. Among issues decided was the reorganization of the air forces supporting *Torch*. The Combined Chiefs of Staff agreed that Eastern Air Command and Twelfth Air Force should be organized into one air force. On February 3, Spaatz ordered the formation of a planning committee to identify the exact composition required for a single air force. The committee recommended that a combined American and British headquarters be formed and designated the Northwest African Air Command, consisting of Twelfth Air Force (to include all Allied heavy and medium bombers and long-range fighters), Tunisian Air Command, Coastal Defense Command, Moroccan Air Command, and a consolidated Air Service Command.

Roosevelt and Churchill decided at Casablanca to designate General Eisenhower as Commander in Chief of the Mediterranean theater of operations and adopt the organizational command structure used by the British Desert Air Force and Eighth Army. British Air Chief Marshal Sir Arthur Tedder was designated as Commander in Chief, Mediterranean Air Command (MAC), which commanded all aviation assets in the Mediterranean.

The Northwest African Air Force (NAAF) was officially activated on February 18, 1943, with six subordinate units: Northwest African Strategic Air Force (NASAF), Northwest African Tactical Air Force (NATAF), Northwest African Air Service Command; Northwest African Coastal Air Force, Northwest African Training Command, and Northwest African Photographic Reconnaissance Wing.⁵ The creation of NAAF allowed implementation of a coordinated air campaign, providing increased operational and tactical flexibility. Air superiority became the priority, and an offensive mindset

dominated the employment of air assets. This doctrine set the precedent for future air operations and would soon receive its initial test.

An Airpower Victory

Operation *Husky* was the first operation in which air commanders exercised centralized control of air assets under NAAF, employing them in a coordinated effort supporting all aspects of the invasion. Air assets were used to provide cover for the naval armada, interdiction to isolate the battlefield, and close air support for ground forces. Gaining and maintaining air superiority was the top priority and was achieved by the bombardment of enemy airfields on Pantelleria and Sicily. The relentless pressure of Allied air forces destroyed hundreds of enemy aircraft and compelled the Germans and Italians to evacuate their Sicilian airfields, leaving behind some 1,100 aircraft. Embracing lessons learned in Tunisia, the Allied air plan for *Husky* was designed around four primary missions: neutralizing enemy air forces, disrupting lines of communication, isolating the battlefield, and providing close air support. Other tasks included protecting the Allied naval armada, coordinating naval and air operations, reinforcing convoys, performing airborne assaults, protecting rear areas from enemy air attacks, and conducting air-sea rescue. The air plan consisted of four phases covering preparatory operations, assault phase, assault on Catania, and the reduction of the remainder of Sicily.⁶ Preparatory operations included conducting Operation *Corkscrew* (capturing the island of Pantelleria and its critical airfield), interdicting enemy reinforcement and supply of Sicily and Sardinia, neutralizing Axis airfields and

gaining air supremacy, building up air facilities to make Malta an "aircraft carrier" for invasion support, and training troop carrier and glider pilots to transport airborne forces.

NATAF assumed planning responsibility for employing tactical air forces while Doolittle planned strategic operations. The *Husky* air planners had over 4,000 operational aircraft at their disposal, divided among 146 American squadrons and 113.5 British squadrons, against up to 1,600 Axis aircraft.⁷ In order for Allied aircraft to operate freely over the Sicilian Straits and eastern Tunisian plains, airmen would have to eliminate German radar direction-finding stations on Pantelleria and destroy enemy air assets on the island.

Seizing Pantelleria would neutralize German long-range radar stations and allow Allied fighters to use the airfield and help aircraft from Malta protect the invasion convoys and beaches during the assault phase of *Husky*. It would also eliminate the ship-watching stations that reported Allied shipping movement. The Axis defense consisted of 15 batteries along the coast of the 42.5-square-mile island, with guns ranging from 90mm to 120mm, with the largest concentration in the north where any amphibious assault would have to occur. A contingent of approximately 100 aircraft, predominantly Italian fighters, was stationed at the airfield.⁸

The NAAF objectives for *Corkscrew* were to destroy any possibility of air interference from the island, blockade

Royal Air Force crew services
British Spitfire on captured
Sicilian airfield



British Ministry of Defence

it against reinforcement by sea, reduce the coastal defenses to permit landing operations, reduce morale of the garrison by continuous bombing, and provide air cover for naval vessels and landing craft. Strategic bombing began on May 15, and 1,267 tons of bombs were dropped by May 30, which almost neutralized the airdrome and prevented the movement of Axis shipping. Air sorties by medium and fighter-bombers, 50 to 60 per day, rendered the port unusable. Heavy bombers began bombing on June 1, focusing on the coastal gun positions. The period from May 30 to June 11 saw over 4,770 sorties, which saturated the sky with so many aircraft that planes had to circle the target area until their turn to attack. Bomber runs were immediately followed by antipersonnel and strafing attacks. The British First Infantry Division embarked on amphibious shipping on June 10 and began sailing toward Pantelleria for an assault at 1100 on June 11. As the first assault craft reached the shore, enemy resistance ceased except for sporadic small arms fire on one landing beach. The island was declared secured on June 13, the first strategic position the Allies captured through the use of airpower.⁹

Operation Husky

Immediately following operations in Tunisia, the strategic air force began modest operations against enemy airdromes in Sicily, Sardinia, southern Italy, and the eastern Mediterranean, as well as submarine bases and communication and industrial targets, until D-7. Winning and maintaining air superiority was the objective of the bombing. From D-7 until D-Day, the focus of strategic bombing was to eliminate the enemy air force, with priority given to German rather than Italian airdromes. These operations were conducted day and night, keeping unrelenting pressure on the *Luftwaffe*. A tactic called *Intruder* operations was introduced, aimed at aircraft approaching their airdromes after dark. A single fighter, or "lone wolf," would locate an enemy

formation and follow the aircraft to their home base. As the formation circled over the airfield preparing to land, the lone wolf attacked from the rear, destroyed as many aircraft as possible, and disengaged.¹⁰

The ports of Messina, Palermo, and Catania were vital enemy lines of communication and were bombed continuously. Other targets of interest were rail marshalling yards and industrial and communication targets. The pre-invasion bombardment by the strategic air force caused the opposing air force to withdraw from Sicilian airfields and seek shelter on the Italian mainland. That significantly reduced enemy ability to provide air support to ground forces defending the island.

While the strategic air force neutralized enemy airfields, fighters assigned to the Coastal Air Force and others based on Malta provided convoy protection to the massive Allied naval armada approaching Sicily from North Africa, which included 945 ships and landing craft of the U.S. Navy and 1,645 ships and landing craft of the Royal Navy. On D-2 and D-1, some 570 sorties covered the western convoys and 540 provided local defense. The convoy protection the air forces provided prevented the enemy from attempting any significant attacks. Only one strike by six enemy aircraft attempted to disrupt the convoys on D-1, and it was easily defeated.¹¹ NATAF aircraft were used extensively for interdiction prior to the main assault. XII Air Systems Com-

air superiority became the priority, and an offensive mindset dominated the employment of air assets

mand and British P-51s participated in newly implemented daylight intrusion raids known as *Rhubarbs*. These missions were carried out under low overcast conditions, 500 to 1,000 feet, against aircraft on the ground, motor transport assets, locomotives, and shipping. Two aircraft executed the mission, one providing cover and the other at-

tacking the target at a speed of 270 mph. The elements of surprise, observation, and coordination were essential to these missions, and intense training was developed that made them highly successful.

Allied assault forces encountered minimal resistance on D-Day, and by 0600 on July 10 all landings were complete and the infantry began advancing inland. Air planners were not able to provide enough fighter aircraft for continuous coverage over the assault beaches due to the operational conditions of the Pantelleria and Malta airfields, short time on station due to the distance of these airfields from Sicily, and the large number of fighters assigned to bomber escort. Air and ground commanders agreed that fighters would provide continuous cover over two of the landing beaches during daylight. All landing areas had continuous coverage from 0600-0800, 1030-1230, and 1600-1730, the last hour and a half daylight; and a reserve wing was to be ready to provide support as required. Enemy air attacks on D-Day were limited to about a hundred sorties, compared to 1,092 Allied sorties, and sank 12 ships by the evening of July 10 at a price of 15 aircraft destroyed and 11 damaged.¹²

Although the presence of enemy aircraft over the beaches and shipping was minimal, the Navy argued that tactical air support for the amphibious assault was inadequate, saying that there were only 10 aircraft over the beaches on average and often none.

It also complained about the limited number of aircraft that prevented the air force from providing patrols at more than one altitude. NAAF airmen pointed out to the Navy that because many aircraft had been fired on by naval and merchant vessels, combat air patrols were moved from 5,000/8,000 feet to 10,000/14,000 feet. Because many ships were anchored up to 6 miles from the beaches, it was difficult for the air force to cover the beaches, landing craft, and ships simultaneously.¹³

Air superiority was obtained through the unrelenting punishment of airfields, causing the enemy to abandon most Sicilian airfields and withdraw to Italy while leaving behind 125 fighters to operate from Sicily. Although aircraft from Italy participated in the defense of the island, their time on station was significantly reduced due to the distance from the southern Italian airfields to Sicily. That minimized the threat to the invasion force and strengthened the airmen's argument for making the destruction of

the Navy argued that tactical air support for the amphibious assault was inadequate

the enemy air force a top priority. The conduct of airborne operations was a fiasco during the insertion phase and revealed that extensive training, coordination with all units, and less complex flight plans were required to ensure future success and avoid fratricide. Coordination between ground and air commanders improved, but tension remained. Ground commanders still desired partial control of tactical aviation supporting their units, although few could deny the success of the *Husky* air plan. A more efficient tactical air request system was needed to process requests for close air support in a more timely fashion and get planes over the target in minutes versus hours. Still, *Husky* was a strategic success and contributed to the resignation of Mussolini on July 25 and the armistice the Italians signed on September 3, 1943.

Operation *Avalanche*

The success of *Husky* opened the door for the Allies to invade Italy and caused Germany to shift forces from Western Europe and Russia to defend against the Allied offensive in the Mediterranean. With the collapse of the Vichy French in North Africa and the surrender of Italy, Germany was compelled to fight alone on multiple fronts with decreasing resources. Operation

Avalanche allowed the Allies to maintain the momentum gained in Sicily, secure airfields that would be used to support operations in southern France, Austria, and the Balkans, force Germany to move forces from the Eastern Front to Italy, and provide a shorter sea supply route to the Soviet Union. The soft underbelly of Germany was exposed.

The air plan for *Avalanche* consisted of pre-invasion operations, D-Day operations, and operations subsequent to D-Day. Air Marshal Tedder assigned Spaatz and NAAF to develop the air plan. The principal tasks were to neutralize the enemy air forces, protect the landing beaches, assault convoys and subsequent operations ashore, prevent/interdict movement of enemy forces into the assault area, provide close/direct air support, and furnish air protection to the Baytown assault force. NAAF planners estimated that the *Luftwaffe* had approximately 380 fighters and fighter-bombers and 270 bombers in the immediate vicinity to defend against the invasion, with an additional 60 fighters and 120 bombers from Sardinia. The Italian Air Force consisted of some 365 day fighters and 275 bombers. NAAF had over 2,060 aircraft, to include 346 heavy bombers, 388 medium day bombers, 122 medium night bombers, 140 light bombers, 528 fighters, 160 fighter-bombers, and 32 night fighters. Aircraft supporting *Avalanche* came from British units based at Malta and the Middle East, and the XII Air Support Command (ASC).¹⁴ An additional 12 British Barracudas, 12 Albacores, and 56 Martlets operating from the 2 British fleet carriers were available to support the invasion.

The commander for all tactical aviation from NATAF for *Avalanche*, Major General Edwin House, was not tasked with supporting any operations until D-Day. The mission of XII ASC was to destroy enemy air strength in aerial combat, bomb Axis airfields, and disrupt communications throughout Italy to prevent enemy reinforcements

from reaching the assault area. Increased night attacks were ordered to destroy enemy equipment and defense installations, provide fighter cover over the assault convoy and assault areas, and provide direct support to the ground forces. Night operations by Allied airmen proved vital throughout *Avalanche*. House would exercise control over a coalition air force of 3 groups of U.S. P-38s, 2 groups of A-36s, 7 squadrons of P-51s, 1 group of U.S. Spitfires, 4 squadrons of British Beaufighters for night operations, and 18 squadrons of RAF Spitfires.

During May, NASAF bombers intensified their efforts against targets in Italy, striking airfields, marshalling yards, harbors, lines of communication, shipping, and other facilities to reduce the Axis ability to reinforce troops in Sicily. Doolittle's bombers maintained a concentrated effort until D-Day of *Avalanche*. NASAF airmen flew over 7,000 sorties and dropped in excess of 10,000 tons of bombs during the preparatory period.¹⁵ The NAAF preparatory air campaign significantly reduced enemy air strength prior to *Avalanche* and helped break the morale of the Italians, contributing to Rome's surrender on September 8, 1943.

The Invasion of Italy

D-Day for *Avalanche* was September 9, 1943. General House's primary mission was to maintain continuous air cover over the assault beaches, which proved difficult due to the distance between Salerno and the Sicilian airfields. The bulk of coverage came from the P-38 squadrons, and House assigned two sorties per day per aircraft, providing an hour of coverage each over the assault area. The British carrier-based Seafires operating from HMS *Unicorn*, *Battler*, *Attacker*, *Hunter*, and *Stalker* were used to augment the aircraft operating from Sicily and conducted 713 sorties during the first 4 days of *Avalanche*.

D-Day operations were successful, and the ground forces, encountering heavier German resistance than expected, established a beachhead and

began advancing inland to assigned objectives. NAAF airmen flew 1,649 sorties on D-Day and dropped over 450 tons of bombs, while carrier aviation flew over 200 sorties. The *Luftwaffe*, flying only 60 to 70 sorties, harassed the invasion force throughout the day but did not have a significant impact.

The *Luftwaffe* used new radio-controlled glide bombs. The Fritz X (PC 1400 FX) was a 3,000-pound armor-piercing, radio-controlled bomb for hitting warships. The Henschel 293 was a rocket-propelled, radio-controlled glide bomb with a 660-pound warhead for use against merchant ships and transports. Glide bombs were guided visually by radio from an observer flying at 20,000 to 23,000 feet. Allied com-

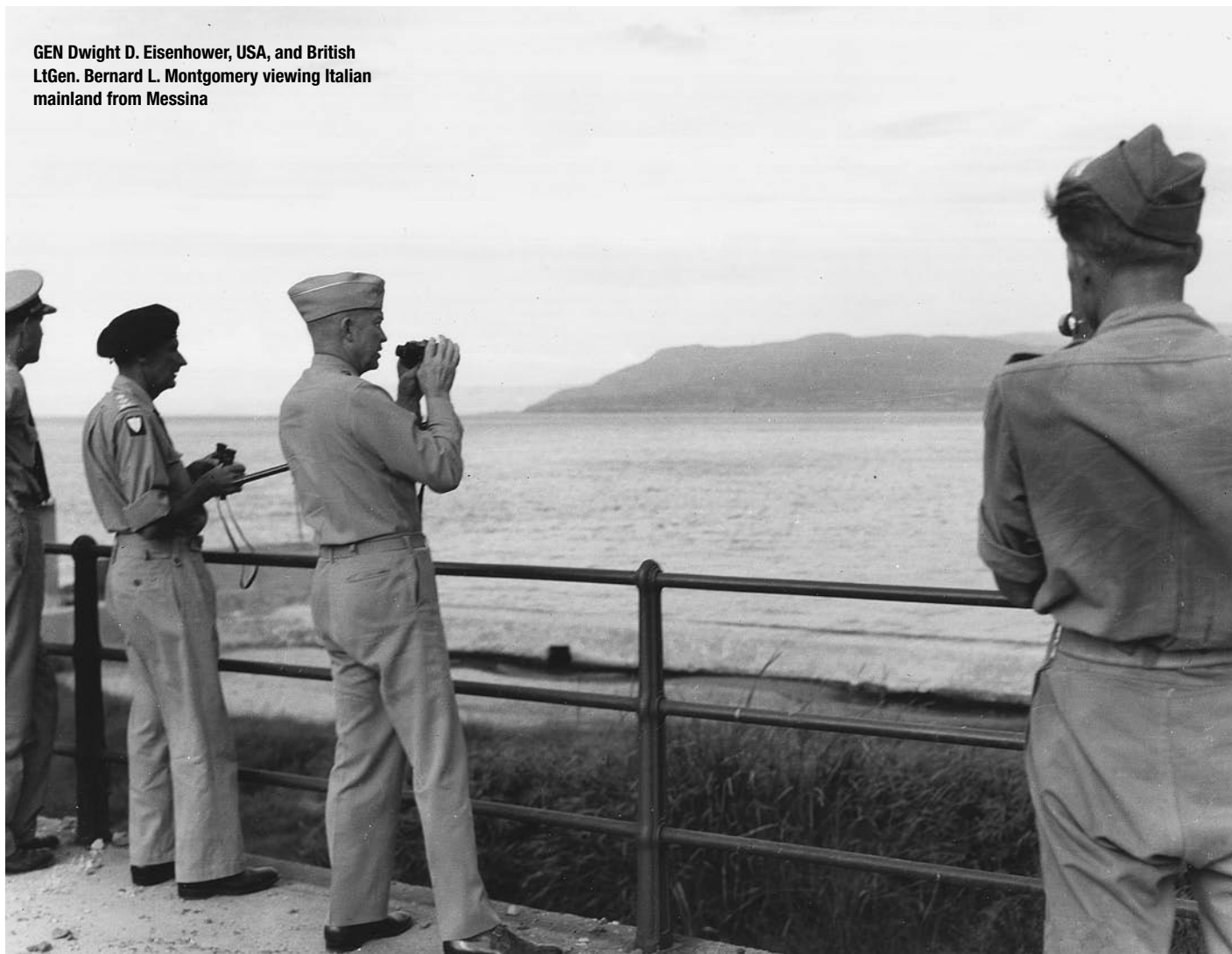
manders had little information on glide bombs and had not developed tactics to defend against them.

To prevent enemy air penetration of the assault beaches and convoys, XII ASC provided three layers of coverage. House ordered high cover to be provided by Spitfires from 16,000 to 20,000 feet, medium cover by P-38s and Seafires from 10,000 to 14,000 feet, and low cover by P-51s from 5,000 to 7,000 feet. With this plan, House was able to ensure continuous air coverage over the assault area with an average of 36 land-based aircraft. The additional 110 carrier-based Seafires increased the number of aircraft over the beaches to 58 during the daylight hours of D-Day. The effectiveness of the fighter protec-

tion is evident in the fact that only one vessel was sunk and one landing ship damaged.¹⁶

Forward air controllers were employed during *Avalanche*. They were used in the Mediterranean by the British Desert Air Force in North Africa but not by the U.S. Army Air Force until Salerno. This command and control system was referred to as "Rover Joe" by U.S. troops and "Rover David" or "Rover Paddy" by the British. The forward air control team, usually consisting of a combat-experienced pilot and one army officer, positioned itself overlooking the front line. Infantrymen encountering resistance that required air support radioed the Rover unit, which passed the request to the fighter control center.

GEN Dwight D. Eisenhower, USA, and British LtGen. Bernard L. Montgomery viewing Italian mainland from Messina



U.S. Army (Longini)

If a request was approved, the Rover unit contacted designated aircraft on station and directed them to the target.

As in Sicily, the focus on gaining and maintaining air superiority, combined with convoy protection, meant aircraft for close air support of the infantry were not always available. Indeed, it was not until D+4 that day close air support bombing was feasible.¹⁷ Fighters and fighter-bombers provided the most responsive close air support and could usually be over the target within 30 to 45 minutes of request. Cooperation between ground, air, and naval commanders improved, but the Navy still complained about inadequate air cover and the Army about the lack of timeliness in processing air requests.

The Germans counterattacked on September 12 with four *Panzer* divisions in an effort to cut the Allied line in half and push it back to the sea. NAAF aircraft then began a massive carpet-bombing effort on September 13, delivering over 1,300 tons of bombs on German forces. On September 14, the Germans penetrated the Allied front and advanced to within 1,000 yards of the beach. Tedder, recognizing the severity of the situation, directed all NAAF efforts to the Salerno fight. The most intense combat took place September 14–15. NAAF airmen flew hundreds of missions with devastating results and severely damaged the *Panzer* units and virtually destroyed the 1st Battalion, 3^d German Paratroop Regiment. The German losses were so heavy that they were forced to pull back by September 16, allowing the Allies to go on the offensive.¹⁸

The Allies established significant combat forces on the Italian mainland with *Avalanche* and continued to attrit the German war machine. However, the initial success soon turned into a stalemate and the tenacity of the German defenders further challenged the ability of air and ground commanders to coordinate operations optimizing the combined effects of available combat power.

The Mediterranean Air Force

On December 10, 1943, the MAC was disbanded and the Mediterranean Allied Air Force (MAAF) was established. Tedder was appointed Air Commander in Chief Mediterranean with Spaatz as his deputy. On January 12, 1944, Lieutenant General Ira Eaker, previously commander of Eighth Air Force, assumed command of MAAF, which consisted of Mediterranean Allied Strategic Air Force (MASAF), Mediterranean Allied Tactical Air Force (MATAF), and Mediterranean Allied Coastal Air Force. The primary missions of MAAF were to support the combined bomber offensive, support ongoing ground operations in the Italian campaign, keep the sea lines of communication open, and protect supply points. Twelfth Air Force also reorganized during this period with Major General John Cannon assuming command on December 21, 1943. On November 1, 1943, Fifteenth Air Force was established, consisting of the six heavy bombardment groups and two long-range fighter groups previously assigned to Twelfth Air Force. Fifteenth Air Force would primarily be part of the combined bomber offensive. The transfer of aircraft from Twelfth Air Force began the process of changing it from an all-purpose to a strictly tactical air force.

Air Plan for Operation Shingle

Operation *Shingle* had three phases. Phase I, from January 1 to 13, 1944, focused on attacking communication targets in northern Italy to conceal the Allied intention to land at Anzio and make the Germans believe an assault against Civitavecchia was imminent. Phase II, when airmen aimed to destroy airfields, aircraft, and communications and isolate the beachhead, ended on D-Day, January 22. Phase III extended to the end of the operation and included maintaining air cover over the beachhead, supply convoys, and naval vessels and providing close air support to the assault forces.¹⁹ Planners estimated that the Germans had some 270 combat aircraft

in Italy, 95 in southern France, and 190 in Greece and the Aegean.

MAAF airpower overwhelmed the Germans with over 2,600 aircraft. The XII ASC had 500 fighters and fighter-bombers plus 369 medium bombers in the tactical bomber force. During Phase I, interdiction of German bridges, rail lines, and marshalling yards was the primary mission of the bomber force. Aircraft of MASAF and MATAF flew 12,974 sorties, dropped 5,777 tons of bombs, and destroyed over 90 enemy aircraft.²⁰

During Phase II, Allied bombardment of German airfields intensified, and MAAF aircraft flew 9,876 sorties, dropped 6,461 tons of bombs, and destroyed over 50 enemy aircraft. The XII ASC, reinforced with 7 Desert Air Force squadrons, flew 3,340 sorties during the week prior to D-Day and more than 5,500 during Phase II. Airfields were made unserviceable by cratering the runways with 500-pound demolition bombs, and aircraft were destroyed on the ground with 20-pound fragmentation bombs an hour later.

Another tactical innovation was bombing airfields. B-17s and B-24s escorted by P-38s flew at normal altitudes to be picked up by German radar. P-47s then took off behind the bombers and flew below enemy radar, overtook the bombers, and climbed to a higher altitude while approaching the target area. The P-47s were to arrive over the airfield 15 minutes early to catch the enemy fighters scrambling to intercept the bombers. After the P-47s destroyed the fighters, the bombers arrived over the target to drop their bombs unimpeded.

D-Day Operation Shingle

On January 22, the assault forces landed at Anzio and Nettuno and encountered minimal resistance, thanks to complete surprise. An armada of 154 American vessels and 215 British and Allied ships supported the invasion force. Allied airmen flew over 1,200 sorties while the *Luftwaffe* managed only 140. General Cannon delegated control

U.S. and British troops landing
near Gela, Sicily, July 10, 1943



of all tactical aircraft of the MATAF to XII ASC, assigning it responsibility for support to the assault force and Fifth Army, while the Desert Air Force supported the British Eighth Army.

To enhance cooperation between the ground and air commanders, Fifth Army and XII ASC personnel met nightly to discuss that day and plan for the next. They built a plan identifying targets for destruction and establishing the order of attack. That improved coordination between the air and ground teams and fostered understanding of objectives, air support, and potential problems. Another new method to enhance air support was the “call targets” system, which consisted of a telephone call from Fifth Army to XII ASC when emergency air support was needed. The XII ASC then directly called a unit standing by for “call targets” and assigned it to the attack.

Using lessons learned from *Avallanche*, and recognizing the difference in spotting procedures practiced by the Army and Navy, U.S. P-51s were used to spot for the ground forces while British Spitfires spotted for the Navy. The

Rover units developed “Cabrank” procedures to enhance their proficiency. Fighters on Cabrank missions were assigned alternate targets prior to takeoff. Cabrank aircraft arrived over the battlespace at 30-minute intervals. Once on station, they waited 20 minutes for Rover tasking. If they did not get it, they attacked previously assigned alternate targets. Rover units often had difficulty locating observation positions to direct aircraft onto targets threatening the infantry. The solution was the “horsefly” technique, which consisted of an L-5 flying at 6,000 feet either *over* or 5 miles *behind* the front lines with an Army observer aboard. Although the horsefly maintained contact with the Rover unit, it could direct aircraft forward to designated targets. Aircraft of MATAF also flew “pineapple” missions against moving targets. Reconnaissance aircraft identifying these targets reported to the Army Air Control Center and passed the information to pineapple-designated aircraft on alert. This proved extremely efficient, and often the aircraft were over the target within 15 minutes of the request.²¹

The German Counterattack

Field Marshal Albert Kesselring launched a vigorous counterattack on February 4 that lasted until early March. The most intensive fighting took place February 16–22. German forces struck with tenacity and at one point penetrated the American lines and advanced to within a few miles of the Allied beachhead. Due to the desperate situation on February 16, XII ASC, augmented by the strategic and tactical air force, committed 813 bombers and fighter-bombers, which dropped over 970 tons of bombs to repulse the counterattack.

On February 29, the Germans attacked with three divisions and penetrated 1,000 yards into the line of 3^d Infantry Division. The MAAF airmen flew 796 sorties on March 2, dropped over 600 tons of bombs, and helped Allied ground forces stop the offensive.²² Although Kesselring failed to break through, nearly 3 months would pass before the Allies could finally breach the Gustav Line and advance on Rome.

The XII ASC and MAAF airmen dominated the skies over Anzio and

Italy. Although the *Luftwaffe* made sporadic harassing raids over Allied shipping and the battle area, MAAF won air superiority and did not relinquish it. From D-Day until February 15, 1944, its airmen flew 27,204 sorties, dropped 13,035 tons of bombs, and destroyed 326 enemy planes at a cost of 96 Allied bombers and 133 fighters, lost mostly to German antiaircraft artillery.²³

The Mediterranean theater of operations proved to be a testing ground for American Airmen in the development of tactics, techniques, and procedures for the employment of airpower in a combat environment. The air-ground operations yielded some of the same lessons gathered earlier by Allied forces in New Guinea in the Southwest Pacific beginning July 1942. Additional lessons gained over the Mediterranean in coordination with ground commanders benefited airmen and soldiers landing in Normandy and southern France.

Twelfth Air Force, within 3 months of activation, deployed to North Africa in October 1942 to participate in Operation *Torch*. Its Airmen arrived without experience in combat or in joint, coalition, or amphibious operations. Dogged determination, innovative thinking, and sound leadership helped them overcome the friction and fog of war. The *Luftwaffe* fought cleverly and tenaciously while introducing new weapons such as the radio-controlled

the Mediterranean theater proved to be a testing ground for American tactics, techniques, and procedures

glide bombs. Twelfth Air Force adapted quickly and became an efficient and effective combat force that helped bring the collapse of Italy and of *Wehrmacht* forces in the Mediterranean theater.

The coordinated air campaigns that supported the amphibious landings of Sicily, Salerno, and Anzio allowed the Soldiers of Fifth and Eighth Armies to secure beachheads and advance inland with minimal interference from enemy aircraft. Allied air-

men quickly established air superiority and denied the enemy the ability to use their rapidly declining air assets effectively. As in the Pacific and Southwest Pacific theaters, the skies over Italy and the Mediterranean were by no means devoid of enemy aircraft; however, the sorties the Germans could fly inflicted only moderate damage and failed to keep the Allies from achieving their strategic objectives.

The intensity of the Allied air campaign compelled the Germans to withdraw most of their aircraft first from Sicily, then from southern Italy. That reduced their ability to mass their air effort to oppose the landings due to the distance from the airfields to the beaches. The Allied air effort in the Mediterranean, along with ground operations, drained German combat power that could have been used on the Eastern front or to reinforce France. Berlin was forced to fight a three-front war with inadequate resources.

The Italian capitulation forced the Germans to defend Italy alone with their overstretched forces. Twelfth Air Force and their British counterparts helped secure the Mediterranean lines of communication, and with most of Italy under Allied control, U.S. and Free French forces were able to invade southern France in August 1944.

This invasion secured the port of Marseilles, which played a major role in relieving the Allied logistic crisis of late 1944. The aerial interdiction campaign in the Mediterranean disrupted the flow of supplies for the German army. Reopening the Mediterranean greatly economized on shipping around Africa with major benefits for the antisubmarine war. Allied airmen helped achieve major strategic goals. More important, the lessons learned in Italy helped refine Air Force doctrine and enhanced the effectiveness of the air-ground team.

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NOTES

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² *Ibid.*, 225.

³ *History of the 12th Air Force*, vol. 1, chap. I, 2, in USAF HRA Doc. 650.057–3, 1942–1945.

⁴ *Ibid.*, chap. X, 5.

⁵ Daniel R. Mortensen, *A Pattern for Joint Operations: World War II Close Air Support North Africa* (Washington, DC: Office of Air Force History and U.S. Army Center of Military History, 1987), chart 2.

⁶ Wesley Craven and James Cate, *The Army Air Forces in World War II. Europe: Torch to Pointblank August 1942 to December 1943* (Chicago: The University of Chicago Press, 1949), 445.

⁷ *Twelfth Air Force in the Sicilian Campaign*, 1, in USAF HRA Doc. 650.01–2, 1942–1944.

⁸ *Ibid.*, 430.

⁹ *Ibid.*, 8.

¹⁰ C.J.C. Molony, *History of the Second World War: The Mediterranean and the Middle East* (London: Her Majesty's Stationary Office, 1973), vol. V, 34.

¹¹ *Ibid.*, 100.

¹² *Ibid.*

¹³ *Ibid.*, 451.

¹⁴ *Fifth Army History*, 52, in USAF HRA Doc. 680.01, vol. I, 1 October–15 November 1943.

¹⁵ *Operational Plan Avalanche*, Headquarters, XII Air Support Command, 81, in USAF AHRA Doc. 651.430–3, August 1943.

¹⁶ Molony, 283.

¹⁷ Alan Wilt, "Allied Cooperation in Sicily and Italy 1943–1945," in *Case Studies in the Development of Close Air Support*, ed. Benjamin Franklin Cooling (Washington, DC: Office of Air Force History, 1990), 116.

¹⁸ Colonel Rudolf Boehmler, Commanding Officer, 4th German Paratroop Regiment, 21, in USAF HRA Doc. K113.310.8, 1943–1945.

¹⁹ *Mediterranean Allied Air Forces, Operations in Support of Shingle*, 6, in USAF HRA Doc. 622.430–1, 1 January–15 February 1944.

²⁰ *Ibid.*, 7.

²¹ Wilt, 219.

²² "Brief of Report by Fifth Army to HQS. Allied Central Mediterranean Forces" in USAF HRA Doc. 680–619–2, March 4, 1944.

²³ *Operations in Support of Shingle*, 17.

Interagency Dialogue Premiere

JFQ is pleased to announce an important new series — *Interagency Dialogue*. With each issue of *JFQ* will supply articles on topics of interest to those who conduct integrated interagency operations and coordinate among Federal and local government agencies and organizations. The goal of this section is to stimulate thought and debate on a wide range of security issues that cut across agency stovepipes within the Federal Government and between the Department of Defense, local government agencies, first responders, and a multitude of agencies in allied governments. This essay is on a controversial topic, strategic communications. It was written by Jeffrey Jones, recently a Bush administration National Security Council member and retired U.S. Army colonel. *JFQ* encourages your feedback or essays on security matters that involve interagency and all the instruments of national power for this featured section. Please see the NDU Press Web site for feedback or information on submissions: ndupress.ndu.edu.

Strategic Communication

A Mandate for the United States

By JEFFREY B. JONES

In an era when the power of information affects every human being in matters mundane and transcendent, individual and social, national and international—when images are transmitted instantaneously worldwide, radio programs are translated into hundreds of languages and broadcast to every corner of the earth, and periodicals and the Internet are universal communications media—there is no alternative but to harness information to protect and promote national interests.¹

The Mandate

As a subset of the national security strategy, there is a need for a national communications strategy coequal with the political strategy overseen by the Department of State, the economic strategy led by the National Security Council Office of International Economic Affairs, and the national military strategy implemented by the Secretary of Defense and the uniformed military. The national communications strategy should provide objectives and guidance for both regional

and transnational issues. A mechanism to coordinate all interagency informational efforts at the national level is essential to its success. The forum should meet routinely, not just in times of crisis.

This call for a national communications strategy is not an argument for a propaganda minister, but for better coordination of information efforts among agencies. The information war must be waged during peacetime, crisis, operations other than war, war itself, and in the post-conflict period. It should shape the informational and intellectual environment long before hostilities. The effort is not restricted to the White House Office of Global Communications or to interagency spokesmen, press officers, information warriors, or technological innovations that are shaping the digitized battlefield; it must include the public diplomacy activities of the Department of State as well as the full spectrum of global activities of the U.S. Agency for International Development (USAID) and other agencies.

In reality, we are talking about *strategic communication*—the synchronized coordination of

Jeffrey B. Jones is a senior associate with Booz Allen Hamilton, and was the Director for Strategic Communications and Information on the National Security Council.



Assistant Secretary of Defense for Public Affairs with Joint Staff Director of Operations briefing reporters at Pentagon

DOD (Helene C. Sikkell)

using information requires coordination with the information efforts of allies, friends, and former adversaries

statecraft, public affairs, public diplomacy, military information operations, and other activities, *reinforced by political, economic, military, and other actions*, to advance U.S. foreign policy objectives. To date, the predominant concern has been for reaching domestic audiences through public affairs and dealing with U.S. and Western media and the 24-hour news cycle, with our public diplomacy efforts severely constrained by the disestablishment of the U.S. Information Agency

some years ago, and the reality that we have had chronic resource insufficiency across the strategic communication domain. As Joseph Nye points out, to get America's message across, we need assurance, positive actions and examples, persuasion, moral suasion, and other inducements as much as we need deterrence, dissuasion, and coercion.²

Using information also requires coordination with the information efforts of allies, friends, and former adversaries. Further, it demands constant multi-agency, multiservice, multidisciplinary, and multidimensional integration as well as orches-

tration, choreography, and synergy. This article deals with the use of information to affect attitudinal and behavioral change (the nonlinear and intellectual fourth dimension) and the mandate for successful communications with first wave (agrarian), second wave (industrialized), and what Alvin and Heidi Toffler call the post-industrial third wave of societies.³ The following factors impact today's informational environment:

- Traditional dividing lines between public affairs, public diplomacy, and military information operations are blurred because of immediate access to information. Domestic press announcements are broadcast and monitored globally, and they influence as well as inform. Reports and examples of focused, tactical U.S. psychological operations (PSYOP)—all truthful but designed expressly to influence foreign attitudes and behavior—are also available in this country on the Internet. Each is important and designed for specific audiences. None is preeminent. Synergy is impossible without coordination. The information activities of other government agencies are distinct, although some of the means may be the same.

- Resources dedicated to the information realm, which some would argue is the most critical element of national power, have been estimated to be insufficient by a factor of ten.

- There is extensive proliferation of animosity, alienation of allies, disappointment of friends, and disillusionment of those who have traditionally looked to a trusted America for hope.

- Technological innovations exist but are insufficiently funded, tapped, or fused. The Joint Staff's information management portal, conceived during operations in Afghanistan, is only now coming to fruition. Integration with unclassified systems at the State Department remains an unfulfilled requirement.

- Bureaucratic turf battles, misperceptions, and the absence of visible, sustained interagency commitment are detriments to progress.

- Al Qaeda and other parties constitute an active adversary in the propaganda domain. What previously existed in the training camps of Afghanistan is now on the Internet. Months ago, Abu Musab al Zarqawi's terrorist group released a CD-ROM urging Muslims to battle against Coalition "crusaders" in Iraq, and others have followed. That is not an argument to engage in propaganda; for the United States, truthful information is the best antidote and is exactly what its public affairs, public diplomacy, and information operators seek to provide.

- Policy issues that dominate the "hierarchy of hatred" against the United States, such as the Middle East peace process, remain unresolved. With increased and balanced U.S. pressure on both sides, and sustained engagement, some progress is being made. But as the United Nations *Arab Human Development Report* recently underscored, we are not the only guilty party, despite accusations to the contrary.

- From the highest levels of government, there is growing overreliance on non-face-to-face communications that do not convey national seriousness of

Secretary of State
Condoleezza Rice
arriving at Darfur,
Sudan, during African
Union Mission



U.S. Air Force (Bradley C. Church)

purpose or even interest in allied opinion. Perceptions become reality in the mind.

- Our national ability to use television and the Internet in sophisticated ways to reach the full spectrum of audiences remains woefully inadequate if we are to influence the future.

- There is a mandate to apply the lessons of the past, positive and negative: organizational, technological, planning; education and training; phasing; interagency, joint, and coalition; strategic, operational, and tactical.

The Requirements

At this point, as the Tofflers point out in *War and Anti-War*, there is no overarching knowledge or information strategy at the *national level*, nor is there a focused and effective mechanism for coordinating dissemination to all prospective audiences around the world—allied, friendly, neutral, potentially hostile, and hostile. While the U.S. Information Agency had the predominant responsibility for public diplomacy until it was disestablished, national assets for communication, information, and education around the globe have degraded, and other actors and key communicators are now involved. There is little evidence of cooperation, coordination, or even appreciation for the impact of strategic communication. Thus, there is a need for a permanent mechanism to coordinate as well as implement and monitor all interagency information efforts. Several attempts have been made over the last 4 years, but none have been effectively institutionalized in a national security Presidential directive, which is needed to add discipline, guidance, and direction as well as to monitor implementation.

This is a requirement in peacetime, as well as during crises, conflicts, and post-conflict operations. Members of such an interagency structure would also work together to implement strategic information plans proposed by the affected geographic Combatant Commanders to both the Secretary of Defense and Chairman of the Joint Chiefs of Staff who would provide these requests for interagency support such as was executed so successfully during Operation *Uphold Democracy* in Haiti.

At the *theater level*, each combatant commander has a theater security cooperation plan, which should include senior leader engagement, international military education and training, security assistance, pervasive use of DOD-sponsored regional security studies centers, peacetime PSYOP programs, and, ideally, a theater information strategy derived from the national communication strategy. All elements of the plan should be designed to help achieve political, economic, and military objectives for the region. Coordination mechanisms include elements of the combatant command staff (operations, intelligence, strategy and plans, public affairs, strategic communications, information operations, PSYOP, and Civil Affairs and the Staff Judge Advocate), U.S. Embassies (foreign policy, intelligence, State Department public diplomacy affairs, Defense Attaches, and regionally oriented USAID advisers) and, to the extent possible, allied representatives. Each combatant command should draft a theater information strategy concentrating on proactive, influential, and shaping (rather than reactive) efforts to reduce sources of conflict; assistance to nations in their transition to democratic systems; increasing dialogue by building political, economic, military, medical, commercial, social, and educational bridges; development of collaborative approaches to regional problems; reduction of the motivation and perceived legitimacy of those who possess nuclear weapons and other weapons of mass destruction; and emphasis on the correct role of the military in a democracy, including constructive domestic uses.

These same advisers would meet regularly to coordinate their respective efforts with those at the interagency level, channeled through the DOD-led/J-39 Battle Update Brief apparatus to maximize the informational impact throughout the region and implement the agreed strategy. As a matter of course, strategic communication plans would be integrated into operation, concept, and contingency plans in much the same way as we have incorporated flexible deterrent

options. Finally, when problems arise and contingency planning commences, a theater-wide strategic communication supporting plan must be developed and implemented. Every effort must be made to “informationally” prepare the battlespace (Phase 0) to defuse, deter, or contain the conflict. Combatant commanders should submit their requests for interagency consideration in terms of encouraging multinational organizations such as the North Atlantic Treaty Organization, Organization of American States, and Association of South-east Asian Nations to participate in developing and implementing such an information strategy and to accept an increasing role. The George C. Marshall European Center for Security Studies and regional centers of National Defense University (Africa Center, Near East and South Asia Center, and Center for Hemispheric Defense Studies), which institutionalize the self-help process through sharing the ideas and experiences of Western democracies and their free market economies, could play an invaluable role as well. New centers of this type should be proposed to meet theater needs.

At the *tactical level*, there are myriad applications for peacetime information use. Conveying information by all means available can enhance one’s ability to see, hear, know, disrupt, deny, “out-communicate,” and “out-think” the adversary. In addition, it can encourage dissension, defection, and surrender, thus ending the battle quickly and saving lives. Also at the tactical level, information must be used to help in the all-important multifaceted, multi-agency, and probably multinational efforts after the battle. Allies can be invaluable contributors to common goals and objectives as well as provide key conduits to enhance the effectiveness of our informational efforts.

Planning Across the Spectrum

In peacetime, strategic communication issues are both regional and transnational. The construct is more encompassing than yesterday’s deterrence and dissuasion, although those remain central to national survival and our global interests. Given the U.S. reputation for unilateral action, with little (or at least perceived as insufficient) coordination and inclusion of allies, we need the following to ensure that we have enduring bridges of understanding: an effective and active strategy of *reassurance* for friends; *assurance* of our capacity and

enduring commitment for potential adversaries; *persuasion* of friends, allies, adversaries, and neutrals; enhanced perceptions in terms of military and other presence; and two-way *education* and capacity enhancement programs at all levels. In addition, we need more effective human rights assistance, informational efforts to speed newly free countries on the road to democracy, humanitarian and disaster assistance, refugee and counterdrug operations, and full-spectrum information efforts in support of President George W. Bush’s Proliferation Security Initiative.

An unfulfilled task from the administration’s first term is the aforementioned need for a national communication strategy to drive the creation of cascading theater information strategies for each region, more comprehensive theater security cooperation plans, better coordination with U.S. Embassy Mission Performance Plans, robust information plans implementing each of the regional combating terrorism strategies, better allied capacity-building, and increased means of measuring strategic, operational, and tactical effectiveness. The Department of Defense needs to establish a comprehensive strategy for its role of supporting the State Department in public diplomacy, as well as more rational and responsive product and action approval authority.

In crises, there are again both regional and transnational requirements: tailored, non-order-of-battle intelligence requirements as well as a mandate for enhanced dissuasion, deterrence, deployment enhancement, perceptions of presence, prepositioning, interagency cross-fertilization, and accessing broader coalition assistance and cooperation. As requested but denied in Rwanda, there may be opportunities for information intervention (U.S./allies/UN) to counter the genocidal encouragement from such entities as hostile radio broadcasts. Strategic communication and information planning accelerators are needed as well as enhanced capacity for technological reachback, tempered with the enduring requirement for physical presence to assess ground truth and the resonance of our messages. We need to develop or take better advantage of other conduits for our messages, especially those with proven or likely resonance.

Just as in peacetime, as crises escalate, we must better understand that our actions—political, economic, or military—convey messages more loudly than rhetoric, but that both are important

conveying information can encourage dissension, defection, and surrender, thus ending the battle quickly

for each region, more comprehensive theater security cooperation plans, better coordination with U.S. Embassy Mission Performance Plans, robust information plans implementing each

of the regional combating terrorism strategies, better allied capacity-building, and increased means of measuring strategic, operational, and tactical effectiveness. The Department of Defense needs to establish a comprehensive strategy for its role of supporting the State Department in public diplomacy, as well as more rational and responsive product and action approval authority.

In crises, there are again both regional and transnational requirements: tailored, non-order-of-battle intelligence requirements as well as a mandate for enhanced dissuasion, deterrence, deployment enhancement, perceptions of presence, prepositioning, interagency cross-fertilization, and accessing broader coalition assistance and cooperation. As requested but denied in Rwanda, there may be opportunities for information intervention (U.S./allies/UN) to counter the genocidal encouragement from such entities as hostile radio broadcasts. Strategic communication and information planning accelerators are needed as well as enhanced capacity for technological reachback, tempered with the enduring requirement for physical presence to assess ground truth and the resonance of our messages. We need to develop or take better advantage of other conduits for our messages, especially those with proven or likely resonance.

Just as in peacetime, as crises escalate, we must better understand that our actions—political, economic, or military—convey messages more loudly than rhetoric, but that both are important

**regarding media monitoring,
we must keep a pulse not only
on what is watched but also
on its public credibility**

and neither in isolation is a panacea. While there are indeed strategic, operational, and tactical measures of effectiveness, there must be organizational elements dedicated to tracking them and providing feedback to information planners at all levels. A more rational and responsive product/action approval process is needed that prescribes authori-

ties down to the lowest level. Earlier information as well as intelligence preparation of the battlespace is required. There must be better analytic, human factor, perceptual, and en-

vironmental guidance in terms of what to expect for planners, commanders, and deploying servicemembers. Some sources exist, but simply posting information on the Defense Intelligence Agency Web site is insufficient. Both push and pull are necessary. There must be attention to identifying full-spectrum intelligence and open-source requirements that are essential to effective understanding as well as communication at all levels.

As crises become more volatile, there must be better pulsing and synchronization of information. There is need for face-to-face engagement instead of the increasing tendency to rely on demarches delivered by others, telephone calls, cables, and interlocutors that do not convey the same national purpose. Moreover—and this is especially key for forward-deployed combatant commanders—we must more pervasively engage multilateral and international organizations (including nongovernmental organizations that understand who the true influencers are in an affected population and have conduits to them), expand our flexible deterrent options, refine interagency requirements in plans, integrate strategic communication planning elements into standing joint force headquarters, develop documents that identify interagency requirements, and establish standing information coordinating committees to better fuse strategic communication both in theater as well as with Washington.

As combat operations appear imminent, we must finalize information planning with both the interagency community and with allies. Country-specific, regional, and transnational strategic communication requirements should have already been identified and expertise deployed to key information nodes in the region so that planning and relationship-building are completed in advance and refined implementation can occur. Moreover, while planning is indeed done in

phases, there must be simultaneous informational and operational planning for the post-conflict period, which can clearly prove more complex, challenging, and of longer duration than force-on-force operations. Feedback loops are essential to ensure resonance and modification of approaches, conduits of influence, products, and actions when appropriate. As during crises, dedicated personnel and systems must be in place to measure the effectiveness of messages and actions, monitor adversarial media, accelerate response times at all levels, and preempt or counteract enemy misinformation and disinformation. We must ensure the capacity for both individual and collective targeting—from sophisticated elites to the illiterate. Databases drawn from all available sources must be assembled months in advance. Targeting guidance must be issued, and tactical as well as theater-wide plans for radio, television, Internet, print, and face-to-face communications must be in place.

Operations in Afghanistan and Iraq have underscored that we must create a greater capacity to capture still and video images and develop improved means to transmit, package, and use them imaginatively. Every effort must be made to more effectively reach out to allies, friends, and neutrals and to prioritize our organizational, joint, interagency, and coalition efforts. Based on experience, there are requirements for rapid adjustment, dissemination of good news, and phasing away U.S. voices and faces to fade into the background while those of the nation in which the operation is being conducted take the lead. We must understand that we may no longer be the critical or most credible deliverers of the message. In fact, we must do everything we can to assist the nation in articulating what must become its, not our, priorities. Coordinating messages with combat power on every level, we must accelerate the defeat of enemy forces and be prepared for such factors as the desertion, defection, and surrender of enemy forces as well as demonstrations by civilians.

Servicemembers must understand that in today's information environment, as underscored by the actions of a few at the Abu Ghraib prison, their individual deeds can have strategic consequence for either good or ill, affecting not just their immediate surroundings, but things as far reaching as alliance trust, confidence, and even continued coalition participation. Improvement is needed in capturing the positive acts of our own Soldiers, Sailors, Airmen, and Marines, the activities of the U.S. Agency for International Development, the citizens themselves, and other parties across the

country. It is essential that the world, as well as regional and U.S. domestic audiences, sees these images of security, collaborative progress, and hope.

In post-conflict operations, interagency coordination on the ground becomes even more critical regionally as well as internationally. Information coordinating committees become vital for interagency, coalition, and potentially international coordination, cooperation, and synergy. Again, the importance of good news cannot be overemphasized. Nor can constantly assessing resonance and target audiences, disseminating to multiple audiences, dealing with insurgents and former regime elements, not giving untoward legitimacy to low-level “thorns” in the process, and “incentivizing” the populace toward cooperation and providing information. Better care must be taken in preparing the Armed Forces for the always difficult transition from warfare to positive engagement with a defeated populace. Joint interagency coordination groups, such as those established in Iraq, are key to engagement at the personal level as well as to coordination, providing cogent explanations for coalition activities, responding to questions from key communicators and “influentials,” managing funding for projects identified as critical to the quality of life for the common citizen, and transitioning from occupier to partner. The message must be communicated to locals that it is their country and their future, and thus their responsibility—with international assistance—to achieve post-conflict stability.

Measures of Effectiveness

At issue is how to establish and institutionalize measures of effectiveness—standards of comparison used to evaluate the progress of an operation—at the strategic, operational, and tactical levels. Lack of established and agreed criteria, failure to fuse intelligence efforts, and shortfalls in dedicated personnel, linguistic oversight, and technological monitoring continue to inhibit data compilation, fusion, and dissemination.

For instance, there is a need to measure the sentiments and actions of:

- the populace (not monolithic in Iraq or Afghanistan—demographics must be understood)
- elites, whose actions and messages impact audiences and decisionmakers
- decisionmakers (de facto and official).

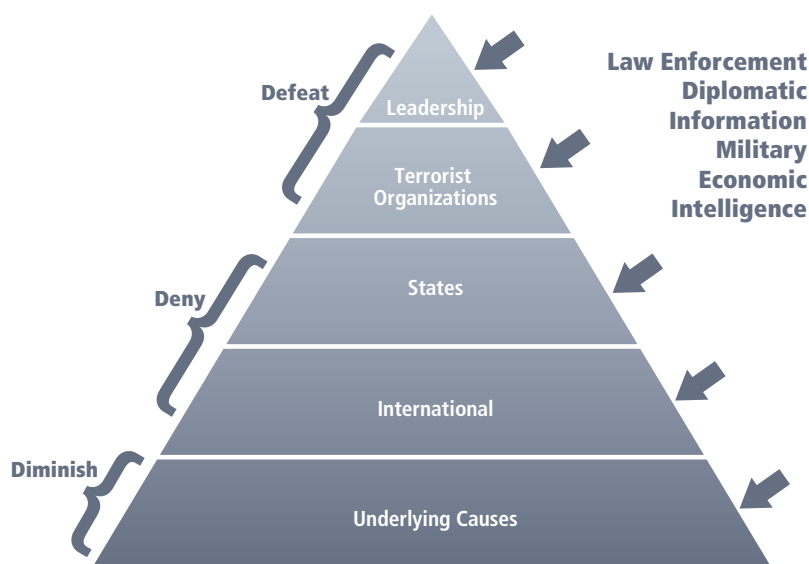
Regarding media monitoring, we must keep a pulse not only on what is watched but also on its public credibility. In addition, those involved in such efforts must do more than simply documenting what was broadcast. They must also tell commanders the range of implications as well as propose what might be done about it—and by whom!

Strategically, leading indicators include alliance participation, statements by heads of state and government leaders, policy endorsement, mobilization, votes in the United Nations and other multinational organizations, resource commitments (forces, equipment, funds, civilian police or other trainers, and facilities), regional Friday sermons, intercepts and intelligence cooperation, international and national media coverage, actions and messages from multinational organizations (such as the Gulf Cooperation Council, Organization of Islamic Council, and Arab League), local alliances, cross-border cooperation, polling, *fatwas*, resonance in academic publications, recall of ambassadors for consultations, and the closing of foreign missions.

Operationally, primary indicators are statements by senior officials and military commanders, statements from religious organizations such as the *hawza*, regional Friday sermons, troop movements and exercises, combat power demonstrations, border and maritime operations, demonstrations or other civil disobedience, national media reporting, enhanced intelligence-gathering, key leader defections and large-scale desertions, self-generated grounding of combat aircraft, self-generated return to garrisons, *fatwas*, national polls, and large unit surrenders.

Terrorism Structure and Approach

Defend—Always, Everywhere





U.S. Army Corps of Engineers (B.J. Weiner)

Iraqi general speaking to media at opening of border patrol fort in Al Zaid

Tactically, important indicators are individual or unit desertions, defections, surrenders, abandonment of equipment, civilian compliance or noncompliance, local open-source print, radio, and television coverage, Friday prayers, influential *imams'* statements, *fatwas*, meetings, attendance at established local, regional, or provincial coordination committees, polling, recruitment and retention figures in military/security forces (such as the National Guard, police, Facilities Protection Service, border police, and army), attacks on coalition forces and civilians, level of intelligence reported to coalition forces or hotlines, intercepts, paramilitary cooperation, reestablishment of a secure environment, school attendance or closings, civilian compliance with interim government directives, Internet traffic, willingness of students and others to engage in discussions and participate in focus groups, telephone call-in data, reports from USAID and its British equivalent, the Department for International Development, as well as other nongovernmental organizations, willingness to be hired for coalition-led infrastructure enhancement projects, focus groups, surveys of elites, open-source photography, and graffiti.

In a time of defense budgets predominantly focused on Iraq and Afghanistan, but with other global concerns, evolving overseas basing, sustained forward deployments, and increased instability, it is critical to reinforce perceptions of American commitment through diplomatic engagement and outreach, particularly toward the Muslim world and against Islamic and other extremists. It is vital to underscore the Nation's economic and developmental assistance as well

as its military capacity and reliability. The way friends, allies, former adversaries, future enemies, and neutrals view our capabilities, as well as our intentions, remains fundamental to strategic and conventional deterrence and to our ability to resolve disputes and prevail in conflict. Today's international security environment requires not only the effective application of emerging technologies to enhance the command and control of the tactical commander, but also the imaginative implementation of information strategies and campaigns at the national and theater levels.

Enhanced cooperation, coordination, and cohesion of information efforts, from the national level to the tactical, bringing to bear all the resources and conduits of influence needed, are essential to meet today's challenges and tomorrow's unknowns. By encouraging long-term change, attacking the sources of conflict, and encouraging openness and dialogue, strategic communicators can contribute significantly to keeping the peace, reinforcing stability, and inhibiting terrorism, the proliferation of weapons of mass destruction, and the flow of drugs. In addition, they can enhance U.S. power projection, accelerate war termination, and help in complex postconflict stability and reconstruction operations.

Maintaining the peace is better than resolving crises. Containing conflict is better than committing forces. If combat is necessary, shortened conflict with minimum loss of life on both sides and postconflict stability are the preferred outcomes. Winning the information war is imperative to all these efforts. Thus, strategic communication—the effective integration of statecraft, public affairs, public diplomacy, and military information operations, reinforced by political, economic, and military actions—is required to advance these foreign policy objectives. No single contributor is preeminent. All are required in a synchronized and coherent manner. **JFQ**

NOTES

¹ Jeffrey B. Jones, "The Third Wave and the Fourth Dimension," in *Special Operations Forces: Roles and Missions in the Aftermath of the Cold War*, ed. Richard H. Schultz, Robert L. Pfaltzgraff, and W. Bradley Stock (Collingdale, PA: Diane Publishing, 1996).

² Joseph S. Nye, *Soft Power* (New York: Public Affairs, 2004).

³ Alvin and Heidi Toffler, *War and Anti-War* (Boston, MA: Little, Brown and Company, 1993).

A Book Review

By JAMES JAY CARAFANO

The Last Word? Essays on Official History in the United States and British Commonwealth

Edited by Jeffrey Grey
Westport, Connecticut: Praeger, 2003
177 pp. \$69.95
[ISBN: 0-313-31083-1]

The aim of *The Last Word? Essays on Official History in the United States and British Commonwealth* is to illustrate how a variety of Western militaries addressed the challenge of writing official histories of battles and campaigns. But the book delivers more than it promises, offering a glimpse into the subtle cultural factors that influence how nations address the art of war and illuminating the shortfalls of institutions that rely too heavily on themselves for understanding their own nature. With contributions from a solid team of international historians, the first of the book's two parts consists of four essays on official history writing in Canada, South Africa, New Zealand, and Australia. Five essays on various aspects of World War II historiography comprise the second half.

Since all the militaries under consideration grew out of the traditions and language of the British way of war, an expected common theme in how each engaged in preparing its official histories is notably and surprisingly absent. Most striking are the distinctions between the Commonwealth and American approaches to the art of writing about war. Truly, these were military historians divided by a common language.

The Commonwealth militaries have always maintained an air of the amateur's superiority. Deeply rooted in the British civil-military tradition that remained skeptical of standing armies, British military professionals were expected, like Cincinnatus, to return to the plow after winning the war. Professionalism was akin to fox hunting, something every

well-bred man should be able to do. The Commonwealth armed forces seemed to have inherited this attitude, albeit in a more egalitarian form, and their attempts at official military history appear to have followed suit. History projects were ad hoc affairs, championed by those who had a particular interest, and produced for a variety of idiosyncratic reasons that may have had little to do with professional military education or the pursuit of academic excellence.

In contrast, the U.S. Army's green book series, its official histories of World War II, also reflected the Nation's approach to war, but it reads altogether unlike the Commonwealth writings. In one of the best essays in the book, Edward Drea, a former branch head at the U.S. Army Center of Military History, describes the genesis of one of the most substantial and comprehensive military history projects ever attempted, a work on an industrial scale, with volumes dedicated to every major campaign in the global war as well as additional treatises on various functional areas such as medical care and ordnance operations. Authorized in 1946, the project was so massive that the last volume, *The Medical Department: Medical Service in The War Against Japan*, by Mary Ellen Condon-Rall and Albert E. Cowdrey, was not published until 1998.

Also, unlike the Commonwealth histories, U.S. military history had a clearly utilitarian purpose. Official accounts were primarily intended as professional military education tools, both to pass on the honors and traditions of the service and to act as platforms for critical thinking about the conduct of war.

Where American and Commonwealth efforts share common ground is that, like all histories, they must be understood within the context of when they were written. Even official historians do not have perfect knowledge, nor are they free of bias, either their own or someone else's. Politics often played a role.

General Robert Eichelberger, for example,

frequently complained to Washington that General Douglas MacArthur was suppressing the publication of the green book on the Buna campaign to diminish Eichelberger's place in history. Indeed, Drea reveals that one of MacArthur's generals tried to derail work on the official history of the Southwest Pacific Theater while he peddled his own commercial, hagiographic version of MacArthur's war.

Curiously, official historians shared their academic brethren's frustration in obtaining access to records. Historians working on the European campaigns during World War II, for example, were barred from looking at War Department holdings. As a result, many of their judgments on how theater operations fit into the overall strategic intent of the Pentagon are suspect.

While *The Last Word?* provides a worthwhile collection of readable and informative essays on the state of official historical writing over the course of the 20th century, missing is an overall assessment of the current state of the craft or projections for the future.

Jeffrey Grey's conclusion that "official histories are best understood as the first word, not the final one" (p. xi), is simply no longer correct. The age when we relied on combat historians for history's first draft and a solid and dependable backbone of chronology, names, and places for others to build on, is over. Today, journalists and academics can crank out reasonably well-written histories long before official historians can have their efforts blessed for publication. The recent war in Afghanistan is a case in point. There are



Lieutenant Colonel James Jay Carfano, USA (Ret.), is a senior fellow at the Kathryn and Shelby Cullom Davis Institute for International Studies at The Heritage Foundation.

half a dozen volumes on the subject but not yet an official history.

Finally, official historians have much to explain regarding their role as educators of future military leaders. Many of the essays presented in *The Last Word?* detail efforts to reach for objectivity and scholarly excellence. Still, it is worth asking if institutional histories can provide the critical introspection and analysis needed to move the profession forward. Militaries tend to call for the histories they want rather than the histories they deserve. There is no need to look further than the current occupation operations in Iraq. Planners and leaders have little history to turn to for guidance. While the U.S. military churned out dozens of combat histories on the battles of World War II, the official histories on the occupation period are few and far between.

There are examples of official history being used to transform a military rather than simply document the past. The post-World War I studies commissioned by German General Hans von Seeckt, which helped launch a revolution in combined arms warfare, are probably the best example of this type. Such moments are the exception and are rarely seen today. Official military history has much to do to recapture its stature as the authoritative word on the past. **JFQ**

A Book Review

By JOHN HILLEN

Carnage and Culture: Landmark Battles in the Rise of Western Power

by Victor Davis Hanson
New York: Anchor Books, 2001
544 pp. \$29.95
[ISBN: 0-3857-2038-6]

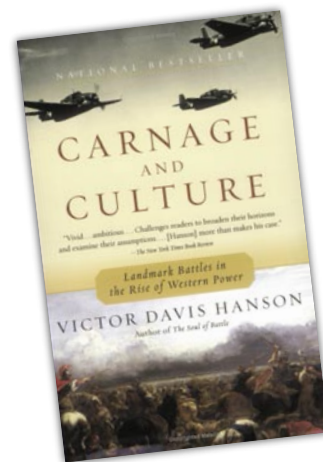
Although for many observers 9/11 brought the return of history to a globalizing world, it is still unfashionable in polite society to admit—à la Samuel Huntington—that

civilizations exist and are fairly clearly demarcated not only by their history but also by unique cultural traits. It is even more déclassé to suggest that those distinctive characteristics might give one civilization an advantage of one sort or another over others. While few observers deny that the West has seemed to have the upper hand in military struggles over the past few hundred years or more, it is far more acceptable in saloon society to chalk up the phenomenon to environmental caprice, as Jared Diamond did in his popular *Guns, Germs, and Steel*, or to the mercantile and militaristic ambitions of a civilization gone greedy.

Classical historian Victor Davis Hanson does not buy the prevailing thinking. In *Carnage and Culture*, he offers fundamental and systematic reasons why history has unfolded as it has, particularly military history. His thesis is that the undeniable Western advantage in warfare itself, particularly on the battlefield, stems directly from the cultural traits of Western societies. Conversely, the cultural traits of non-Western societies gave way to ritualistic and tribal forms of warfare that were regularly bested by Western militaries.

Victory has causes, Hanson tells us, and they are not always the ones that crop up in after-action reviews, such as terrain, command, planning, local tactics, and weaponry. Instead, such factors as political freedom, the quest for decisiveness, a sense of civic duty, rationalism and science, capitalist economics, technological enthusiasm, discipline combined with individual initiative, and a tradition of critique and self-correction have not only made Western societies into what they are today, both good and bad, but they also provide the foundation of understanding the enduring Western military advantage in battle.

While allowing for anomalies, Hanson maintains that the whole of military history basically supports his thesis. To illustrate his points most vividly—and



he is a vivid writer and historian—he chooses one West versus non-West battle (to include a few Western defeats) to highlight advantages derived from each cultural trait.

The Athenian naval victory over the Persians at Salamis in 480 BC shows the moral advantage that free men have over slaves. Alexander the Great's breaking of Darius III's large Persian and Greek force at Gaugamela in 331 BC evinces the advantages of a Western tradition of decisiveness rather than ritual maneuvering. The annihilation of the Romans by Hannibal's army at Cannae in 216 BC and Rome's subsequent recovery to drive him from Italy and win the war with Carthage demonstrate the ability of a civic republic to rally its citizenry to strategic victory even after a calamitous defeat.

The Frankish victory over the Moors at Poitiers in 732 AD exemplifies the power of the yeoman tradition in Western warfare—lower class landed infantry soldiers and their shock formations whose operations were based not on brave individual warriors, a proud non-Western tradition, but on a team of exchangeable cogs in a machine. Cortez's campaign in Mexico in 1520–1521 and culminating victory over the mighty Aztecs at Tenochtitlan point up the advantages of Western rationalism and technology when put together. The Venetian crushing of the Turkish fleet at Lepanto in 1571 highlights the military benefits capitalist societies have over command-directed economic traditions.

John Hillen, the author of several books and numerous articles on strategic affairs, is a military consultant to ABC News and a contributing editor at *National Review*.

The 1879 British defense of Rourke's Drift against the Zulus after the annihilation of the British force at Isandhlwana shows the advantage of the soldier over the warrior. Nimitz's tide-turning triumph at Midway in 1942 illustrates the value of a society that prizes individual initiative. Finally, and perhaps most controversially, the U.S. operational victory/political defeat in the Tet Offensive of 1968 is an example of the self-correcting mechanisms of societies not afraid to criticize themselves and improve.

Hanson's battle chapters are rich and entertaining. Even so, the problem with this battle-per-cultural-trait method is that military history is so rich and diverse that it offers a series of actions or battles to prove almost any thesis on warfare. Hanson is primed to take on this argument and spends considerable time in a preemptive defense to convince the reader that such engagements as Thermopylae, Kabul, the Little Big Horn, Isandhlwana, Khartoum, and Dien Bien Phu do not disprove his thesis. His general tactic is a debater's best friend—positing the impossible to imagine the opposite case. After all, “England was in India, India not in England,” and a handful of Zulus could never be

imagined “butchering thousands of rifle-carrying redcoats.”

Moreover, where many non-Western forces were successful, Hanson contends that it was because they borrowed Western tactics and weapons. “In all such debate [scholars] must keep in mind that non-European forces did not with any frequency and for long duration navigate the globe, borrowed rather than imparted military technology, did not colonize three new continents, and usually fought Europeans at home rather than in Europe.” For those keeping score and bent on citing notable non-Western victories, Hanson maintains that his essential points still stand on the record: the dynamism of the West has generally made for superior forces and that dynamism sprang from political and cultural values unique to the Western tradition. Moreover, there has been no attempt by Western forces to incorporate non-Western traditions or cultural values to improve battlefield effectiveness, while the reverse has often been true. After all, as Hanson tells us, “Alexander did not hire the [Persian] Immortals, the British did not outfit regiments with assegais, and the American Navy did not institute samurai sword training.”

Hanson's broad and provocative thesis is largely supported by his analysis of selected engagements (themselves subject to endless reinterpretation), but the more interesting issue is whether his choices are indicative of a more universal theme that provides the single best explanation for Western dominance. This is a complex question. First, there is the matter of what the West is and what it is not. Hanson is squarely in the Adlerian intellectual tradition in assuming that the West is defined by a relatively linear cultural tradition evolving from Greece to Rome to Europe and at last to the United States. David Gress, author of *From Plato to NATO: The Idea of the West and Its Critics*, has challenged this traditional interpretation effectively, or at least expanded on the idea of a pure cultural link from Socrates through to Milton Friedman. But questions remain. For instance, what traditions do the Russians/Soviets represent? This is not addressed. In fact, much could be learned from West-on-West conflicts, but Hanson's only point there is that such clashes have always been a bloodbath due to the military effectiveness of both sides.

Second, who represents “everyone else,” and why can't these societies reach

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a point where they can challenge the dominant characteristics of Western societies? This brings to the strategist's mind the question of whether these cultural traits represent truly sustainable, competitive advantages on the battlefield—advantages that are valuable, unique, hard to copy, and decisive. Hanson leaves no doubt that these qualities are valuable. He also makes a persuasive case that they are unique. It is less certain whether they are difficult or costly to imitate—and the Chinese, Koreans, and Japanese in particular have effectively demonstrated that on occasion. Finally, we know that these traits, while giving great advantage to Western militaries, are not always decisive.

Most important, there are the questions of whether these advantages even matter. The invasion of Iraq would certainly prove Hanson's point about Western military superiority when the enemy stands and fights, but the non-Western way of war has been employed since the initial victory and with some tactical success for America's adversaries. If these cultural traits manifest themselves as advantages only on the battlefield, then a Westerner hopes that he doesn't run short of fights and adversaries willing to accommodate him. Finally, there is the question of where political and cultural qualities actually make the West more vulnerable. For instance, do the standards of individual freedom, openness, and transparency make homeland defense harder? Do the traditions of civic society and clear separation between combatants and noncombatants hamper the West's effectiveness in counterinsurgency campaigns?

The questions remain to be answered. But Hanson's provocative thesis is more right than wrong and marks a valuable contribution to a hotly debated subject. Whether one buys his entire premise, Hanson's enduring contribution is to reintroduce the power of culture to the debate about military effectiveness. For too long it has been out of fashion to speak of cultural influences and differences—systems of belief, patterns

of behavior, and values. Instead, intellectuals swarmed to cultural relativists (Aren't we all really the same? It's just our greedy leaders who are different) and geographic determinists such as Jared Diamond, who offered explanations about Western military superiority that had the comforting feel of an apology.

Ironically, Hanson's controversial thesis is fairer to the non-Westerner than to Diamond or others. Unlike them, he is by no means an implicit racist. He makes much of the fact that intelligence and bravery are shared the world over and by every culture in equal measure. But some cultural groups evolved different societal traits concerning the way they would order their economic and political affairs. The traits of the West allowed it to develop a matchless military power that accounts for the advantages it has enjoyed on the battlefield and in campaigns.

JFQ

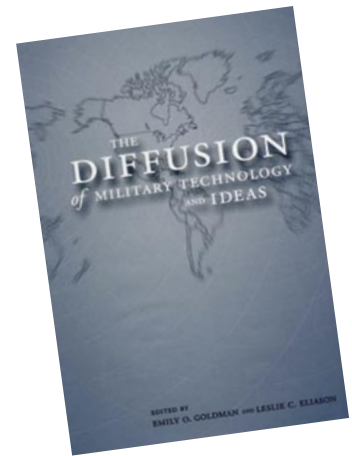
A Book Review

By JAN M. VAN TOL

The Diffusion of Military Technology and Ideas

*Edited by Emily O. Goldman
and Leslie C. Eliason*
Stanford, California: Stanford University
Press, 2003
415 pp. \$75.00
[ISBN: 0-8047-4535-8]

This book comprises historical case studies on the diffusion of military technologies and ideas, framed by a concise introductory section laying out the key issues and how to think about them and a cogent final chapter drawing thoughtful hypotheses from the cases. The case studies were prepared for workshops sponsored by the Office of the Secretary of Defense (OSD) addressing the international consequences should the United States



realize the dramatic increase in military effectiveness the Gulf War suggested.

Advances in information technology (IT) are having revolutionary impacts on a wide range of human activities. Perhaps the closest recent historical analog was the upheaval that ensued from widespread diffusion of small engines and motors in the first decades of the last century. Societies, cultures, militaries, economies, and the structure of international relations changed in ways that could not have been foreseen. The impact of today's information advances is similar in scale for the same reason: IT has become ubiquitous in virtually every facet of life. For defense strategists, the key question is how to think about the possible military consequences.

The diffusion of U.S. military technology is a multifaceted problem. Most of the current debate on the ostensible IT-driven revolution in military affairs (RMA) is focused on what the United States can or should do to transform its forces. The debate, however, is taking place without reference to what other actors will do in response to U.S. transformation. Yet it is virtually inevitable that new technologies and ideas with military applications will diffuse to other state and nonstate actors. As the Director of OSD Net Assessment notes in his preface, this diffusion "raises issues that U.S. policymakers will have to address in developing a strategy to guide our actions in the RMA that is currently unfolding." The editors note that:

Captain Jan M. van Tol, USN, is the Navy fellow at the Council on Foreign Relations. He was commander, USS Essex, through February 2005.

our study takes up the question of how others are likely to respond to U.S. innovations and how this will affect America's position. The answer depends on whether and how others assimilate and exploit innovations. Anticipating the diffusion trajectories likely to accompany military innovation and transformation, and developing strategic responses, are core aspects of the RMA challenge.

As various Third World nations have found, diffusion of technology and ideas is not merely a matter of purchasing new technologies, thereby achieving instant improved performance. The

contributors to this volume distinguish between two facets of technologies and innovations: hardware (the physical manifestations of the technologies) and software (ideas, organization, doctrine, or social change). Many observers focus wrongly on the more obvious hardware facet. Merely acquiring the hardware in an effort to emulate other militaries is rarely sufficient to improve capability. Indeed, "a key finding of this analysis is that for military diffusion, the spread of ideas, or software, has throughout time been the crucial dimension that accounts for military effectiveness." Yet, "software generally does not travel as well as

hardware [since] military innovation and diffusion are shaped by societal, cultural, institutional, organizational, bureaucratic, individual, doctrinal, and historical forces." The case studies illustrate these points.

The first set of cases addresses the way "local culture shapes and redirects even the most assiduous attempts at emulation." These include the highly successful 18th-century introduction of the British regimental system into South Asia, the less than effective adoption of Soviet doctrine and organizational forms by Egypt, Syria, and Iraq, and the successes due to cultural affinity between

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The Arab-Israeli Conflict: Toward an Equitable and Durable Solution

Aaron David Miller, President of Seeds of Peace, argues that there is an equitable and durable solution to the Arab-Israeli conflict. But such a solution can only be achieved through the long and imperfect process of negotiation. Sadly, Israelis, Palestinians, and Arabs in general still see the struggle as an existential conflict over physical security and political identity. U.S. diplomacy must recognize that ending the conflict is a generational proposition.



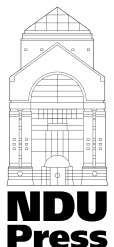
U.S.-Australia Alliance Relations: An Australian View

Paul Dibb, professor emeritus at The Australian National University, discusses how Australia will remain a committed U.S. ally for the foreseeable future. Though Canberra and Washington have common views on many issues, Australia faces considerable challenges in its own neighborhood, which have first priority. Maintaining a strong relationship will be contingent upon Washington's success in convincing the Australian public that U.S. policies are both necessary and legitimate and that Australia's contributions to mutual security are not taken for granted.



Sustaining U.S.-European Global Security Cooperation

Stephen J. Flanagan, director of the Institute for National Strategic Studies at the National Defense University, explains how sustaining effective transatlantic security cooperation over the next decade will require narrowing remaining European-American differences over threat perceptions, strategy, and military priorities. In fact, Washington will remain reluctant to treat Europe as a full partner until it demonstrates a willingness to enhance lagging defense capabilities.



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the United States and its Anglo allies that underpins their sharing of military expertise.

The next cases examine “whether and to what extent it is possible to shape, direct, and manage the diffusion process.” Tracing cause and effect turns out to be difficult. One case explores how the Soviets consciously tried to restructure the military organizations of the Warsaw Pact states by controlling the diffusion of technology. Strikingly, the Soviet motivation for the type and quantity of technology to supply to each ally was driven less by the international security of the alliance than by the need to safeguard and legitimize the communist regimes in those states, something not understood in the West until well after 1989. Another case examines the diffusion of nuclear weapons. This is a less satisfying case in that, given that the imperatives for acquiring nuclear weapons or constraining their proliferation are so unique, it is difficult to generalize from such special weapons to technological diffusion more generally. A third case

addresses differences between diffusion from “core” (major or technologically advanced) states to the “periphery” and vice versa.

A third set of cases examines how diffusion of ideas and technology has resulted in large-scale military transformations. Cases include the Napoleonic and Prussian revolutions, which “consisted of military innovations embedded within broader social and economic transformations”; the varying Allied responses to combined arms armored warfare in World War II; and the differing paths to carrier aviation taken by the British, U.S., and Japanese navies, as well as those considered by Germany and Italy.

The final set of cases addresses diffusion in the information age. Information technology is not merely the means by which military effectiveness may be greatly increased in coming years; it simultaneously facilitates the rapid diffusion of ideas about warfare generally, which may be as important. The easy access to inexpensive advanced IT may in itself lower the barriers to

entry to acquisition of lethal capabilities; as a result, smaller powers and nonstate actors may have access to destructive capacity formerly the province of only major powers. On the other end of the scale, diffusion of IT systems and ideas to growing powers such as China could affect military balances globally, perhaps much more rapidly than has happened historically. It thus is not clear that aggressive U.S. exploitation of an information RMA, reacted to by a host of actors, will leave the Nation in a better position over the long term. Accordingly, these diffusion issues are among the most complex and vital that policymakers face in planning forces and capabilities.

Editors Goldman and Eliason are professors at the University of California at Davis and the Monterey Institute of International Studies, respectively. The case study contributors come from a wide range of military and civilian academic institutions. Mixed groups of academics and military professionals attended the various OSD workshops for which these cases were prepared.

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