Peace Operations

Training and Developing Leaders in a Transforming Army by Lieutenant General Mike Steele, see page 2

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From the Editor

In this issue, Lieutenant General Mike Steele completes his two-part report on the proceedings of the Army Training and Leader Development Panel. The first part appeared in the July-August 2001 issue of *Military Review*. In this article, Lieutenant General Steele discusses the panel's recommendations.

Congressman Ike Skelton argues that the past holds lessons for contemporary soldiers in asymmetric warfare. In recalling the Indian campaigns of yesteryear, he advises, "we must not fall into the same trap of underestimating a potential adversary because of his different culture or seemingly inferior capability. To do so would be to repeat errors of the past with potentially devastating future consequences."

Leadership and training remain vital issues to the Army. Gillespie, the 2001 MacArthur Award winner, proposes that the Army's leadership doctrine should be nested horizontally and vertically to provide a more comprehensive body of doctrine than is currently available. Hertling and Boisselle review the National Training Center's 20 years of excellent service and preview its 21st-century innovations.

Commanders continue to be challenged to conduct peace operations ever more effectively. The authors in this section discuss how commanders might achieve this. Thomas introduces us to "policekeeping" and the effect of information technology on peacekeeping operations. Anderson proposes that operational commanders can enhance their chances for successful peacekeeping by developing measures of effectiveness to determine success. Siegel offers insight into intelligence challenges posed by civil-military operations that might not exist in traditional warfighting operations. Bingham, Cleary and Rubini share their experiences as part of a civil affairs ministerial advisory team in Haiti.

Because peace operations can erode fundamental warfighting skills, senior leaders must keep essential functions—core competencies—honed and ready. Logistics is a particularly important core competency. The solution, according to Ferris and Keithly, is outsourcing—contracting commercial logisticians to perform noncore logistics functions.

Is technology the answer to battlefield confusion? Kiesling argues that for Clausewitz, the real confusion of battle is not the so-called fog of war created by imperfect or incomplete information but the friction generated in the commander's mind by uncertainty, exhaustion and fear. Kipp and Grau argue that the very technology that commanders increasingly rely on to clear the fog of war creates its own fog and friction.

As the 43d Editor in Chief of *Military Review*, I will continue the journal's tradition of stimulating discussion to address the challenges that the US Armed Forces face. There are no perfect solutions—only workable ones. This journal plays a vital part in developing these solutions.

MRR

Training and Developing Leaders in a Transforming Army

Lieutenant General William M. Steele, US Army and
Lieutenant Colonel Robert P. Walters Jr., US Army

Without close examination and monitoring, Army culture may evolve in a direction that is both unwanted and counterproductive to developing future leaders. By implementing some or all of the ATLDP recommendations, the Army can take charge of its culture and create a warfighter environment for routinely training soldiers and growing leaders.

"Go Army, Beat Navy!"

"My Other Car is a Porsche"

"If You Can Read This, You Are Following Too Close"

"Airline Pilots on Strike"

"My Kid is an Honor Roll Student at Patton Junior High"

"I Brake for Animals"

YOU SEE THEM EVERYDAY. People plaster their car bumpers with stickers. They hang logo flags on their porches. They walk in picket lines holding signs. They confront police barricades shouting protest slogans. And they skillfully use the 15-second sound bite on "CNN." What are they doing? The answer is simple; they are sending messages. Their messages reflect their beliefs.

In the Army, our actions also speak to our beliefs.

In fact, they speak volumes. Our actions, policies and practices let our soldiers, civilians and family members know what the Army values. It does not matter if we *believe* in locking in our training six weeks out if our *practice* is to routinely change the training schedule at the last minute. Our soldiers will not believe us if we do not practice what we say. We tell cadets and officer candidates they will lead soldiers when they join the Army, and they believe us. When we move platoon leaders out of their leadership positions quickly into staff jobs, our practice sends a different message. When our practice is not consistent with soldier beliefs, what message are we sending?

We are transforming to a more strategically responsive force that is dominant at every point on the operational spectrum. The Army Vision guiding this transformation has three component parts: Readiness, Transformation and People. As we started down this Transformation path, we began by ad-

dressing doctrine, organizational structure and materiel with the Transformation Campaign Plan. In June 2000, the Chief of Staff, United States Army, (CSA) chartered the Army Training and Leader Development Panel (ATLDP) to look specifically at training and leader development as part of the Army's Transformation Campaign Plan. For three months, the panel conducted exhaustive research and collected data across the Army. Over the subsequent three months, the panel assessed Army training and leader development to determine their suitability for the future. The panel's commissioned officer study was released 25 May 2001. This article continues my previous discussion, "Training and Developing Army Leaders," in the July-August issue of *Military Review*. Here, I will describe the panel's work on Army culture and discuss the major findings, conclusions and recommendations concerning the Officer Education System (OES), Army training, the systems approach to training (SAT) and the requirement to link training and leader development.

Merriam-Webster's *Collegiate Dictionary* defines culture as "the set of shared attitudes, values, goals, and practices that characterizes a company or corporation." While we are not a corporation, our organization, the United States Army, does have its own unique culture. We have a common set of values and goals described as missions, and we have practices that we accept as routine. Soldiers understand that life within the Army culture is not a utopian existence. They recognize that a commitment to duty, honor and country requires personal sacrifice that ebbs and flows with the operational pace of the unit. The pace increases in times of crisis and should decrease during routine peacetime operations. There exists an acceptable level of sacrifice that soldiers and their families accept as part of our professional culture. We will call that level the "acceptable band of tolerance." The ATLDP discovered several beliefs with contradictory practices. The more important ones follow.

Our Practices Contradict Our Beliefs

Our beliefs make Army culture unique, but they compete with negative practices. Officers surveyed by the ATLDP voiced a common theme—an excessive operational pace pervades nearly all aspects of their personal and professional lives. Their commitment and service ethic conflict with their commitment to their families. Officers perceive that the Army is not as committed to them and their fami-

> Officers surveyed by the ATLDP voiced a common theme—an excessive operational pace pervades nearly all aspects of their personal and professional lives. Their commitment and service ethic conflict with their commitment to their families. Officers perceive that the Army is not as committed to them and their families as the Army expects them to be committed in return.

lies as the Army expects them to be committed in return. Trust, an essential component of an effective military organization, suffers from lack of senior to subordinate contacts and from perceptions of inequity in the Officer Evaluation Report (OER) system. The warrior ethos for lieutenants diminishes when confronted by an often too-brief experience as a platoon leader or other small-unit leader to fill staff positions left vacant by our shortage of captains. There is a frequent inability to conduct training in accordance with the Army's training doctrine due to resource constraints and the undisciplined application of our training doctrine. Junior officers find themselves performing jobs for which they are not prepared. In turn, senior leaders oversupervise and micromanage. Finally, the overall personnel management system appears to focus not on leader development in organizational assignments but rather on placing "faces in spaces."

Belief: Doctrine is sound.
Practice: We do not follow the doctrine.

The officer study found that we no longer follow or cannot follow our training management doctrine. We do too many nonmission tasks; make last-minute changes and direct too many top-down prescriptive training events. The study noted that commanders do not enforce the contractual aspects of locking in short and near-term training events. When this happens, predictability for units, soldiers and families is the victim. Scheduled training is overcome by last-minute nonmission events. When units attempt to conduct too many events in a given period, training suffers and units seldom retrain to

> **To prepare for asymmetric threats, and noncontiguous and nonlinear battlefields in our present operating environment, all Army leaders must be warfighters. Officers must be competent in conducting small-unit operations and bonded to the Army before, and as a higher priority than, their branch.**

standard on assessed deficiencies because they are racing to the next event.

Quarterly training briefings (QTBs) no longer follow their intended format. Rather than an opportunity for senior and subordinate commanders to schedule and resource future training, maintain priorities, achieve unity of effort and synchronize actions, today's QTBs have morphed into all-encompassing unit status reports. This emphasis on process (researching data, providing input and preparing briefing slides) consumes an inordinate amount of staff and commander time and detracts from the intended purpose of QTBs.

The panel recommended several policy changes for Army Regulation 350-1, *Army Training,* and the CSA's training guidance to increase predictability and reduce operational pace. It also recommended that the Army and units discipline the training management process by locking in training schedules as described in doctrine to increase predictability, eliminate nonmission-related compliance training, protect weekends from routine Active Component garrison training and staff activities, and commit to quality family time by scheduling four-day weekends in conjunction with national holidays. Finally, the panel recommended a Department of the Army (DA) policy that vests in one staff agency the publication of taskers to subordinate commands.

> **Belief: Commanders build cohesive teams.**
> **Practice: OER stifles unit teambuilding and inhibits trust.**

The OER is a source of mistrust and anxiety. It has two fundamental purposes: to provide for leader development and to manage personnel. The OER does not yet meet officer expectations as a leader development tool. The leader development aspects of the OER are seldom used, and senior raters sel-

dom counsel subordinates. The current OER does provide selection boards what they need to sort through a high-quality officer population and select those with the greatest potential. Despite recent high promotion rates—98 percent to captain and 92 percent to major—and three years' experience with the current OER, there remains considerable anxiety over the evaluation system.

Who wants to be labeled a "center of mass" (COM) officer? The OER's forced distribution formula requires at least 51 percent of the officer corps to be COM. Field feedback indicates officers are concerned about the impact of a COM rating on career progression. Officers believe the forced distribution system causes senior raters to pool officers and rate by position. They consider the term "center of mass" as negative and believe a COM OER in a branch-qualifying position is career-ending. A comment from the General Officer Army Training and Leader Development Conference at Fort Hood, Texas, on the term "center of mass": "Center of mass is an adequate description of the aiming point for a weapon's sight picture, but not to describe the abilities and potential of our leaders."

> **Belief: Leader development is essential.**
> **Practice: Platoon leader longevity is determined by time vice the quality of the developmental experience.**

How can a brigade commander build a cohesive team of leaders if he or she has to senior rate more than half of the unit's captains as COM? Many officers do not believe that the senior rating accurately reflects actual job performance or future potential. They see the top block as being reserved for purposes outside the stated OER construct. Perceived manipulations of the system include reserving above centers of mass (ACOMs) for company commanders at the expense of staff officers, automatic COMs on initial OERs so that subsequent reports show improvement and ACOMs on OERs issued just before selection boards meet. In short, in its current form and application, the OER counters team-building; promotes competition among unit officers; and inhibits bonding, trust, cohesion and loyalty at the battalion and brigade levels.

The panel recommended that the Army review the OER this year to examine its leader development aspects, the terms ACOM and COM, counseling

A 4th Infantry Division soldier returns to his family from a Persian Gulf deployment.

Soldiers understand that life in the Army is not a utopian existence. They recognize that a commitment to duty, honor and country requires personal sacrifice. Our soldiers also believe that the level of sacrifice will ebb and flow with the operational pace, increasing in times of crisis and decreasing afterwards. The panel called the level of sacrifice that soldiers and their families can endure indefinitely the "acceptable band of tolerance."

and forced distribution requirements. To get a balanced look at the system, it is important to involve the field in the OER review. Brigade and battalion commanders need an effective evaluation/assessment tool that reinforces trust, cohesion, team-building and loyalty at unit level; the current OER fails this test.

Junior officers' initial experiences must be protected by ensuring adequate time in jobs with associated criteria-based, quality job experiences. To mitigate the tendency to use lieutenants to fill officer personnel gaps around post, general officer approval should be required to assign lieutenants above brigade. When lieutenants are moved out of branch jobs, we must provide the appropriate training required for their success.

Belief: OES will prepare officers for the future.
Practice: OES is focused on the last war.

Officer Education System

Many of the institutional tools that served the Army well during the Cold War are no longer adequate. Largely untouched since the collapse of the Soviet Union and progressively underresourced during Army downsizing, the OES is out of synch with Army needs today and the needs of the Objective Force tomorrow. We must adapt OES curricula to prepare for a new operating environment characterized by regional threats, full spectrum operations and information-age technology. To prepare for asymmetric threats, and noncontiguous and linear

> **The panel found that the SAT process is fundamentally sound but not executed well. Due to a lack of training development resources, the Army does not have up-to-date training and educational products, the foundation for standards-based training and leader development. How can soldiers train to standard if the Army standard is outdated or has not been defined?**

nonlinear battlefields in our present operating environment, all Army leaders must be warfighters. Officers must be competent in conducting small-unit operations and bonded to the Army before, and as a higher priority than, their branch. They must be cohesive as year groups and as officer cohorts, self-aware and adaptive, and committed to lifelong learning. Adapting the OES requires a new approach that focuses each school on a central task and purpose, links schools horizontally and vertically in the educational process, synchronizes the educational and operational experiences of officers, and educates officers to established common standards.

At Fort Benning, Georgia, the US Army Infantry School has conducted the first two of four pilot courses of a common Basic Officer Leader Course (BOLC). Phase I takes newly commissioned second lieutenants from all branches and trains them on what is expected of Army commissioned officer leaders in, what amounts to, a leadership laboratory. During the course, the lieutenants are immersed in hands-on leadership training built around small-unit leadership skills required by all officers on full spectrum battlefields. In addition to weapons qualification, physical training and confidence-building exercises, the common core focuses on the development of basic leadership skills in a field environment. Upon completion of BOLC, Phase I, the officers attend their branch basic officer course to receive the necessary branch-specific technical training. The intent of this common BOLC is to produce officers, regardless of commissioning source or branch, who are self-aware, adaptable and prepared to meet the challenges of leading our soldiers in full spectrum operations. During BOLC, Phase I, officers establish bonds to their year group cohort that transcends branch parochial biases. Although this BOLC is just one step toward transforming OES to meet the demands of the new operational environment, initial feedback indicates that the Army is on the right track.

A new Captains Career Course (CCC) should provide combined arms training to all captains. This course will focus on establishing a common Army standard for fighting, leading and training combined arms units. The CCC instructors will teach company combined arms skills, reinforce officership and prepare officers to be battalion and brigade combined arms battle captains. The end product of the new CCC will be captains ready to be combined arms company commanders or battle captains who can plan, prepare, execute and assess operations and training at the company, battalion and brigade levels.

> **Belief:** Right officer, right education, right time.
> **Practice:** 50 percent of our officers do not get resident schooling.

All majors need a resident intermediate-level education (ILE) based on the Officer Personnel Management System (OPMS) XXI. We should eliminate selection to the Command and General Staff Officer Course (CGSOC) as a discriminator. The panel recommended eliminating the CGSOC selection board starting with Academic Year 2003-2004. The Army is planning and preparing to execute an ILE program to replace the current CGSOC. The goal is simple—provide *all majors* with a quality resident ILE based on OPMS XXI. This ILE will give all majors a common core of Army operational instruction of approximately three months. Career field, branch or functional area education will follow common core instruction and be tailored to prepare officers for future service in the Army. Lengths and locations will vary depending on the educational requirements of their career fields and/or functional area designations. This ILE program will end our current practice of using educational opportunities as a discriminator for branch qualification, promotion and command selection. The product the Army receives with ILE is a cohort of majors with a common knowledge of division, corps and joint operations who better understand their career fields. ILE graduates will have the technical, tactical and leadership skills required to be successful in their career fields, branches and/or functional areas.

A soldier from the 755th Military Police Company provides security during a weapons search in the village of Crnilo, Kosovo.

Adapting the OES requires a new approach that focuses each school on a central task and purpose, links schools horizontally and vertically in the educational process, synchronizes the educational and operational experiences of officers, and educates officers to established common standards.

Belief: Bottom-up approach is best.
Practice: Training is driven from the top.

Training

During the Armywide study, the field reported that although we are training hard, we are not training to doctrinal standard for a myriad of reasons. Nonmission taskings, an excessive operational pace and a shortage of training resources make it harder to execute home station training in accordance with Army training doctrine. Beyond the day-to-day consequences of missed training opportunities, there is a long-term impact on leader development when junior officers become our future battalion and bri-

gade commanders. Many will not know or understand what right looks like and may not fully understand the principles of planning, preparing, executing and assessing training and retraining to standard. The principles and processes of current training doctrine are sound, but the Army must adapt them to the operational environment for table of organization and equipment (TOE) and table of distribution and allowances units. A rewrite of Field Manual (FM) 7-0 (25-100), *Training the Force*, and FM 7-10 (25-101), *Battle Focused Training*, is needed. Training aids, devices, simulators and simulations (TADSS) are outdated and do not adequately model Army system behaviors and characteristics. Many units reported having weapons and command and control systems with no associated TADSS.

> **[The OER]** has two fundamental purposes: to provide for leader development and to manage personnel. The OER does not yet meet officer expectations as a leader development tool. The leader development aspects of the OER are seldom used, and senior raters seldom counsel subordinates.

A bright spot in training is the operational and leader development experience the combat training centers (CTCs) provide to soldiers, leaders and units. The panel found that the Army must sustain the CTCs through robust recapitalization and modernization. In the late 1990s, we deferred CTC recapitalization and modernization requirements. CTC recapitalization sustains near-term readiness requirements for worn-out instrumentation, aging opposing force (OPFOR) vehicles, lack of aviation tactical engagement systems and interim fixes at CTCs until objective systems are fielded. CTC modernization provides for future requirements for TADSS, OPFOR and objective instrumentation—moving CTCs to commonality, digitization and an operational environment that enables Army Transformation. In 2000, the Army forecast funding for only 6 percent of the CTC recapitalization and modernization requirement. Today, we are forecasting funding through Fiscal Year (FY) 2007 at 70 percent of the CTC recapitalization and modernization requirement—more than $780 million. The intent is to sustain these training centers as the crown jewels of the Army training program.

With the Army keeping the bar high at the CTCs, home station resourcing must improve to get the most out of the coveted CTC training and leader development experience. One example would be a portable CTC-like instrumentation package that commanders could use to train soldiers at home station. We are moving in that direction with Portable Range Instrumentation Systems to aid with training assessments and fixed tactical Internets to provide communications support that will drive the Army Battle Command System and its associated components. These automated systems will assist commanders conducting combined arms training locally by reducing support requirements.

Belief: Train to standard.
Practice: Standards do not exist.

Systems Approach to Training

The panel found that the SAT process is fundamentally sound but not executed well. Due to a lack of training development resources, the Army does not have up-to-date training and educational products, the foundation for standards-based training and leader development. How can soldiers train to standard if the Army standard is outdated or has not been defined?

Standards are the basis for developing training, assessing performance and providing feedback. Without common standards, soldier, leader and unit readiness—and battlefield success—are in doubt. These common standards must be documented, accessible and digital. We need to reinforce the importance of standards-based training and enforce the SAT process. In the US Army Training and Doctrine Command (TRADOC), we should redesign the SAT development and support structure to leverage the subject matter expertise in the CTCs for training and doctrine development. The intent is not to put additional requirements on the observer/controllers and operations groups but to reallocate some training developers and doctrine writers and place them under operational control of the CTC operations group to capture training lessons learned and produce timely training products. Additionally, we need to invest in and exploit network technology to develop a more streamlined and effective SAT process where training and doctrine publications are web-based and updated. Up-to-date training and educational products are the foundation for standards-based training and leader development. Currently, we only have on hand 10 percent of the mission training plans (MTPs) required to support unit training. Of this 10 percent, most are obsolete.

Soldier training publications (STPs) are similarly obsolete or outdated. There are 273 of these publications addressing military occupational specialties at the -10, -20, -30 and -40 skill levels. Seventy

Obsolete or Nonexistent STPs
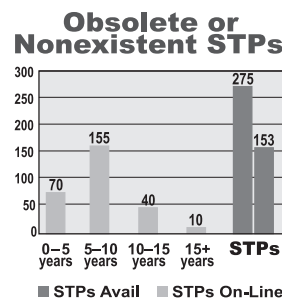
Figure 1.

STPs are less than five years old, 155 STPs are five to 10 years old, 40 STPs are 10 to 15 years old, and 10 STPs are more than 15 years old. These publications are not specifically designed to support Army of Excellence, Limited Conversion Division, Force XXI or Initial Brigade Combat Team forces and generally do not reflect digital skill requirements and training.

Reenergizing SAT will directly support the Army requirement for all battalions to receive an external evaluation (EXEVAL) annually. The goal is to start EXEVALs in FY 01 and to execute them for every TOE battalion annually thereafter. To meet this requirement, TRADOC reviewed the status of MTPs, the documents that provide the battalion-specific training standards. As of April 2001, there were 361 MTPs identified for review or revision; 86 are complete and the remainder are under revision. TRADOC's priority for MTP development is to immediately revise or develop, as appropriate, all divisional battalion and supporting/support unit MTPs this FY, then publish MTPs for nondivisional battalions by FY 02. This is a challenging plan, but rejuvenating the SAT process is clearly worth the time and effort.

> **Belief:** Training and leader development are inextricably linked.
>
> **Practice:** They are under separate DA staff proponencies.

Training and Leader Development

In the Army, we train soldiers, and we grow leaders. To excel at these two fundamentally necessary processes, we must look at them as one. Currently, the Army has a disjointed approach to training and leader development. The panel's work provides compelling evidence that a main effort in Army Transformation should be to link training and leader

> Our leaders must commit to lifelong learning through a balance of educational and operational experiences, complemented by self-development, to fill knowledge gaps educational and operational experiences do not provide. . . The panel recommends that the Army provide the training and educational standards and products that are the foundation for standards-based training and leader development.

development. Linking these two imperatives commits the Army to training soldiers and growing them into leaders.

The panel recommended that the Army establish a single proponent for training and leader development to improve the link between training and leader development, policy and resourcing. Currently, the proponency for training and leader development is vested in separate staff elements at DA level. The Deputy Chief of Staff for Operations and Plans is responsible for matters relating to training, and the Deputy Chief of Staff for Personnel is responsible for matters relating to leader development. The lack of a single proponent for training and leader development results in unsynchronized policy and resourcing of these two key imperatives. There is no funding line for leader development in the Program Objective Memorandum, and leader development currently tends to compete poorly for funding against training priorities. If training and leader development are to be fully linked, the responsibility for both should rest with a single proponent on the DA staff.

Obsolete or Nonexistent MTPs

AOE MTPs: 313 required — 187 of 267 obsolete

Force XXI MTPs: 259 required — 27 produced

Limited Conversion Division MTP: 313 required — 0 produced

IBCT Draft MTPs: 43 required — 34 produced

■ Required   ■ On hand   ■ Obsolete

Figure 2.

Army Training and Leader Development Model

Self-aware and adaptable leaders

Trained and ready force for the nation

Train
Self-develop
Educate

Experience
Operational and educational

Feedback
Leaders, units, army

Standards
Soldiers, leaders, and units

Army Culture
Warrior ethos, values, service ethic, learning organization

Train Soldiers . . . Grow Leaders

- **Mission-focused**
- **Doctrinally based**
- **Performance-oriented**
- **Train as you fight**
- **Leader as primary trainer**

- **Know yourself**
- **Lifelong learning**
- **Mentorship**

Figure 3.

> The proposed model is a balanced, integrated, progressive training and leader development model that assures full spectrum capability. The model shows the components of a combined Army training and leader development program, the process and the products that link training and leader development into a single entity.

We need a training and leader development model that clearly communicates the Army leadership's intent and is understandable for junior leaders, staffs and outside agencies. The proposed model is a balanced, integrated, progressive training and leader development model that assures full spectrum capability. The model shows the components of a combined Army training and leader development program, the process and the products that link training and leader development into a single entity. The components of the model are linked and intrarelated. Army culture, our beliefs and practices, is the foundation block on which this model builds. At its core are values, service ethic, warrior ethos and commitment to lifelong learning. Standards build on the culture foundation and illustrate the importance of setting a bar that our soldiers, leaders and units must achieve. Standards provide the mechanism for the next portion of the model, feedback. It is required for commanders to assess training and retrain and develop to standard. Feedback is required for our leaders, units and the Army as an institution. The top portion of the model represents the balance between operational and educational experiences needed to train soldiers and grow our own leaders. The model requires action by our soldiers, leaders and units to self-develop, educate and train. The result is leaders who are self-aware and adaptable. It also emphasizes the enduring principles of both training and leader development.

Our Army must be a learning organization. Our leaders must commit to lifelong learning through a balance of educational and operational experiences, complemented by self-development, to fill knowledge gaps educational and operational experiences do not provide. To be a learning organization that supports this lifelong learning, the panel recommends that the Army provide the training and educational standards and products that are the foundation for standards-based training and leader development. Needed are the doctrine, tools and support to foster lifelong learning. We must develop, fund and maintain an Armywide Warrior Development Center using information technology where soldiers, leaders and units go to find standards, training and education publications, doctrinal manuals, assessment and feedback tools and access distance and distributed learning programs for self-development.

We have to teach the importance of lifelong learning and the enduring competencies of self-awareness and adaptability throughout OES and strengthen this approach through organizations and self-development. In this context, self-awareness is the ability to assess abilities, determine strengths and weaknesses in an operational environment, and learn how to sustain strengths and correct weaknesses. Adaptability is the ability to recognize changes to the environment, determine what is new and what must be learned to be effective, and includes the learning process that follows that determination— all performed to standard and with feedback. The competencies of self-awareness and adaptability are all about lifelong learning. Their mastery leads to success in using many of the other skills required in full spectrum operations.

With this article and its predecessor, I have described the ATLDP and its conclusions from the commissioned officer study. The results from the panel's work confirm that leaders and soldiers must be at the center of our Army's Transformation process. For this to happen, we must take charge of our Army culture—set our own path vice yielding to external pressures. Additionally, we need to commit to training and growing our leaders by allocating the necessary resources to the OES, Army training and SAT. This commitment, along with inextricably linking training and leader development and arming our leadership with a management process to track and assess progress, will better align our beliefs and practices.

Nonmission taskings, an excessive operational pace and a shortage of training resources make it harder to execute home station training in accordance with Army training doctrine. Beyond the day-to-day consequences of missed training opportunities, there is a long-term impact on leader development when junior officers become our future battalion and brigade commanders.

To move ahead with our Transformation process, we must be willing to challenge everything from doctrine; to OERs; to OPMS XXI; to unit status reporting; to the way the Army designs forces, assigns operational missions and allocates resources. We must send the right message by balancing our practices with our beliefs. The ATLDP Commissioned Officer Study was just one component of our Army's transformation. The panel's findings, conclusions and 84 recommendations provided the CSA with credible information to improve our training and leader development programs and to balance our beliefs with our practices. Acting on these recommendations, along with the other ongoing Transformation efforts, will require extensive work. The good news is that our Army leaders are equal to the task. *MR*

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Teaching the Circumference of Army Leadership

Major William Gillespie Jr., US Army

The author argues that the Army's leadership doctrine must be more thoroughly nested vertically and horizontally with other leadership publications to achieve an fully integrated leader-development program.

The Army's Commitment—*The Army of tomorrow relies on the Army of today to accept the challenge and responsibility for the development of leaders for the future.*

—*Leader Development for America's Army*[1]

AS WE TRANSFORM our Army to meet the dynamic challenges of the 21st century, we must develop leaders who understand and can take advantage of the full potential of present and future Army doctrine, equipment, technology and information in full-spectrum operations. This environment requires increased situational awareness, understanding and dominance. We must fully understand the challenge and develop a leader-development program to meet it. Developing leaders is never easy. In today's environment of decreasing resources, shifting training priorities and a lighter force, it is especially difficult. Thus, we must seek efficiencies at every opportunity. While our leader-development principles are solid, our leader-development methods are not.

Improving Army leader development requires a simple, systematic methodology to communicate clearly the interworkings of the leadership framework within the Army Leader-Development Model. The small step to define and nest the pieces of the circumference of Army leadership and provide the critically needed common picture will generate a quantum leap in the Army's leader development.

Problem Analysis

The military experiences that have fed my interest in leader-development and teaching methods include interfacing with cadets from the United States Military Academy (USMA), Reserve Officers' Training Corps (ROTC), US Army Training and Doctrine Command (TRADOC) personnel, Army branch school instructors and Command and General Staff College (CGSC) faculty and students. During these I have witnessed clear, systemic weaknesses that have led me to challenge the Army's current leader-development process and doctrine.

Military history has demonstrated that introspection and self-examination are critical to an army's training and preparation for war. I have searched for appropriate leadership material, methodologies and how-to publications to augment junior leadership programs of instruction (POIs) and US Army Field Manual (FM) 22-100, *Army Leadership*, versions July 1990 and August 1999.[2] Because the three-pillar model—institutional education and training, opera-

DA Pam 350-58 defines leader development and explains how the Army desires to execute it for diverse Army audiences. . . . [However,] too many pieces of the leader-development puzzle are found elsewhere or are produced by individual instructors, branch schoolhouses and units, causing consistency and standardization problems throughout the Army. More important, this wastes valuable time and resources, and is often redundant.

tional assignments and individual self-development—in the new FM 22-100 mostly affects junior, uniformed leader development, my examples and solutions will focus at that level; however, my recommendations apply at any leadership level. After years of study and trial and error, some problems with the Army Leader-Development Program and processes became clear.

While many leadership programs, policies and plans are in place, they usually lack a systematic methodology that unifies the developmental sequence to make the teaching and learning process simple, understandable and effective. When and where does FM 22-100 start and stop? One must read and decipher dozens of Army and TRADOC regulations, pamphlets, training circulars (TCs) and command publications to ascertain the full leader-development process. To obtain a common picture, these dozens of publications require consolidation. Why were the appropriate leadership methods and processes not outlined in FM 22-100 so instructors and unit leaders know what, when and how to teach the progressive and connected leadership concepts? Although all leadership publications are linked through Army and TRADOC Internet websites, it is still difficult to piece the puzzle together. Nowhere in leadership training do we concentrate on Department of the Army Pamphlet (DA Pam) 350-58, *The Enduring Legacy: Leader Development for Americas Army*, and its connection to other leadership documents and processes.[3] Few senior leaders adequately explain or connect the processes and fundamentals to manuals, training programs and follow-on development through the three pillars.

DA Pam 350-58 defines leader development and explains how the Army desires to execute it for diverse Army audiences. Institutional and operational leaders do not use or understand it properly. Too many pieces of the leader-development puzzle are found elsewhere or are produced by individual instructors, branch schoolhouses and units, causing consistency and standardization problems throughout the Army. More important, this wastes valuable time and resources, and is often redundant.

If the current leader-making program succeeds, it is due to four primary reasons. First, many individuals report to leadership positions having already learned the requisite leadership fundamentals. Because of recruitment challenges during strong economic cycles and shifting demographics and values, new officers and soldiers will not always have the necessary characteristics and skill sets. We need to build them through training and development. Over the past five years, the strong indoctrination program of values, patriotism and self-discipline has begun to pay dividends. The Army first produces a good citizen, then a trained soldier.

Second, the current leader-development program succeeds because of the enthusiasm and experimentation of Army instructors and unit leaders. Institutional instructors, unit leaders and individuals need better guidance, and the Army needs better standardization. Third, the leader-development program succeeds through soldier self-development. Unfortunately, the current program relies too heavily on a self-development system that lacks direction, monitoring and mentoring, so individual gains or shortcomings go unnoticed. Finally, the leader-development program succeeds through learning by trial and error. However, without the learned leadership fundamentals, learning only by trial and error
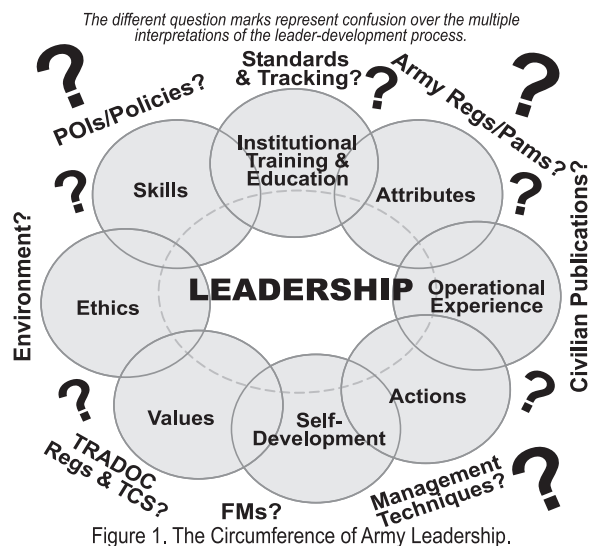
Figure 1. The Circumference of Army Leadership.

The recently revised FM 22-100 is the heart of Army leadership training and education for the new century. It supersedes four publications: FM 22-101, Leadership Counseling; *FM 22-102,* Soldier Team Development; *FM 22-103,* Leadership and Command at Senior Levels; *and DA Pam 600-80,* Executive Leadership. *It is an excellent publication that provides a simple, idealistic, one-source leadership blueprint for all levels of Army leaders.*

might stifle development and hurt morale.

These four reasons, even in the worst case, show the current method takes a lot for granted and is a system out of balance. With the leader skills required for fielding the new 21st-century doctrine of full-spectrum operations and information warfare, the lack of synchronization between the three pillars will get worse. We must better educate the force on the Army's leader-development doctrine and its relationship to required values, attributes, skills and actions—the systematic circumference of Army leadership. The Army must focus on Army leadership elements and their relationship to subordinate nesting concepts and manuals; the impact of missing leadership tactics, techniques and procedures (TTP); and leader-development tracking mechanisms. By adopting this philosophy, the Army will fulfill an immediate need and close the widening gaps between the three leader-development pillars.

Methods, Strengths and Shortfalls

The recently revised FM 22-100 is the heart of Army leadership training and education for the new century. It supersedes four publications: FM 22-101, *Leadership Counseling*; FM 22-102, *Soldier Team Development*; FM 22-103, *Leadership and Command at Senior Levels*; and DA Pam 600-80, *Executive Leadership.*[4] It is an excellent publication that provides a simple, idealistic, one-source leadership blueprint for all levels of Army leaders: civilian and military, Active and Reserve, officer and enlisted. With competent, professional leadership and values at its core, the manual clearly establishes the Army's desired organizational culture by providing definitions and short examples of leadership competencies and desired character traits. The new Army Leadership Framework model expanded on the time-honored principles of be, know, do by adding the specific values, attributes, skills and actions required for each.

However, it falls short as an all-encompassing leadership manual. While previous editions of FM 22-100 focused exclusively on tactical leadership at battalion and below, the newly revised manual combines the three levels of Army leadership—direct, organizational and strategic. The manual was to be a comprehensive reference showing how leadership skills, actions and concerns are linked. It would allow direct leaders to read about issues that affect organizational and strategic leaders.[5] Unfortunately, the new manual relies too heavily on definitions, short historical examples and simplified bullets. The end product is not a comprehensive and adaptable leadership resource for the Army of the 21st century.

Consolidating FMs 22-101 and 22-102 removed valuable explanations and guidance from the previous manuals. Targeted for battalions and below, these manuals were clearly established as how-to publications nested with the old FM 22-100. Leaders still use them for TTP and implementing guidance. To strengthen FM 22-100 and junior leader development, FM 22-101 and FM 22-102 should be reinstated as separate manuals. Army TTP manuals normally implement doctrinal FMs, thus directing training at the appropriate organizational level.

Another shortcoming of FM 22-100 is its design for a single leader-development program for all civilian, officer and enlisted members as well as for every environment—office, garrison and field, in war and peace. An overarching leadership concept is difficult to execute. FM 22-100 has an ill-defined audience. Therefore, senior uniformed leaders and civilians go elsewhere for leader development. Many institutional educational programs and opportunities compensate for FM 22-100's missing strategic leadership tools, plus the other two pillars—operational assignments and self-development—work well for senior leader development.

The revised FM 22-100 undermines cadet, junior officer and noncommissioned officer (NCO) development. It is easy to espouse desired leadership competencies and character traits through definitions, simplified bullets and historical examples, but this covers only the rudimentary desired end state of leadership. We know the destination, but how do we get there? Where is the road map?

Trying to simplify Army leadership doctrine into a one-source, catchall document does not work. The new manual causes more decentralized training and exacerbates long-standing problems. How and when do other Army keystone fundamentals and manuals nest in teaching leadership, and where are the TTP to implement FM 22-100—the how-to manu-
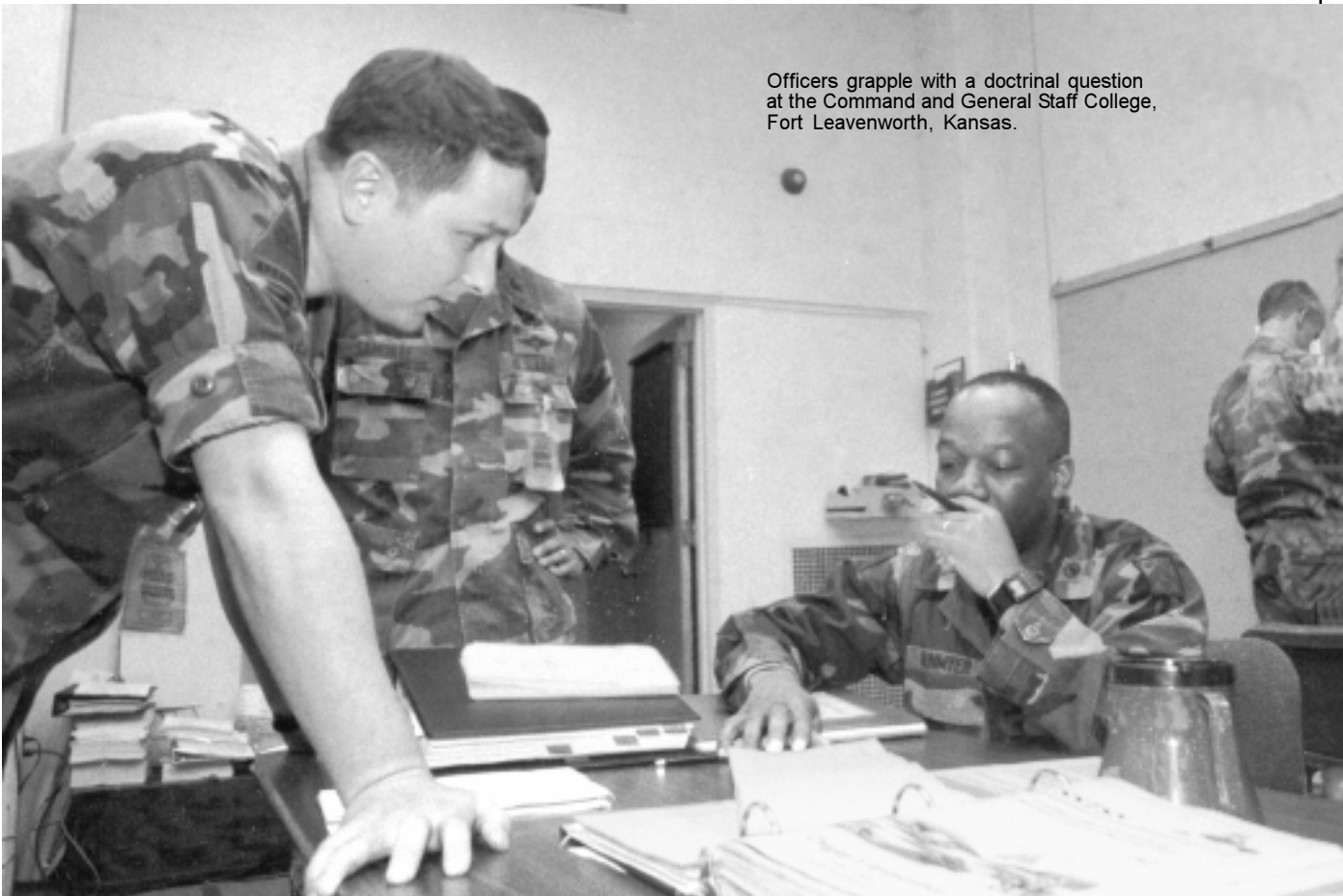
Officers grapple with a doctrinal question at the Command and General Staff College, Fort Leavenworth, Kansas.

When and where does FM 22-100 start and stop? One must read and decipher dozens of Army and TRADOC regulations, pamphlets, training circulars and command publications to ascertain the full leader-development process. . . . These dozens of publications require consolidation . . . so [that] instructors and unit leaders know what, when and how to teach the progressive and connected leadership concepts?

als that train and educate the diverse audience at all three levels of Army leadership? Which pillar is clearly responsible for specific developments, and how are they connected, mutually supported, managed and tracked? Do units and individuals know what, when and how to teach or study leadership? Again, Army TTP usually address these questions at the unit level, but they are missing from the current FM 22-100's methodology.

A consolidated Army leadership blueprint manual is beneficial only if reinforced by detailed, specific, supporting-level, how-to publications to educate and train the target audience. Without a clear pedagogical relationship to essential doctrinal publications and without specific leadership TTP, the Army's leadership teaching methodology cannot be clearly understood or taught based on a consistent standard and within the intent of senior leaders. Additionally, with the consolidation, reduction and new intent of FM 22-100, the leader-development burden shifts farther away from the institutional pillar to the operational assignment and self-development pillars.

Units are not trained or resourced, nor do they have time to adequately fulfill this role. Self-development is not carefully choreographed and monitored, even with improved developmental counseling forms.

Nesting and Doctrine Integration

FM 22-100 states that it supports FM 100-1, *The Army* (replaced by FM 1) and FM 100-5, *Operations* (replaced by FM 3-0).[6] When should an Army institution, instructor or leader turn to other Army doctrinal manuals—FM 25-100, *Training the Force*; FM 25-101, *Battle-Focused Training*; or FM 101-5, *Staff Organization and Operations*—to teach initial leader skills (interpersonal, conceptual, technical and tactical) and actions (influencing, operating and improving)?[7] About one-half of the leadership framework—be, know, do—is not found in any FM in significant detail so that the topics can be taught. Currently, positive, adequate coverage includes technical and tactical (know), operating (do) and decisionmaking (subcategory) from the influencing (do) category. For instructional purposes and to

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cover omissions in the manuals, the Army needs stronger, systematic links to additional training material such as TCs, compact disks, videos, websites, digital libraries (specifically the General Dennis J. Reimer Training and Doctrine Digital Library) and civilian publications, so every aspect of the leadership framework is covered. As a foundation, FM 22-100 must list these resources.

In units and during self-development, who decides when an Army publication is not enough and when it should be augmented? Who decides the setting and conditions for learning these undocumented skills and actions? Are first-line supervisors and unit leaders really knowledgeable in every area? Leaders will use their best judgment and initiative, but better TRADOC guidance is necessary. Army branch schools, POIs and training support packages (TSPs) must address these shortcomings; however, POIs and TSPs are often misunderstood or under-used. They are better suited for military occupational skill training or for providing direction or turnkey training. With Internet website availability, leader-development training can improve in this area.

The current system of leader-development training generally defaults to instructors or unit leaders who are not necessarily subject matter experts. If leadership instructors cannot explain how the whole leader-development framework connects or nests, inexperienced leaders will have to learn through experience and self-development. Instructors and leaders struggle because developing and synchronizing schooling, operational experience and self-development through the Army leadership framework is difficult. It would not be as difficult or intangible if the circumference of Army leadership message were clearly understood; nested to subordinate fundamentals; and methodology, application and monitoring were standardized among the three pillars.

FM 3-0 provides an excellent example of how an Army capstone manual should nest in joint military operational and higher headquarters guidance as well as with essential concepts and organizational doctrine. FM 3-07, *Stability Operations and Support Operations;* FM 3-90, *Tactics*; FM 3-100.7, *Decisive Force: The Army in Theater Operations;* and FM 4-0, *Combat Service Support*, clearly show relationships and ensure connectivity.[8] To ensure this unity of purpose and linkage, FM 3-0 and its supporting doctrine were developed at the same time. This type of synchronized nesting and linkage among FM 22-100 and resurrected FMs 22-101 and 22-102, DA Pam 350-58 and others is necessary for a clearer implementation methodology for teaching the leadership framework. My conception for a nested methodology for operations include the following:

- FM 3-90, *Tactics*, 2001 (skills).
- FM 21-20, *Physical Fitness Training*, 1992 (attributes).
- FM 22-9, *Soldiers' Performance in Continuous Operations*, 1991 (attributes, skills and actions).
- FM 22-51, *Leader's Manual for Combat Stress*, 1994 (attributes, skills and actions).
- FM 25-100, *Training the Force*, 1988 (skills

Nesting shows the necessary relationships for teaching the leadership framework to junior leaders.
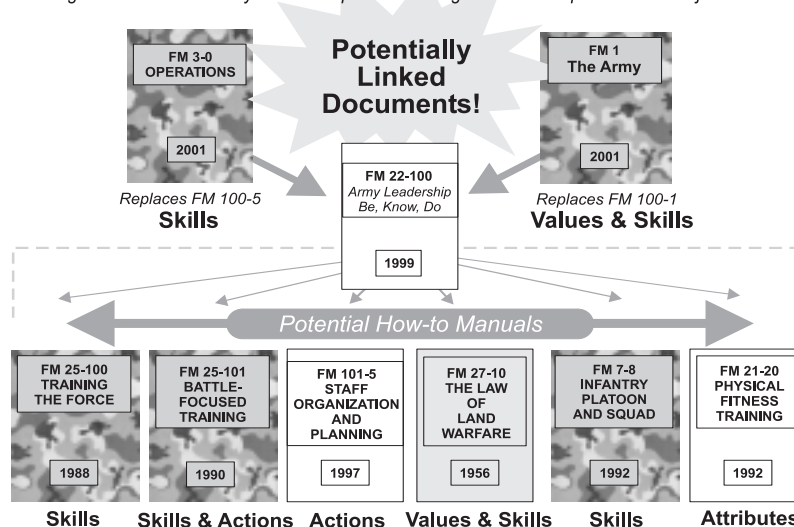
Figure 2. FM 22-100

Young leaders require more direct guidance and monitoring during self-development before they are introduced to the finer, advanced leadership techniques and applications found in most books on reading lists.

Almost all of the critical human-dimension skills and actions are missing from manuals: interpersonal and conceptual skills, communicating, motivating, developing, building and learning actions. With the teamwork, communication and coordination required for Army operations in the information age, this absence may prove dangerous. Leaders turn to civilian publications and books on junior leader professional-development reading lists to fill the gap in leadership and managerial skills and actions.

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- FM 27-10, *The Law of Land Warfare*, 1956 (values and skills).
- FM 1, *The Army*, 2001 (values and skills).
- FM 3-0, *Operations*, 2001 (skills).
- FM 100-6, *Information Operations*, 1996 (skills).
- FM 3-100.7, *Decisive Force: The Army in Theater Operations*, 2001 (skills).
- FM 6.0 (100-34), *Command and Control*, TBP (skills and actions).

The Army's leadership doctrine lacks the systematic doctrine integration that operational doctrine has, as evidenced by this list. No manual on the leadership list has the how-to capacity of the superseded FM 22-101 and FM 22-102, which were the only manuals with the proper nesting methodology. Many current manuals need revision and do not correlate to the new Army Leadership Framework. Revisions can strengthen the loose associations, and new manuals and augmentation can fill the gaps. More important, which of the current FMs should be directly linked to the implementation of FM 22-100 for junior leaders? Although they are not currently ad-

equate, only eight FMs directly link to the current leadership framework and general core curriculums for training and developing junior leaders. The following manuals provide my concept for basic leadership doctrine integration, explanations and context for how the Army works, communicates, trains and fights:

- FM 1, *The Army*, explains organization and roles.
- FM 27-10, *The Law of Land Warfare*, sets the rules and ethical framework for warfare.
- FM 3-0, *Operations*, shows the operational doctrine and tactical language of the profession.
- FM 25-100, *Training the Force*, and FM 25-101, *Battle-Focused Training*, show the big picture and fundamentals of Army and small-unit training.
- FM 101-5, *Staff Organization and Operations*, covers military roles, responsibilities, decisionmaking and planning.
- FM 7-8, *The Infantry Platoon and Squad*, provides the necessary tactical knowledge and common soldier skills.
- FM 21-20, *Physical Fitness Training*, covers the importance of physical fitness training.

> *[A centralized tracking] system would show the foundational skills required for a specific occupational skill and rank, and track progress throughout the three pillars. Supervisors would report and upload achievement results to a centralized Army system such as skill and doctrine training and professional reading completed. Perhaps at the unit level the Standard Army Training System could track this information. To succeed, the system must have a strong compliance and inspection program.*

The nesting diagram shows the links between these manuals and the leadership framework. This concept methodology and diagram provide the necessary simplicity, relationships and common picture Army leaders and institutions need to understand and teach leader development.

The Army develops junior leaders by arming them with leadership definitions and examples. These junior leaders then go on to units and hope they become successful leaders. Often, learning by others' failures or by failing themselves, they turn to mentors, peers and books for wisdom and guidance. More often than not, the guidance they receive and books they turn to are from time-tested, proven civilian or military publications and corporate managerial and leadership techniques. This hit-and-miss self-development technique fills the missing how-to manual gap, but to be more effective, leader development must be more direct and have clearer objectives, responsibilities and supervision throughout the three pillars.

Augmenting FM 22-100 and Junior Leader Development

What about the leadership framework's other missing skills and actions? Almost all of the critical human-dimension skills and actions are missing from manuals: interpersonal and conceptual skills, communicating, motivating, developing, building and learning actions. With the teamwork, communication and coordination required for Army operations in the information age, this absence may prove dangerous. Leaders turn to civilian publications and books on junior leader professional-development reading lists to fill the gap in leadership and managerial skills and actions. However, young leaders require more direct guidance and monitoring during self-development, and they often fail to master the critical fundamentals. Junior leaders need fundamental leadership skills before they are introduced to the finer, advanced leadership techniques and applications found in most books on reading lists.

Perhaps the weakness of civilian publications is their focus on civilian managerial techniques. The word "management" is not part of Army culture and with many leaders is a forbidden word. It is unfor-

tunate how out of balance the science and art of leadership and management are in the Army. In the future, the Army must integrate fully the time-tested corporate and academic techniques into its own leader-development programs. Fear of going too far with management and with corporate and academic culture has cut the Army off from innovative solutions. Given the cuts to TRADOC doctrine writers and training developers, closer association to outside leadership and management development is necessary, if not inevitable.

Leading is inspiring people to get things done; managing is getting things done through people.[9] Leaders lacking management skills waste resources and time by inspiring people to do the wrong things or to do the right things only through exhausting effort and excessive cost. General John A. Wickham Jr. summarized this dichotomy by stating, "I think the Army would make a serious mistake if we made a distinction and said, 'You are a manager, and you are a leader.' So my philosophy is that we are all leaders! We also must be responsible managers or stewards of the resources entrusted to us. We would make a serious mistake to think we could be one and not the other."[10] While combat leadership is the highest form of military art, most of what military leaders do in the training base is manage. If we lead and manage at the same time, we must systematically link the two effectively to fill the gap in leader-development publications.

FM 22-100 is deficient in recommending leadership communication and feedback techniques for new leaders, but Kenneth Blanchard and Spencer Johnson's book *The One-Minute Manager* is exceptional in this area.[11] Although published in 1984, it remains a classic that is used in several ROTC programs and branch schoolhouses. If it works well and fills a developmental void, it should be an Army standard. The book is best suited for training ROTC and USMA cadets in their senior year and NCOs during their basic course. The *One-Minute Manager* is clearly a how-to text for the inexperienced and nests perfectly in the leadership framework. Because FM 22-100 does not go in depth or provide techniques, this book should be listed as a TTP in the leadership style section in chapter 3, "Human Di-

1st Cavalry Division soldiers deploy near Daharan after arriving in Saudi Arabia during Operation *Desert Shield*, August 1990.

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mensions." Instead of only being on a professional reading list, it should be in the common-core POIs as required reading with FM 22-100 lessons. Several role-playing practical exercises could be planned from the chapters on communicating, delegating, goal setting and feedback. The end state is competent, confident leaders who are prepared to lead soldiers.

For further junior officer development, I recommend three more books: *Leadership and the One-Minute Manager*, *Principle-Centered Leadership* and *The Seven Habits of Highly Effective People*. The first two are perfectly suited for Officer Basic Course (OBC) students.[12] A bit more advanced, the third book is well-suited for captains attending their career course.

Officers who read these books will become not only better leaders but also better people. Supporting our mantra of leaders of character, these three books show the importance of solid interpersonal and conceptual skills for effective leadership. They also discuss situational leadership styles and provide di-

rections for using motivational and team-building techniques. The authors stress being professionally well-rounded and cultivating an appreciation for continued growth and learning. The authors are clearly synchronized with the Army's leadership framework and three-pillar model.

An approach suited to ROTC and USMA cadets is to adopt a simple, turnkey leadership manual that supports FM 22-100. Major John Bucciarelli's *Leaders are Made: A Building Block Approach to Effective Leadership* fully covers the leadership framework and is an excellent how-to guide with many examples, self-assessments and quotes from history and popular leadership books.[13] His building-block approach for creating effective leadership outlines 17 skills that all leaders require. The text lends itself to practical exercises. This manual will help start a systematic building program to develop leaders.

TRADOC already has an excellent introductory leadership and management student text (ST)—

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in the school environment, unfortunately supporting the old adage that those who can,
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in their own branch schoolhouses because they believe TRADOC assignments are the
kiss of death to promotion boards. Although this belief is unfortunate and wrong, it
speaks volumes about the actual state of institutional development for future leaders.*

ST 5001, *Managing and Leading*—but it is seldom used in the uniformed Army.[14] It is a phase I correspondence subcourse for the resident Sustaining Base Leadership and Management Course, Army Management Staff College, Fort Belvoir, Virginia, used as a refresher manual for midlevel leaders. The text is simple and is a great companion to FM 22-100. It is perfect for students in OBC and the advanced NCO course because it covers skills and actions missing from the leadership framework. Issuing this ST to junior leaders during initial institutional training and education would enhance FM 22-100 and provide missing explanations.

Leveraging Web-Based Technology

Recently, the Army emphasized improving counseling, individual leader-development plans and mentoring. These steps better link the leadership framework to the three-pillar model, especially by using the Developmental Counseling Form and Junior Officer Evaluation Report Support Form. The logical next step would use these focus areas to improve the self-development process and link it to institutional guidance and unit assignment oversight. One way to do this is to create must-read professional reading lists within the current recommended lists. A reading program tailored to leadership levels and officer, enlisted and civilian differences would strengthen self-development. The many professional reading lists in circulation need to be reduced. They lack command guidance, specific user-level application, and compliance and enforcement standards.

Under a new system, TRADOC would give institutional guidance, and supervisors and senior raters would ensure compliance and run decentralized implementation programs. The Army also needs a centralized tracking system that records development throughout people's careers. A combination of an electronic job book and resume, this system would show the foundational skills required for a specific occupational skill and rank, and track progress throughout the three pillars. Supervisors would report and upload achievement results to a centralized Army system such as skill and doctrine training and professional reading completed. Perhaps at the unit level the Standard Army Training System could track this information. To succeed, the system must have a strong compliance and inspection program.

Currently, the uniformed Army uses only performance ratings, job titles and assignment histories to track development, a practice that assumes an individual has the requisite skills. The new system should not be linked to evaluations but should be used to place the right person in the right assignment at the right time. A centralized, individual leader-development plan with a tracking system is realistic using individual accounts on an Army website. This type of tracking system would finally bridge the gaps between institutional development, operational assignment experiences and self-development.

Instructing the Circumference of Army Leadership

The most fundamental conceptual building block of any leader-development plan is knowing how to combine initial training and operational experience to produce complementary, synergistic effects. Within the Army's current stand-alone leadership manual and approach, many of the developmental pieces are taken for granted or left to chance. Further, TRADOC and most Army branch schools lack the adequate oversight for regulatory compliance, standardization and quality control. This lack of oversight is compounded by difficulties in developing instructors. It takes two to three years to train an instructor who can implement the pieces of the leadership puzzle. Additionally, the institutional educational base, the foundation of the Army, is generally held in low esteem and priority, especially within the current Army design when compared with the operational Army.

The best and brightest are seldom found in the school environment, unfortunately supporting the old adage that those who can, do, and those who cannot, teach. USMA does a better job than TRADOC at selecting and attracting qualified, interested instructors. In the current culture, officers do not aspire to serve in their own branch schoolhouses because they believe TRADOC assignments are the kiss of death to promotion boards. Although this be-

A centralized, individual leader-development plan with a tracking system is realistic using individual accounts on an Army website. This type of tracking system would finally bridge the gaps between institutional development, operational assignment experiences and self-development.

lief is unfortunate and wrong, it speaks volumes about the actual state of institutional development for future leaders. A schoolhouse training assignment is more career-enhancing for NCOs than for officers. We should seek the best professionals to put in front of young soldiers, and these instructors should be proud and respected. The Army rewards operational experience but values it at the expense of the training base.

Perhaps the Army cannot support both the operational and training base simultaneously, but there is an associated cost in not doing both equally well. Training quality affects operations, and the cause-and-effect relationship radiates among the three pillars and at all leadership levels. Degrading the training base to support the operational Army provides only the most illusory and transitory short-term gains in readiness. Degrading institutional training will jeopardize future readiness by placing more training and developmental responsibilities on units and individuals, something they currently cannot do effectively due to time, resources and elusive methodology.

The current leader-development program is a strong concept, but its instructional methods are too ambiguous and lack essential pieces. Because of this, we muddle through without a clear, simple methodology and standard for our most fundamental role—producing leaders. History has shown that, for future readiness, it is good to question and challenge assumptions. The dynamic environment of Army Transformation, full-spectrum operations and information dominance demands leaders with greater skills and competencies. To fulfill the Army's commitment to future readiness, our leader-development methods must be more effective. We can do this by redesigning leader-development methods and by leveraging enabling technology.

The current FM 22-100 is inadequate for the Army to bridge the leadership gap into the 21st century. It is an excellent organizational culture manual and a capstone blueprint leadership manual but not a stand-alone publication. For a winning program, it must be nested with how-to manuals and TTP that support the Army Leadership Framework. Civilian leadership and management techniques from the corporate world and academic programs may help fill the immediate voids, especially with cuts in TRADOC doctrine writers and training-development personnel. These connections will improve the integration of the art and science of leadership with management and promote efficiency, effectiveness, productivity and performance. Web-based technology will allow us to track individual leader-development progress across the Army spectrum—institutions, operational assignments and self-development—and throughout a soldier's career. The circumference of leadership methodology—systematically connecting the fundamentals of the leadership framework across the three pillars—will provide the simple, common picture to improve how we teach and develop future Army leaders. **MR**

NOTES

1. DA Pam 350-58, *Leader Development for America's Army* (Washington, DC: US Government Printing Office [GPO], 1994), 1.
2. US Army FM 22-100, *Army Leadership* (Washington, DC: GPO, July 1990 and August 1999).
3. DA Pam 350-58.
4. FM 22-101, *Leadership Counseling* (Washington, DC: GPO, 3 June 1985); FM 22-102, *Soldier Team Development* (Washington, DC: GPO, 2 March 1987); FM 22-103, *Leadership and Command at Senior Levels* (Washington, DC: GPO); DA Pam 600-80, *Executive Leadership* (Washington, DC: GPO).
5. FM 22-100.
6. FM 1, *The Army* (Washington, DC: GPO, June 2001); FM 3-0, *Operations* (Washington, DC: GPO, 14 June 2001).
7. FM 25-100, *Training the Force* (Washington, DC: GPO, 15 November 1988); FM 25-101, *Battle-Focused Training* (Washington, DC: GPO, 30 September 1990); FM 101-5, *Staff Organization and Operations* (Washington, DC: GPO, 31 May 1997).
8. FM 3-07, *Stability Operations and Support Operations* (Washington, DC: GPO); FM 3-90 (3-100.7), *Tactics* (Washington, DC: GPO, July 2001); FM 3-50, *Decisive Force: The Army in Theater Operations* (Washington, DC: GPO); FM 4-0, *Combat Service Support* (Washington, DC: GPO).
9. ST 5001, *Managing and Leading* (Fort Monroe, VA: US Army Training and Doctrine Command, 1994), 5-2.
10. FM 22-103, *Senior Leadership* (Washington, DC: GPO, 1987), 43.
11. Kenneth Blanchard and Spencer Johnson, *The One-Minute Manager* (New York: Berkley Books, 1984).
12. Steven R. Covey, *Principle-Centered Leadership* (New York: Summit Books, 1991); Steven R. Covey, *The Seven Habits of Highly Effective People* (New York: Simon and Schuster, 1989).
13. John Bucciarelli, *Leaders are Made: A Building Block Approach to Effective Leadership* (Cape Canaveral, FL: Blue Note Publications, 1997).
14. ST 5001.

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America's Frontier Wars:
Lessons for Asymmetric Conflicts

Congressman Ike Skelton

Congressman Ike Skelton suggests how to overcome the threat of asymmetrical warfare by examining yesteryear's battles to develop strategies and tactics for tomorrow's conflicts.

I N JULY 1755, Major General Edward Braddock, commander in chief of all British forces in North America and a 45-year career soldier, was killed along with 900 of his men by a smaller French and Indian force. On his way to capture Fort Duquesne, Pennsylvania, Braddock had split his force into two divisions. Because of the difficulty of crossing the wilderness, they opened a distance of 60 miles between the "flying column" division of rapidly moving soldiers and a support column hauling "monstrously heavy eight-inch howitzers and twelve-pound cannons" completely unsuited to the terrain.

The lead column stretched a mile in length and was attacked on the far side of the Monongahela River by Indians streaming along either British flank and hiding within the forest they had long used as hunting grounds. The British responded using traditional tactics—continuously trying to form companies and return fire but only concentrating their number further for Indian attack. Braddock ordered forward the main body of his troops, which then collided with retreating elements ahead. In the resulting confusion, 15 of the 18 officers in the advance party were picked off. Still, the remaining forces continued to fight the way they were taught: maintaining platoon formations and firing together even as they drew heavy fire to the line from well-hidden Indians. It was not until Braddock himself was shot in the back that the British broke in retreat, carrying off the body of their commanding officer.[1]

Asymmetric Warfare: Yesterday and Tomorrow

Why do I begin an article addressing tomorrow's conflicts with an account of a battle fought two and a half centuries ago? As an avid student of history, I believe it is critically important for us to understand that asymmetric warfare is not something new. In fact, it has been a recurring theme of American military history and is familiar to many of today's military officers. Many of its best historical examples come from the series of conflicts we collectively refer to as the Indian Wars. Braddock's defeat highlights as many useful insights as contemporary examples of asymmetric action, like Russian battles with the Chechens. Overcoming future challenges will require that we both understand the lessons from the past and develop strategies and tactics appropriate to tomorrow's battlefield.

While asymmetric warfare is not something new, it is very much in vogue today in the aftermath of the Persian Gulf War. Given America's resounding success in that conflict, potential adversaries have learned Iraq's lesson that it is foolish to try to match us conventionally. Instead, they are seeking ways to

turn our strengths against us. This is the heart of the concept of asymmetry, broadly defined by Steven Metz and Douglas Johnson of the US Army War College as: "In the realm of military affairs and national security, asymmetry is acting, organizing, and thinking differently than opponents in order to maximize one's own advantages, exploit an opponent's weaknesses, attain the initiative, or gain greater freedom of action."[2]

Asymmetry on the Future Battlefield

In operational terms, asymmetry derives from one force deploying new capabilities that the opposing force does not perceive or understand, conventional capabilities that counter or overmatch the capabilities of its opponent, or capabilities that represent totally new methods of attack or defense—or a combination of these attributes.[3] The US Army Training and Doctrine Command (TRADOC) now thinks of ways to characterize tomorrow's asymmetric challenges.[4] In considering its arguments, I was struck again by the utility of lessons learned from earlier campaigns against Native Americans such as Braddock's defeat. So I have matched TRADOC's insights for the future with asymmetric examples from the past. Only by studying the lessons of history are we likely to adapt to asymmetric challenges.

TRADOC's analysis begins by stressing the differences between our current perception of the future operational environment and what is likely to be true. Today we think of close combat as involving deliberate actions conducted at a tempo decided by the United States and characterized by the application of technology and systems that leaves opponents virtually helpless to respond or retaliate. Therefore, the public expects military operations to involve few casualties and precision attacks, secure our homeland and be short-lived. On the contrary, potential adversaries will likely choose to fight in ways that negate these expectations. Future close combat will be much more dynamic and lethal, marked by greater intensity, operational tempo, uncertainty and psychological impact. We cannot expect the experience of the Gulf War to be repeated.

Likely Characteristics of Adversaries

With this as a starting point, TRADOC has discussed attributes a potential enemy is likely to possess: greater knowledge of the physical conflict environment, better situational awareness, a clearer understanding of US military forces and an ability to adapt quickly to changing battlefield conditions. These attributes strongly mirror challenges for British, and later American, soldiers in Indian campaigns of yesteryear.

The physical environment remains the defining variable of close combat. For US military forces, it is almost certain that future conflicts will occur in regions where the enemy has a greater understanding of the physical environment and has better

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We think of close combat as involving deliberate actions conducted at a tempo decided by the United States and characterized by the application of technology and systems that leaves opponents virtually helpless. . . . Potential adversaries will likely choose to fight in ways that negate these expectations. Future close combat will be much more dynamic and lethal, marked by greater intensity, operational tempo, uncertainty and psychological impact.

Opposing forces will also have greater situational awareness. . . . We should expect them to have human networks operating over telephone lines or with cellular phones and using commercial imagery systems. . . . Even with its sophisticated intelligence, surveillance and reconnaissance systems, [the United States] will have difficulty in complex settings unless it builds a more effective human intelligence

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optimized his forces to fight. A common characteristic of many Indian campaigns was the Indians' superior knowledge of the terrain. A great example of this was the attack on the forces of Colonel Henry Bouquet during his march to relieve Fort Pitt, Pennsylvania, during Pontiac's War in August 1763. The Indians attacked in an area of old growth forest, offering limited fields of fire, around Bushy Run. They forced Bouquet's forces back into a defensive position on a hilltop, attacking the position repeatedly but without waiting for a counterattack. Their detailed knowledge of the area allowed them to simply fade into the forest, suffering few casualties.[5] This is but one example of the advantages that accrued to many Indian tribes through the late 1800s.[6]

Opposing forces will also have greater situational awareness in future conflicts. We should expect them to have human networks operating over telephone lines or with cellular phones and using commercial imagery systems. This will be critical, not only because the adversary can distribute information quickly but also because crucial information will only be available through human interaction. The United States, even with its sophisticated intelligence, surveillance and reconnaissance systems, will have difficulty in complex settings unless it builds

During the Second Seminole War, Major Francis L. Dade and all but three soldiers of his 110-man detachment were killed on 28 December 1835 during an ambush near Ocala, Florida.

Museum of Florida History, Tallahassee, Florida

The Seminole Indians adapted continuously during the second Seminole War of 1835-1842. . . . Where other eastern Indians could usually be depended upon to follow the rules of the game—to defend a fixed position and be routed—the Seminoles . . . regularly rejected pitched battles and instead relied on ambushes and raids to bleed the Army, sap its strength, and generally discourage its leadership. In the future, such an adaptive enemy would put additional pressure on the United States' ability to respond, as their battlefield successes would be covered instantly by the global media.

a more effective human intelligence capability in strategically important regions. Moreover, these new adversaries will learn not only how to adapt technology but also tactics, formations and operations in light of changing battlefield conditions during the course of operations. Such adaptations will help them counter a precision warfare strategy by creating uncertainty while also trying to control the nature and timing of combat engagements.

During the war in Chechnya, the Chechens fought using few prepared positions, preferring instead, as Chechen Vice President Yanderbaijev said, to "let the situation do the organizing."[7] They would move from city to city to deny Russian maneuver and fire superiority and would use the local population as cover for their activities.

Similarly, the Seminole Indians adapted continuously during the second Seminole War of 1835-1842. One noted historian puts it this way: "The second Seminole War did not follow the precedent set in earlier Indian wars by producing a single daz-

zling stroke by a spectacularly brilliant leader. No fewer than seven American commanders would try and fail to bring the war to a successful conclusion. When confronted with superior firepower and at a tactical disadvantage, the Seminoles simply dispersed into small bands and continued to fight a guerrilla war . . . best suited to the terrain and their own temperament. Where other eastern Indians could usually be depended upon to follow the rules of the game—to defend a fixed position and be routed—the Seminoles . . . regularly rejected pitched battles and instead relied on ambushes and raids to bleed the Army, sap its strength, and generally discourage its leadership."[8]

In the future, such an adaptive enemy would put additional pressure on the United States' ability to respond, as their battlefield successes would be covered instantly by the global media, instantaneous communications and media coverage.

Finally, our future adversaries will almost certainly have greater knowledge of US forces than we will of theirs. We are the most studied military in the world. Foreign states have regular military features and, in some cases, entire journals (most notably Russia's *Foreign Military Review*) devoted to the assessment of US military force structure, doctrine, operational concepts and capabilities. All major US Army field manuals (FMs) and joint doctrinal publications are freely available on the Internet, and many foreign organizations access them regularly. As an example, in April 2001 alone, the Center for Army Lessons Learned recorded 5,464 sessions on its website from Europe and 2,015 from Asia. This access, combined with their knowledge of battlefield terrain, greater situational awareness and adaptability, will make future adversaries far more menacing.

How Will They Fight?

The essence of future asymmetric warfare is that adversaries will seek to offset our air, intelligence, surveillance, reconnaissance and other technological advantages by fighting during periods of reduced visibility and in complex terrain and urban environments where they can gain sanctuary from US strikes. This will also deny these areas and their inherent protective characteristics to US forces, keeping us exposed and on the defensive.

US forces will have to contend with greater uncertainty in the field as adversaries mask the size, location, disposition and intentions of their forces. They will seek to convince US commanders that they are using conventional tactics while making us vulnerable to unconventional, adaptive and asymmetrical actions.

Geronimo (*in front of horse*) with some of his warriors during negotiations with General George Crook in 1886. During this period, telegraph linemen (*inset*) and Apache warriors were antagonists in a 19th-century precursor to 21st-century cyberwar.
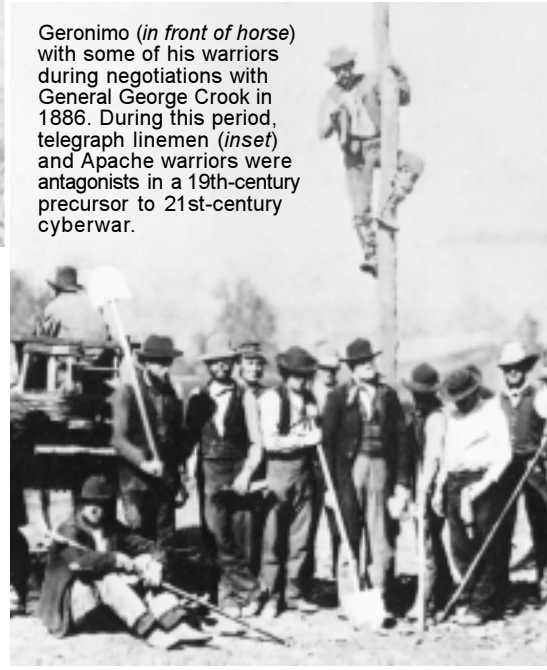
National Archives

National Archives

There is a relevant Indian war complement to today's challenges. . . . By 1882, the Apache had learned [the telegraph's] function and its method of operation. When they jumped the reservation, they would cut the lines and remove long sections of wire, or they would remove a short piece of wire and replace it with a thin strip of rawhide, so cleverly splicing the two together that the line would appear intact and the location of the break could take days of careful checking to discover. This disruption foreshadows the potentially far greater problems from cyberattacks.

At the same time, adversaries will use both old and new technologies to great effect on the battlefield. They may use older technologies in unique ways as the Chechens did by buying commercial scanners and radios to intercept Russian communications. They will also try to acquire advanced niche technologies like global positioning system jammers and systems for electronic attack to significantly degrade our precision strike capabilities. Moreover, we must be prepared for adversaries to upgrade software capabilities in the middle of an operation, potentially allowing for a more networked opposition.

While some of the technology may be new, the Indian campaigns again provide useful insights. Many Indian campaigns demonstrated the effectiveness of asymmetric tactics in countering larger and better-armed British and American forces. In fact, "Indian skulking tactics—concealment and surprise, moving fire, envelopment and, when the enemy's ranks were broken, hand-to-hand combat—remained

the cardinal features of Native American warfare" over a period of 140 years.[9] The longevity of their effectiveness shows how important it is to develop appropriate responses to asymmetric tactics.

One of the most successful Indian tactics was the ambush. Captain William Fetterman's massacre in 1866 near the Lodge Trail Ridge in Wyoming left 92 American soldiers dead in a classic ambush some believe was masterminded by Sioux leader Crazy Horse. A lesser-known battle, almost a century before, shows the effectiveness of the ambush, particularly when matched with reckless leadership. At the Battle of Blue Licks in August 1782, a group of 182 Kentucky militiamen, led by Colonel John Todd and including Daniel Boone and members of his family, was in hot pursuit of Indians who had attacked an American fort. Boone noticed the Indians were concealing their numbers by sharing tracks, yet making the trail easy to follow. He smelled an ambush by a force he estimated at 500 and advised

breaking off the pursuit until reinforcements could arrive. A more junior officer yelled, "Them that ain't cowards follow me," and recklessly charged across the river toward several decoy Indians, with much of the force following him. The remaining Indians were waiting in ambush, as Boone had feared, and delivered a devastating defeat to the rangers.[10]

Like Blue Licks, the Battle of Bushy Run not only shows the efficacy of Indian raids until defeated by Bouquet's brilliant feigned retreat and flanking maneuvers; it also shows how an enemy can use deception effectively. The official history of Bushy Run says Bouquet's forces were engaged and surrounded by Indian forces at least equal in size to his own. However, when I toured the battlefield, Indian

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recreators, who have studied the battle extensively from the Indian point of view, maintained that the Indians numbered no more than 90 and that the tactics they used in the forest made their numbers seem larger. This disparity is a good example of attempts to confuse conventional forces so that the size of the opposing force is impossible to discern.

Finally, the Indian campaigns provide some excellent examples of the role of technological advances in asymmetric campaigns. Noted historian Armstrong Starkey emphasizes that the Europeans arrived in North America during a time of military revolution in Europe: "European soldiers brought the new weapons and techniques of this revolution with them to North America and by 1675 had provoked a military revolution of a sort among Native Americans, a revolution that for 140 years gave them a tactical advantage over their more numerous and wealthier opponents."[11]

Specifically, King Philip's War (1675-1676) was the first conflict in which the Indians had modern flintlock firearms. This proved an important advantage because some of the American militias were only equipped with matchlocks and pikes, and because the Indians were excellent marksmen.[12] More than 200 years after the Civil War, the same faulty assumptions were still at work—namely, that the US military retained unmatched technical advan-

tages over its more primitive adversaries. At that time, the US government rearmed its forces with breechloaders in place of magazine rifles—due to a bias against unaimed shots and excessive use of ammunition—while the Plains Indians acquired such weapons by direct purchase and thus, in some cases, had superior arms in the 1870s. We must be on the lookout for technological matches like these in our own future conflicts.

New Threats

We have seen the great utility of examining historical conflicts between Europeans and Native Americans to learn lessons about possible future conflict. Yet there are two additional dimensions to asymmetric warfare that must be mentioned—the threat of weapons of mass destruction, potentially used against the American homeland, and of cyberattacks on US military, government and private information systems.

At the heart of asymmetry is the assumption that an adversary will choose to attack the weakest point. In the case of the United States, asymmetric tools may well entail terrorist acts—with or without nuclear, biological or chemical weapons—on the US homeland designed to disrupt deployments, limit access, erode public support and take the fight to the American people. In some respects, this homeland tactic is not new. Beginning with King Philip's War, the New England Indians abandoned their traditional restraints and "prepared to wage total war on all of the colonists, making no distinction between combatant and non-combatant."[13] Attacks on Americans using weapons of mass destruction take these homeland tactics to a new level. Because of the devastation of these attacks and the interest of many potential adversaries in acquiring these capabilities, the United States must develop strategies for preventing and responding to such an occurrence.

The cyberthreat now facing the United States is equally compelling and risks both the effectiveness of US forces on the battlefield and the safety of private and government systems throughout the United States. Recent Joint Chiefs of Staff-directed cyberwarfare exercises like *ELIGIBLE RECEIVER* and *ZENITH STAR* showed how vulnerable command and control networks are to cyberattacks, a prime asymmetric target given the US military's continued reliance on information technology. Moreover, there are now approximately 30 nations that have developed "aggressive computer-warfare programs."[14]

Again, there is a relevant Indian war complement to today's challenges. Indians of the Southern Plains disrupted American efforts in the West through unconventional means. "The telegraph line, which once had commanded their awe, no longer was mysteri-

ous. By 1882, the Apache had learned its function and its method of operation. When they jumped the reservation, they would cut the lines and remove long sections of wire, or they would remove a short piece of wire and replace it with a thin strip of rawhide, so cleverly splicing the two together that the line would appear intact and the location of the break could take days of careful checking to discover."[15] This disruption foreshadows the potentially far greater problems from cyberattacks if we do not design strategy and tactics for dealing with this as part of an asymmetric campaign.

Preparing for Asymmetric Attacks

The first step in preparing to better meet tomorrow's challenges is to learn from the past. As the examples drawn here indicate, there is a rich history to be tapped in the early American experience. But there are many other examples as well—Yugoslav partisans fighting the occupying Nazis or Afghans against the Russians and Serbs in the recent NATO operation in Kosovo. Military commanders must study history. Modern, technologically sophisticated warfare—with the asymmetric challenges that accompany it—makes that requirement more true, not less.

Our forces must also be adaptive. Just as our adversaries will continuously change tactics and approaches to seek our weaknesses, so must we be able to counter them through continuous adaptation. If we do not, we risk the mistakes of the past. "While European military revolutions provided states with the means to project power into the interior of North America, they did not provide troops

Many Indian campaigns demonstrated the effectiveness of asymmetric tactics in countering larger and better-armed British and American forces. . . . [and] remained the cardinal features of Native American warfare over a period of 140 years. The longevity of their effectiveness shows how important it is to develop appropriate responses to asymmetric tactics.

with appropriate training and tactics to succeed on the frontier."[16] Therefore, our forces, doctrine and tactics must continue to embrace agility and adaptability and prepare for a range of missions. The Army continues to do so in its most recent doctrinal publications, FM 1 and FM 3-0.[17] Efforts to address asymmetric threats must also retain the unique American strengths—superior training, leadership and technology—that give us an edge against any potential adversary.

Finally, we must guard against arrogance. An account at the time of Braddock's defeat noted the irony that his preparations for the march to Fort Duquesne were precise. He attended to every minute detail except "the one that mattered most: Indian affairs."[18] He dismissed those Ohio Indian chiefs who might have been allies for his expedition as savages who could not possibly assist disciplined troops. We must not fall into the same trap of underestimating a potential adversary because of his different culture or seemingly inferior capability. To do so would be to repeat the errors of the past with potentially devastating future consequences. *MR*

NOTES

1. Fred Anderson, *Crucible of War: The Seven Years' War and the Fate of Empire in British North America, 1754-1766* (New York, NY: Alfred A. Knopf, 2000), 94-107.

2. Steven Metz and Douglas V. Johnson II, *Asymmetry and US Military Strategy: Definition, Background, and Strategic Concepts* (Carlisle, PA: Strategic Studies Institute, US Army War College, January 2001), 5.

3. This operational definition of asymmetry is drawn from my conversations with General Montgomery Meigs, Commander of US Army Forces, Europe, who is an excellent source for insights on operational art.

4. I am deeply indebted to General John Abrams and his staff, especially Colonel Maxie MacFarland at TRADOC for many of the ideas presented here. In addition, I would like to thank Professors Graham Turbiville and William Robertson at Fort Leavenworth, Kansas, for their assistance with the historical examples. Their help was invaluable in constructing this article. I am also grateful to Erin Conaton, professional staff member with the House of Representatives' Committee on Armed Services, for her assistance with researching and writing this article.

5. See Anderson, 547-63.

6. Jack Lane's biography of General Leonard Wood notes that as a new surgeon in the Army Medical Department, Wood "learned why the Apaches . . . proved to be the army's most impervious foe in the 1870s and 1880s. Perfecting guerrilla warfare to a fine art, the Apaches operated in small raiding parties rarely numbering more than 100 braves. The hardy warriors had developed incredible stamina and a seemingly unlimited ability to endure with only the bare necessities for long periods in the almost impenetrable, barren mountains and deserts of southern Arizona and northern Mexico. Organizing themselves into small bands, they roamed the Arizona ter-

ritory at will until, pursued closely by the army, they retired into the strongholds of the Sierra Madre Mountains. To defeat such an enemy required exceptional leaders and men." See Jack C. Lane, *Armed Progressive: General Leonard Wood* (San Rafael, CA: Presidio Press, 1978), 4.

7. "Chechen Commander on Modern Separatism," *Nezavisimoye Voyennoye Obozreniye* (22-28 January 1999), 2.

8. John D. Waghelstein, "The Second Seminole War: Lessons Learned, Relearned and Unlearned," *Low Intensity Conflict and Law Enforcement* (Winter 1992), 4.

9. Armstrong Starkey, *European and Native American Warfare, 1675-1815* (Norman, OK: University of Oklahoma Press, 1998), 167.

10. Isaac Newton Skelton III and Earl Franklin Skelton, *Ike, This is You* (Washington, DC: 1995), 132-41. The author's great-great-great grandfather, Squire Boone, was wounded during this battle.

11. Starkey, viii.

12. Ibid., 71-72.

13. Ibid., 72.

14. James Adams, "Virtual Defense," *Foreign Affairs* (May/June 2001), 102.

15. Odie B. Faulk, *The Geronimo Campaign* (New York: Oxford University Press, 1969), 46.

16. Starkey, 169.

17. US Army FM 1, *The Army* (Washington, DC: US Government Printing Office [GPO], June 2001); FM 3-0, *Operations* (Washington, DC: GPO, June 2001).

18. *The Journal of Captain Robert Chomley's Batman*, 20 and 23 May 1755, cited in Anderson, 94. The rest of the account of Braddock's defeat is largely drawn from Anderson's work; see 94-107.

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Peace Operations

Peacekeeping remains one of the Army's primary missions. Commanders continue to be challenged to carry out peacekeeping more safely and effectively. Anderson discusses how commanders can gauge success in peacekeeping operations by developing measures of effectiveness. Thomas argues that a new term—policekeeping—is needed to describe the combination of police work and soldiering that seems to characterize contemporary peacekeeping. He also examines how policekeepers might use emerging technology to keep the peace. Siegel argues that civil-military operators have more information needs when participating in civil-military operations than in conventional operations. Authors Bingham, Rubini and Clearly show how civil affairs ministerial advisory teams have worked to achieve stability in Haiti.

IT Requirements for "Policekeeping"

Lieutenant Colonel Timothy L. Thomas, US Army, Retired

TRADITIONAL PEACE SUPPORT operations differ by degrees of consent, force and impartiality. Peacekeeping operations require the consent of the belligerent parties, the use of force only in self-defense and the maintenance of impartiality. Peace-enforcement missions do not require absolute consent; force can be used to compel or coerce, and impartiality is usually strained.

Today, peace support operations are caught between these two extremes. Peace support personnel deal more often with crowds than armies and with questions of ownership of houses and pigs rather than buffer zones. Missions are increasingly intrastate with a police mission overtone. These missions do not fall neatly into either the peacekeeping or peace-enforcement category but approach "police-keeping" performed by "policekeepers."[1]

Luckily for peace support personnel facing these new missions, there has been a rapid proliferation of information technology (IT). If properly understood, these new technologies can help policekeepers prevent or control conflict.

New Peacemaking/Peacekeeping Model

On 7 September 2000, the United Nations (UN) Security Council voted unanimously to overhaul its peacekeeping operations. There was strong support in the council for a more professional, high-tech UN force that would work harder at conflict prevention. Former US Secretary of State Madeleine Albright agreed with this reassessment. She had stated earlier that "old models of peacekeeping don't always meet current challenges. Peace operations today often require skills that are neither strictly military nor strictly police but, rather, a combination of the two. The international community needs to identify and train units that are able to control crowds, deter vigilante actions, prevent looting and disarm civilian

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agitators while, at the same time, winning the trust of the communities in which they are deployed."[2]

In the past, a peacekeeper's job was to deploy between two opposing militaries at their invitation to serve as a buffer between the forces, usually in interstate operations. Albright noted that today's mission is more intrastate, with more attention directed toward crowds, vigilantes and agitators than to separating traditional military forces. As a result, militaries are in direct contact for long periods of time with the people of a region; they are exposed to local nuances and traditions.

IT, which was seldom available to peacekeepers before, is addressed in the Brahimi Report, which discusses the need for a new peacekeeping strategy and organization to support these efforts. It recommends that an executive information and strategic analysis secretariat (EISAS) be formed and composed of information system specialists, military analysts and criminal network experts. The last category reflects the UN's increased focus on police matters. Further, the report noted that the UN presently has no IT center responsible for user-level strategy and policy in peace support operations. The Brahimi Report also recommends developing a peace operations extranet with access to the EISAS and other databases.[3]

Different cultures are coerced by different degrees of intimidation. In Haiti, a club was enough to get someone moving. However, in Somalia, it took something much more intimidating—weapons. In Bosnia, a tracked recovery vehicle was often more intimidating than a tank.

This resolution for change and new technology could not come at a better time. Although currently engaged in 14 peacekeeping operations worldwide that employ more than 37,000 troops, UN police-keepers have had numerous failures over the past few years.[4] Part of the reason is that peace support forces are underequipped for the changed nature of the mission since IT has traditionally gone to the warfighter. This emphasis needs adjustment.

The US Army appears to understand this dilemma and is developing US Army Field Manual (FM) 3-07, *Stability and Support Operations*, to address peace operations. The new FM is a compilation of FM 100-23, *Peace Operations*; FM 90-29, *Noncombatant Evacuation Order*; FM 100-19, *Domestic Support Operations*; and FM 100-20, *Military Operations in Low-Intensity Conflict*.[5] It is still a year or so away from publication but shows the complexity of peace support operations today.

Potential IT Military Uses

If Albright is correct in her analysis that a new peacekeeping model is required today, then IT is poised to play a significant role in developing the capabilities to assist that model. One of the facilities involved with accelerating the availability of tools and techniques to develop training applications for policekeepers is the Institute for Creative Technologies (ICT) located in Marina Del Ray, California. These efforts are the result of a $44.5-million contract between the US Army and the University of Southern California that concluded in August 1999. The institute is charged with creating a system adaptable enough to provide the correct virtual environment for policekeepers such as the proper terrain, culture and situational context.[6] Policekeeping forces trained by facilities such as ICT learn how to resolve disputes on city streets or in crowded market squares before they become conflicts.

ICT's first product has met these expectations. The institute constructed an interactive simulation vignette that depicts a peacekeeping operation in Bosnia. It demonstrates how squad leaders and other noncommissioned officers can learn "through simulation to deal diplomatically with people from differing cultures, and without relying on firepower."[7] During a mission rehearsal exercise for a battalion preparing to deploy to a peacekeeping mission, a writer for the *Christian Science Monitor* observed: "A hostile crowd confronts the U.S. Army commander. His troops are supposed to be on a peacekeeping mission. Instead, they're now trying to rescue a local child who has been injured by a U.S. Humvee [high-mobility, multipurpose wheeled vehicle (HMMWV)]. Gunfire erupts over a hill. A helicopter circles deafeningly overhead. What should he do? Teams of soldiers run up and demand orders. He barks out commands. Units disperse in three directions about to carry out the operation when . . . someone turns on the lights. The soldier—though in fatigues—is standing in a small room surrounded by a 180-degree screen. This is no regular movie or video game. It's the Army's latest high-tech tool to train tomorrow's soldiers."[8]

The military can use IT to guide or force combatants and civilians of disputing nations away from conflict. IT can be used to distract, pacify, appease, intimidate, provoke, immobilize, wear out, confuse, weaken, suggest or mislead.[9] This is an important list of uses since many can help slow or prevent the use of force. An IT difficulty is producing software that can reflect cultural sensitivities and expectations. If software developers interact with academicians, religious and cultural leaders, and others with experience in regional sensitivities, then such computer developments stand a chance. Remember that IT cannot replace troops.

IT supports peace operations at both the operational and tactical levels. It can demonstrate simultaneity of effort. A simulation capability known as Spectrum simulates the actions of several interagency groups all working together in a peacekeeping environment. Policekeepers could develop a synchronization matrix to monitor this process and keep it under observation. It might demonstrate where help is needed, what combinations of agencies are most effective and so on.

IT can also demonstrate the vulnerabilities of those involved in the conflict. Bahktar Associates has reportedly developed radar that gathers intelligence on hidden or underground weapons facilities, enemy bunkers and other hard-to-find structures. Known as ground-penetrating radar (GPR), it can provide three-dimensional images up to 45.7 meters below the surface of land or sea. GPR's Doppler radar uses very little power, thus reducing

Soldiers struggle to put a Bosnian protester outside of a gate at Eagle Base in Tuzla. Local farmers were upset at road construction across their land.

In the past, a peacekeeper's job was to deploy between two opposing militaries at their invitation to serve as a buffer between the forces. . . . Today's mission is more intrastate, with more attention directed toward crowds, vigilantes and agitators than to separating traditional military forces. As a result, militaries are in direct contact for long periods of time with the people of a region; they are exposed to local nuances and traditions.

its probability of detection. The system can also identify unexploded ordnance, find utility lines or mass graves and help map minefields.[10]

Another development is the Discover II satellite system. The House Appropriations Committee recently delayed accepting the satellite system but did not cancel it outright. Discover II offers warfighters and policekeepers affordable, continuous and contiguous battlefield coverage in all weather, day or night. Discover II detects camouflage, concealment, deception and movement by combining synthetic aperture radar, moving target indicators and digital terrain-elevation data. Designed for the theater commander, the entire system involves 20 satellites and could be in place by 2005 if approved.[11]

IT enables compelling compliance by simulating actions and consequences. The best example of

compelling compliance through simulations remains using digital maps at the Dayton Peace Accords. As one participant noted, "Digitized map information (points, lines and areas in vector form), names data, elevation data, scanned map images and imagery could be pulled into the PowerScene terrain visualization systems and presented to negotiators as still screen shots, fly-through videos, or dynamic fly-throughs under joystick control. PowerScene also supported dynamic annotation and visual assists such as flooding, slope computations and intervisibility exploration. Any realignment of real or negotiated boundaries between the factions could be reflected in automated recompilations of areas and in adjustments of buffer zones."[12]

Digital mapping allows policekeepers to intimidate negotiators by showing detail, displaying the instan-

Disruptive Haitians are reined in by MPs after jumping a perimeter fence.

On the sidelines at National Football League contests are satellite dishes designed to pick up sounds from the game. Similar systems could be invaluable for policekeepers trying to monitor crowds or troublemakers.

taneous ability to change the format from peace-keeping to war, providing absolute consistency and offering flexibility and responsiveness of support. The technology intimidated the negotiators by giving them a sense of loss of control and privacy since they had to work with computer operators who were not on their team.[13]

IT can assist policekeepers by monitoring and reviewing actions for participants and the international community. For example, unmanned aerial vehicles provide situational awareness and locate unauthorized equipment. Commercial imagery is now available to UN policekeepers and can revolutionize the way they do business. For example, the imaginative policekeeper can look for refugees, artillery positions or arms-control storage sites, or he can search for conventional terrain imagery. A US company called Orbimage offers 1-meter imagery applications for resource deployment, mission planning, targeting, battle damage assessment, intelligence gathering and trend analysis. While some

of these do not apply to peacekeeping, it is important to know the capabilities available because potential combatants have the same access to this cost-effective combat multiplier. This capability offers continuous monitoring of any area for less than the cost of operating a reconnaissance aircraft.[14] Money and download capabilities are the only limitations.

For the policekeeper, the most important uses of imagery at the operational level are:
- Verifying claims by potential belligerents.
- Observing terrain that can be inspected by ground forces.
- Searching for refugees or mass graves.
- Building confidence and security measures between disputing parties.
- Destigmatizing intelligence use in UN peacekeeping operations.
- Providing hard evidence to confirm or deny claims made by disputants.[15]

## IT Policekeeper Needs at the Tactical Level

Discussions with policekeepers who have served in Bosnia, Kosovo, Haiti and Somalia reveal the need for other specific types of IT. A partial list includes:

Electronic tagging. One of the most difficult problems policekeepers face is tracking troublemakers. Tagging troublemakers or opposition leaders to follow their movements would significantly help

Illegal immigrants hidden within a shipment of bananas are discovered by a backscatter X-ray.

American Science and Engineering (AS&E), Inc.
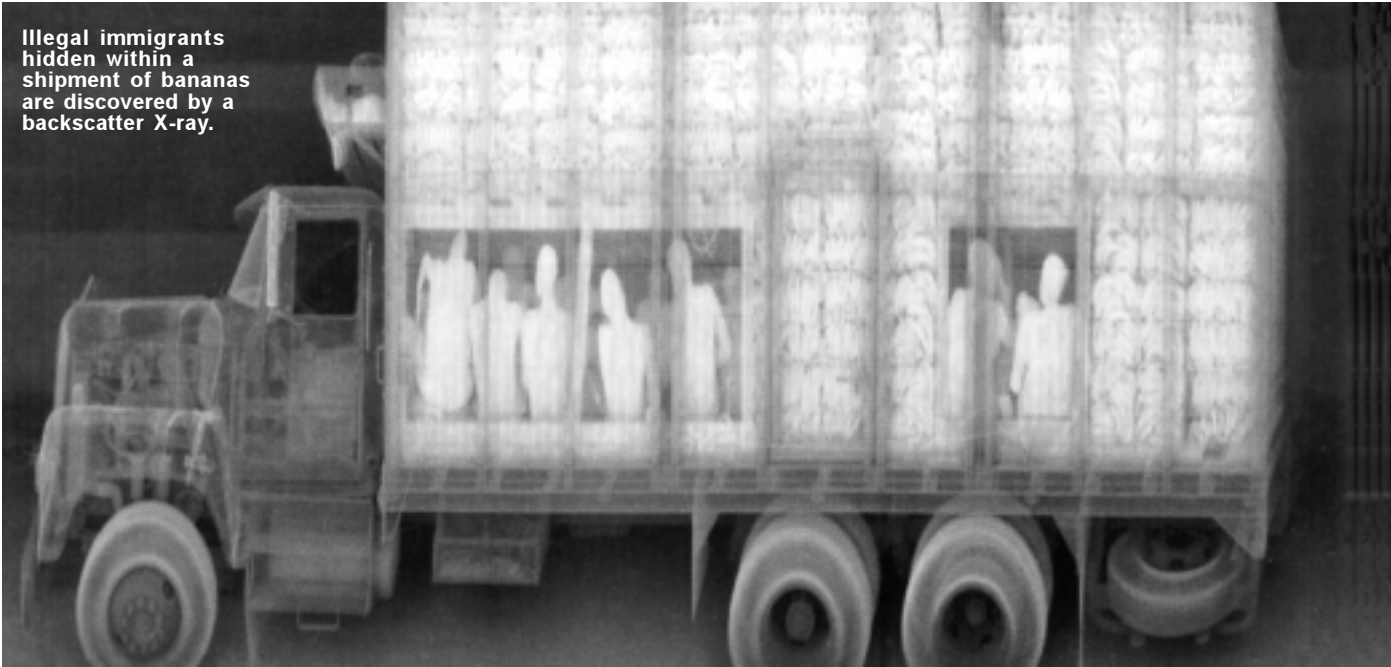
Past peacekeeping models do not apply. Intrastate conflicts are now more common than interstate conflicts. Peacekeeping missions are now more oriented toward police actions and require new IT, as interviews with US policekeepers demonstrate. Today's policekeepers request language encoders, satellite dishes, electronic informants, crowd-control devices and drug-detection or X-ray technologies. The warfighter can use these technologies as well, especially in urban combat.

peacekeeping forces; however, this may not be possible due to legal constraints. By tagging friendly troops, commanders could follow their subordinates' whereabouts in cities and in the countryside. If one were taken hostage, the commander would immediately know the hostage's location.

Electronic informants. Any type of device that could provide information to improve situational awareness would be of great assistance. This could include electronic monitoring devices, tape recorders, sensors or other such devices.

Satellite monitoring. On the sidelines at National Football League contests are satellite dishes designed to pick up sounds from the game. Similar systems could be invaluable for policekeepers trying to monitor crowds or troublemakers.

Search and seizures. Drug-detection, pulse or X-ray devices to help with searches for contraband would be invaluable.

Language decoders. Hand-held instantaneous language translators would relieve tension between policekeepers and soldiers where hand signals are sometimes the only communication. These devices are presently undergoing testing and will offer some relief from the conundrum of unintelligible languages.

Flying transport discs. It is difficult to cordon off an area or chase someone through a city, forest or countryside. A flying disc that could hover above the ground and move at speeds up to 15 miles per hour would be invaluable to policekeepers.

Vector technology. Cameras, the Remotely Monitored Battlefield Sensor System or other types of sensors, including global positioning systems (GPS) that get policekeepers to the proper place quickly and precisely.

Intimidating technologies by culture. Different cultures are coerced by different degrees of intimidation. In Haiti, a club was enough to get someone moving. However, in Somalia, it took something much more intimidating—weapons. In Bosnia, a tracked recovery vehicle was often more intimidating than a tank.[16]

Crowd control. Various items such as rubber sting balls, foam grenades and foam batons can disperse a crowd without causing fatalties.[17]

Observer support. The plethora of readily available commercial observation equipment can provide observers more remote viewing, sensing and listening capabilities.

Transparency. Communication technologies are

being touted as a confidence-building measure to demonstrate to all parties that everyone is adhering to agreements in a similar fashion.

Separation zone. Sensors and GPS can be used to locate or establish zones of separation and secu-

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> *Using IT to manage time and space can help policekeepers when they handle potential conflicts. For example, if a crowd confronts a policekeeping force at a roadblock, soldiers must know how to manage the space between the checkpoint and the policekeepers' backup to ensure the backup has access to the checkpoint. The same scenario applies for VIP safety in a crowd.*

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rity. Linking this information with the peace process in real time is key to developing a mandate.[18]

IT also offers systems that create time and space to give other courses of action a chance. Using IT to manage time and space can help policekeepers when they handle potential conflicts. For example, if a crowd confronts a policekeeping force at a roadblock, soldiers must know how to manage the space between the checkpoint and the policekeepers' backup to ensure the backup has access to the checkpoint. The same scenario applies for VIP safety in a crowd. It can also depict how a policekeeper handles time and space before deployment. For example, time and space parameters are enhanced for the policekeeper who trains while en route to an area or in theater and immediately before a mission. This helps hastily assembled joint or multinational teams to reach a common understanding of a mission.

The University of Houston's Virtual Environment Research Laboratory, which is part of a joint venture with the National Aeronautical Space Administration's Johnson Space Center, is developing such technology for the US Army and Marines. They have developed software that creates virtual crowds and opposing forces for policekeepers to confront. Perhaps most important, policekeepers can train on simulated rules of engagement before deploying. The software also demonstrates how to deal with other cultures and situations where verbal communications will not work. The idea "is to be able to provide crowd scenes, for example, that behave as crowds behave: that may run at the sound of gunfire, that may provide hiding places for opposing forces . . .

we want to enable people who are planning a mission of this type to rapidly examine the alternatives. What if this happens? What if that happens? What would I do in this situation? Without having to go to the real environment, which is often at times impossible, or do it basically as a mental exercise with the obvious limitations you would have without having a detailed copy of the environment to work with."[19]

Identifying those responsible for vigilante action, agitation and looting is a huge problem for policekeepers. In the Balkans this process also involves finding armed individuals. Early identification puts time and space between these people and the policekeepers. The military can use IT as a deterrent or confidence-building measure to contain or block the actions of vigilantes or crowds. As a deterrent, IT can pressure people or organizations, instill fear over consequences of potential actions, threaten to expose a leader's state secrets, demonstrate that a nation cannot pose a credible threat or expose troop deployments or other forms of military buildups. These activities can uncover blatant lies designed to manipulate public opinion.

The policekeeper, however, has always been the neglected soldier when it comes to new and exciting technology. It was assumed in the past that policekeepers could use IT developed for combat soldiers. That was and is true, especially for peace-enforcement missions, but the tables have turned somewhat—past peacekeeping models do not apply. Intrastate conflicts are now more common than interstate conflicts. Peacekeeping missions are now more oriented toward police actions and require new IT, as interviews with US policekeepers demonstrate. Today's policekeepers request language encoders, satellite dishes, electronic informants, crowd-control devices and drug-detection or X-ray technologies. The warfighter can use these technologies as well, especially in urban combat.

Many technologies policekeepers want are still in the US Army's procurement system. Some potential opponents, if they have sufficient financial assets, can purchase commercial off-the-shelf high-technology products faster than the US military can procure them. The procurement cycle for equipment can thus put US forces at a disadvantage. Potential opponents might use these technologies to prejudice troop-contributing countries through media or situation manipulation.

Peace support personnel should benefit from IT more than they have in the past, especially if the UN

expects them to confront IT-enhanced criminals and insurgents. IT can explain, pressure, instill fear, uncover manipulation, expose deployments or plans, threaten and demonstrate impotence. It can contain and recover, and offers certainty of punishment in an invisible, anonymous manner that ignores sovereignty. In addition, IT-enhanced policekeeping can deter conflict by:

● Coercing by demonstrating potential military power in benign form.

● Building confidence, mustering support, saving time, explaining visually complicated processes, offering to reach people or places directly with speed, providing accurate and timely information, eliminating mistrust and disinformation, and compelling compliance.

● Developing common values for the world community.

● Offering a virtual show of force and potential outcomes.

● Modeling information friction or those areas needing special attention.

● Signaling acceptable behavior.

● Offering a preemptive strategy.

● Capitalizing on the transparent world.

● Developing an information blockade or overloading to compel behavior.

● Integrating all assets such as law, people and technologies.

● Reverting to a react-act mode due to its speed.

● Offering precise information on a variety of issues for decisionmakers.

IT can also depict how a policekeeper handles time and space before deployment. For example, time and space parameters are enhanced for the policekeeper who trains while en route to an area or in theater and immediately before a mission. This helps hastily assembled joint or ultinational teams to reach a common understanding of a mission.

● Helping connect data perceptual systems.

● Enabling nations to manage or leverage the consequences of their actions.

● Allowing smaller nations to dominate larger ones.

These issues require intense doctrinal policy and legal review. IT can prevent conflict by manipulating, interrupting or interfering with information systems and infrastructures, areas where there are serious legal questions. IT needs to be regulated under such circumstances. IT remains a national issue. It is not a focal point for the UN, which remains inundated with more pressing issues. States must develop their own peace support IT within international guidelines. But, the issue is crucial. Without such support, peace operations may indeed lose their effectiveness and ability to keep the peace. Give IT-supported policekeepers, not criminals and insurgents, a chance to succeed. **MR**

NOTES

1. Author's term to describe the current situation. No such term actually exists in the peace support operations lexicon. It has been brought to the author's attention that Graham Day used this term in the past when he described another peace support operation.
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3. See http://www.un.org/peace/reports/peace_operations/, the Brahimi Report.
4. "U.N. Council Votes to Improve Forces," *The Kansas City Star*, 8 September 2000, A9.
5. US Army Field Manual (FM) 100-23, *Peace Operations* (Washington, DC: US Government Printing Office [GPO], 30 December 1994); FM 90-29, *Noncombatant Evacuation Order* (Washington, DC: GPO, 17 October 1994); FM 100-19, *Domestic Support Operations* (Washington, DC: GPO, 1 July 1993); FM 100-20, *Military Operations in Low-Intensity Conflict* (Washington, DC: GPO, 5 December 1990).
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7. Ibid.
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12. Richard G. Johnson, "Negotiating the Dayton Peace Accords Through Digital Maps," United States Institute of Peace, 25 February 1999.
13. Ibid.
14. Mark Stout and Thomas Quiggin, "*Exploiting the New High Resolution Satellite Imagery: Darwinian Imperatives?*" Commentary No. 75, Canadian Security Intelligence Service, Summer 1998.
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16. Based on talks with US Army officers Lieutenant Colonel Mike Chura, Major Rick Nussio, Major John DeJarnette and Captain Clay Mountcastle. The author would like to thank these officers for their policekeeping and IT ideas.
17. Jon R. Anderson, "Nonlethal Weapons Pack Powerful Punch," *European Stars and Stripes*, 9 April 2000, 3.
18. Author's discussion with retired Colonel William Flavin, US Army Peacekeeping Institute, 10 October 2000.
19. Peter La Franchi, "Going Virtual to Get the Rules Right," *Simulation and Training Technology*, October 1999, 7 and 10.

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Military Operational Measures of Effectiveness for Peacekeeping Operations

Lieutenant Colonel Joseph Anderson, US Army

F OR THE PAST 18 YEARS, stability and support operations have been a US diplomatic focal point. These operations involve employing military forces to support peace operations in places such as Lebanon, Bosnia, Haiti, Macedonia and the Sinai. Most recently, the United States deployed Task Force (TF) *Falcon* to Kosovo to support NATO's Operation *Joint Guardian.* Events during *Joint Guardian* indicate that military peacekeeping operations (PKO) require identifying specific operational measures of effectiveness (MOEs) to determine when conditions are established for transferring control to legitimate civilian authorities or other political organizations.

Dual Pillars of Diplomacy

Ethnic conflict in the Balkans is viewed as a different form of warfare, and the US military will continue to be involved in such wars. It is therefore incumbent on those with responsibility in these matters to pay close attention to the nature of ethnic conflict and determine how to use the dual pillars of diplomacy and force most effectively to support peace and justice.[1] It is critical to articulate the desired end state for an ethnic conflict before establishing conditions for successfully transferring control from military to civilian agencies. The end state for an ethnic conflict is limited to suppressing or defeating the insurgents or the dominant power, de facto partition, autonomy or independence.[2] Both Bosnia and Kosovo required NATO forces to separate warring parties as a condition for political accommodation. NATO's goal in Kosovo allows Albanians, the regional minority, autonomy in areas where they form a majority.

US security interests in the Balkans include controlling violence in the region, preventing the collapse of Europe's security structure and defining NATO's role in the post-Cold War era.[3] PKO support dip-

US military forces have expertly prepared to conduct PKO as an element of US diplomatic strategy. The greatest concern continues to be restoring some form of normalcy with limited resources and dealing with competing demands that are usually associated with functions outside of military jurisdiction.

lomatic efforts to establish or maintain peace in areas of potential or actual conflict. They take place following a diplomatic agreement between the disputing parties, the sponsoring organization and potential force-contributing nations. A credible truce or cease-fire must be in effect, and the disputing parties must consent to the operation. The military's main functions are to inhibit hostile actions by the disputing parties and to bolster confidence in the peace process.[4]

PKO also support continuing diplomatic efforts to achieve long-term political settlements and normal, peaceful relations.[5] The difficulty with achieving this aim in Kosovo is the lack of a unified truce among Serbian regular forces, paramilitary forces, ministry of interior defense forces, Kosovo Liberation Army (KLA) rebel forces and NATO. Signing two separate military annexes to the peace agreement between the two parties weakened credibility. A military technical agreement (MTA) signed on 10 June 1999 between the Serbs and NATO provided for a three-phased withdrawal of all Serbian forces from Kosovo. The Undertaking, which was signed on 20 June 1999 between the KLA and NATO, provided a phased procedure for demilitarizing the KLA.

Kosovo Force (KFOR) is the 37,000-man, NATO-led contingent deployed to the region to monitor both the MTA and the Undertaking. KFOR is divided into five sectors of responsibility—US,

British, French, Italian and German—and is commanded by an allied three-star general headquartered in Pristina.

The United States is responsible for the southeastern portion of the province with all forces operating under the command and control of TF *Falcon*. Its mission is to maintain law and order, secure lines of communication (LOC), provide humanitarian assistance support and facilitate transition of the provincial government and infrastructure back to legitimate civilian authorities in sector. TF *Falcon* is an ad hoc coalition under the command of a brigadier general. The coalition is made up of one US infantry battalion, one mechanized battalion and one armored battalion; a Greek mechanized battalion; a Polish airborne battalion; and a Russian airborne battalion. These units rotate every six months. The TF is well-manned and equipped to deal with local military forces in its assigned area of operations (AO).

Military Security Tasks

The first challenge for the operational commander during PKO is determining whether crimes committed are ethnic or domestic. Events in Kosovo indicate that ethnic crimes generally include murder, assault, kidnapping and arson while domestic crimes normally involve assault, rape and larceny. The types of crime in Kosovo have changed over time. Military forces monitored the treaties throughout demilitarization and separation of the disputing parties and discovered a direct correlation between the status of agreements and the types of crimes that were committed. As the time lines and milestones for the agreements were met and domestic crime became more prevalent, the ethnic situation stabilized.

The tactics, techniques and procedures (TTP) used to maintain law and order in the US sector accord with joint doctrine. To perform their mission, peacekeepers must have freedom of movement; open access to all areas in their operational areas; and the freedom to patrol freely, observe, monitor, verify and report their findings.[6] TF *Falcon* foot and vehicle patrols monitor agreement compliance, deter violent acts and determine ethnic mix. These patrols put military presence in areas of concern. Special Forces teams also conduct area assessments and provide information on each sector's ethnic populations and leadership. Personal property search-and-seizure operations are conducted with probable cause to seize weapons, ammunition and other contraband. Efforts to identify, arrest, detain and process suspected war criminals are ongoing. Curfews are imposed in population centers where

violence and crime are most evident. A vehicular quick reaction force (QRF) is ready at all times to respond rapidly and forcibly to agreement violations, interference with freedom of movement and other threats to peaceful coexistence.

A primary supporting task of maintaining law and order is protecting and returning refugees, who

> *Although 335 aid agencies operate in Kosovo, military ties to NGOs in PKO are poorly structured. Previous peacekeeping operations illustrate that many NGOs view the military as out of touch with the values of the society they seek to protect, while military personnel tend to see NGOs as undisciplined and an obstacle to their duties.*

number in the tens of thousands. Most Albanian refugees have returned to the province but have no place to live because of arson and vandalism. Camps established by nongovernment organizations (NGOs) and private volunteer organizations (PVOs), such as the International Committee of the Red Cross and Catholic Relief Services, provide shelter for the homeless. These camps require security to prevent Serbian retaliation. Another concern is protecting Serbs who leave the province to return to Serbia. Many of them camp near municipal facilities while waiting for transportation out of Kosovo.

Another supporting task involves protecting key facilities such as hospitals, public utilities, factories and government buildings. Resuming normal operations in these facilities is critical to preserving many public and private documents and to restoring economic and political normalcy in the region. The documents serve as evidence in resolving claims such as land ownership.

Vehicular patrols, heliborne QRF and traffic control points (TCPs) secure LOCs. This is difficult because of the sector's size, approximately the size of Rhode Island. Still, vehicular patrols are useful in reducing obstacles and conducting show-of-force operations. The air QRF provides a UH-60 helicopter platform for responding to arson strikes and other serious incidents. Apache helicopters and unmanned aerial vehicles are also excellent sources of information and intelligence. TCPs are effective in searching vehicles and monitoring refugee flow across the Macedonian border.

Humanitarian assistance support is provided in various ways. The most significant effort is the
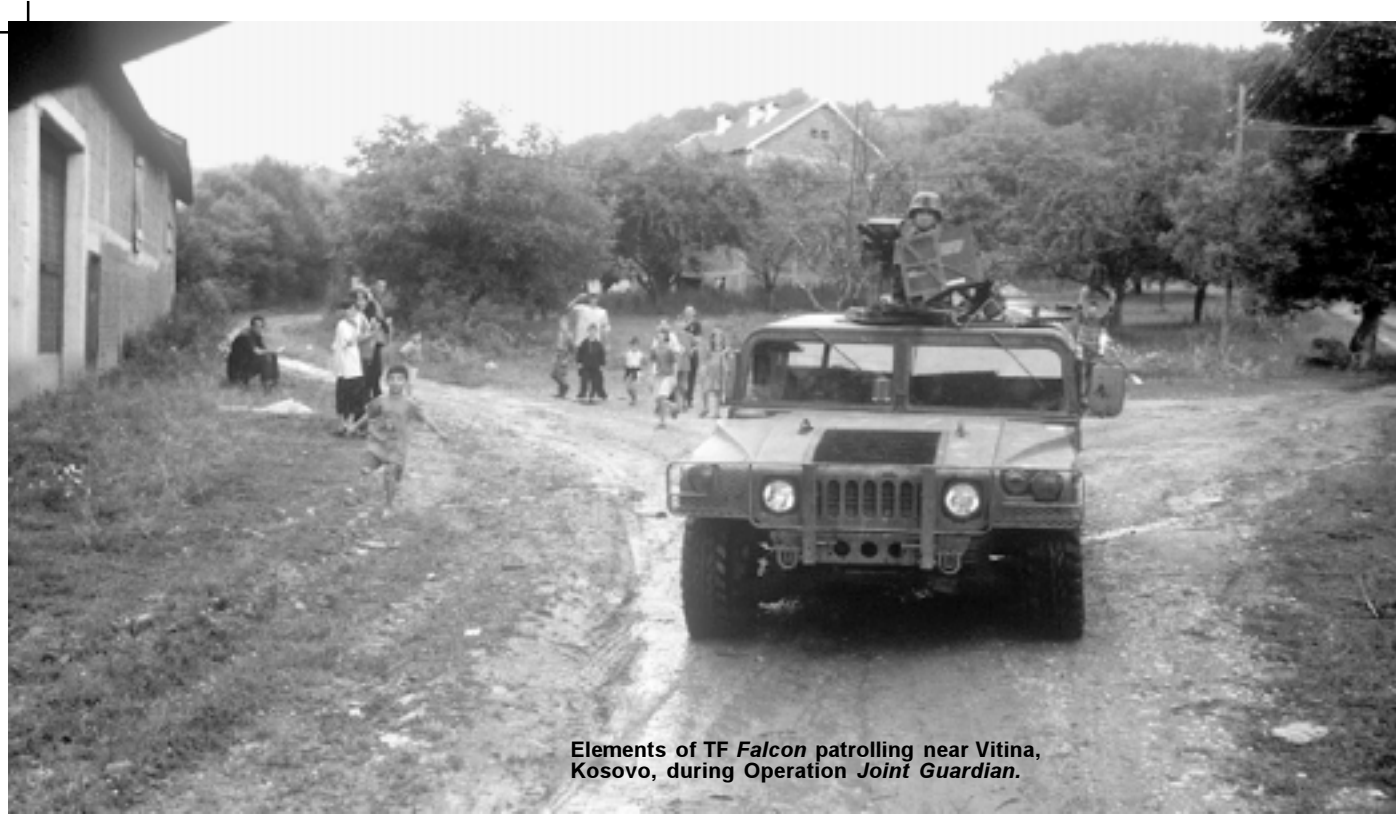
Elements of TF *Falcon* patrolling near Vitina, Kosovo, during Operation *Joint Guardian*.

To perform their mission, peacekeepers must have freedom of movement; open access to all areas in their operational areas; and the freedom to patrol freely, observe, monitor, verify and report their findings. . . . [TF **Falcon***] patrols put military presence in areas of concern. Special Forces teams also conduct area assessments and provide information on each sector's ethnic populations and leadership.*

medical support provided to minefield victims and other critically injured people. This was an important step toward winning the hearts and minds of the people because other facilities and air- or ground-evacuation capabilities were simply not available. The engineers provided tremendous assistance with demining operations. International law and the rules of engagement prohibit engineers from physically clearing minefields, but they can provide demolition and technical support to the UN teams.

Military escorts for NGO and PVO relief convoys are also required. Military transportation assets expedite movement of food, clothing and other supplies for the UN High Commissioner for Refugees (UNHCR). The UNHCR focuses on returning Albanians to their homeland and has prioritized resources to repair roofs and patch windows and doors with plastic. Materials to repair homes, such as wood, glass and tile, are precious commodities and have to be secured by military forces. The only recourse for many families is to live with friends and relatives in lesser-damaged homes.

Information Operations

The operational commander's second challenge is to establish a positive relationship with the civilian population and influence adversaries not to use force.

In accordance with joint doctrine, information operations (IO) are used in Kosovo to degrade Albanian and Serbian abilities to respond to KFOR operations to restore peace.[7] Commanders are responsible for themes and messages that synchronize IO throughout their AOs and guide TF elements as they interact with the local populace. Themes are broad statements supporting the mission and represent essential components of the end state or final objective the commander is attempting to attain, for example, that all military leaders will be held accountable for their actions. Messages directly support themes by specifying detailed actions that are associated with these themes. For example, a message supporting the theme used in Kosovo was that military leaders who violate provisions of the MTA or the Undertaking will be prosecuted under international law.[8]

The most important IO forum the TF *Falcon* commander used was the joint information committee (JIC). This committee conducted weekly meetings at a hotel in Urosevac to discuss treaty implementation and a plan of action—with milestones—for the continued evolution toward a peaceful, functional society. JIC members included US sector commanders, selected TF *Falcon* staff members, KLA zone commanders and Serb leadership representatives. The basic themes dissemi-

Local civilians asking for assistance at the Regional Information Center, Urosevac, Kosovo.

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nated to the JIC included that peace was a prerequisite for restoring normalcy in the region and that KLA and Serbian atrocities would not be tolerated. The JIC allowed the TF *Falcon* commander to issue policy and procedural guidance and to allow disputing parties an opportunity to voice concerns. This weekly gathering prompted several follow-on negotiations and meetings throughout the sector.

Another important IO program that was established throughout the AO was creating regional information centers (RICs). These RICs provide places and contacts for the local populace to interact with the military chain of command. Each RIC has an officer in charge and is manned by fire support personnel. Although each RIC is staffed slightly differently, each has linguistic, medical, military police (MP) and civil affairs (CA) support. RICs are points to document incidents, respond to complaints, and react to public safety needs. Also, RICs are sources of information for the local people and reinforce the message that KFOR responds to complaints regardless of ethnic background. Their presence also emphasizes that everyone is responsible for keeping the peace. RICs are excellent means to assess regional stability while building the people's trust and confidence.

Critical to IO in Kosovo are radio interviews with

local radio stations conducted by battalion TF commanders, executive officers and staff members. The psychological operations (PSYOP) staff representative arranges interviews that are conducted on Sunday afternoons. The PSYOP representative receives the questions from the interviewer two days before the event and relays themes that TF commanders want to cover during the interview. PSYOP staffs prepare responses to ensure coordination. A CA or PSYOP translator is always present to avoid confusion and to ensure that themes are transmitted accurately and convincingly. Official press releases that discuss events, policies or programs are also provided to local stations for broadcast. The radio stations receive payment for interviews or broadcasts after they air to ensure the plan was followed and that all broadcasts are devoid of emotion and politics. Radio broadcast procedures used in Kosovo are similar to those employed by TF *Eagle* in Bosnia.[9]

Also important to IO is providing information to the media. TF *Falcon* established a joint visitor's bureau (JVB) to deal efficiently with the press, media and other visitors such as congressional leaders. The suffering in Kosovo and the role of US forces are destined for worldwide attention. Sharing situational awareness with the media is basic and important because information affects international

[Humanitarian assistance support] to minefield victims and other critically injured people . . . was an important step toward winning the hearts and minds of the people because other facilities and air- or ground-evacuation capabilities were simply not available. The engineers provided tremendous assistance with demining operations. International law and the rules of engagement prohibit engineers from physically clearing minefields, but they can provide demolition and technical support to the UN teams.

support for military activities.[10] The public affairs staff effectively determines and disseminates media themes in the JVB that cover Serbian compliance with the MTA, mitigates reaction to mass gravesite and minefield reports, urges both military and public cooperation with KFOR and monitors KLA adherence to the Undertaking. Military commanders host reporters daily and give them open access to unit activities. Periodic press conferences also provide updates on military operations in the sector.

Civil Affairs Functions

The operational commander's third challenge is defining and restoring some sense of normalcy in the region as part of the mission's postconflict-resolution phase. CA personnel spearheaded this effort by providing advice and formulating procedures to create a basis for cultural accommodation and expediting compliance with the agreements.[11] CA personnel provide expertise in assessing the region and form a liaison with local civilian leaders, but the interaction with NGOs has become a more important factor in this process.

Although 335 aid agencies operate in Kosovo, military ties to NGOs in PKO are poorly structured.[12] Previous peacekeeping operations illustrate that many NGOs view the military as out of touch with the values of the society they seek to protect, while military personnel tend to see NGOs as undisciplined and an obstacle to their duties. These sentiments are no different in Kosovo. The number of NGOs continues to increase, and they are usually the first to enter a country and the last to leave. NGOs often have better local knowledge than military forces and are able to bypass local bureaucracies. NGOs also consist of organizations with varying degrees of competence and political motives. They are likely to resist military attempts to coordinate and control their activities and often differ on the best approach to problem solving.[13] These factors indicate that modern PKO are complex, multi-faceted missions that require close coordination between civilian and military elements to be successful.[14]

The TF *Falcon* commander established a civil-military operations center (CMOC) at TF headquarters, Camp Bondsteel, to synchronize information and coordinate interagency activities. The CMOC serves as a command and control center for the battalion CA teams to help establish an interim regional government, restore the industrial and agricultural economic base, and manage resources and assets.

Suspected arsonists are detained outside a company command post in Vitina, Kosovo. (*Opposite page*) Curious children surround a collection point for defused mines awaiting transportation for demolition in Urosevac.
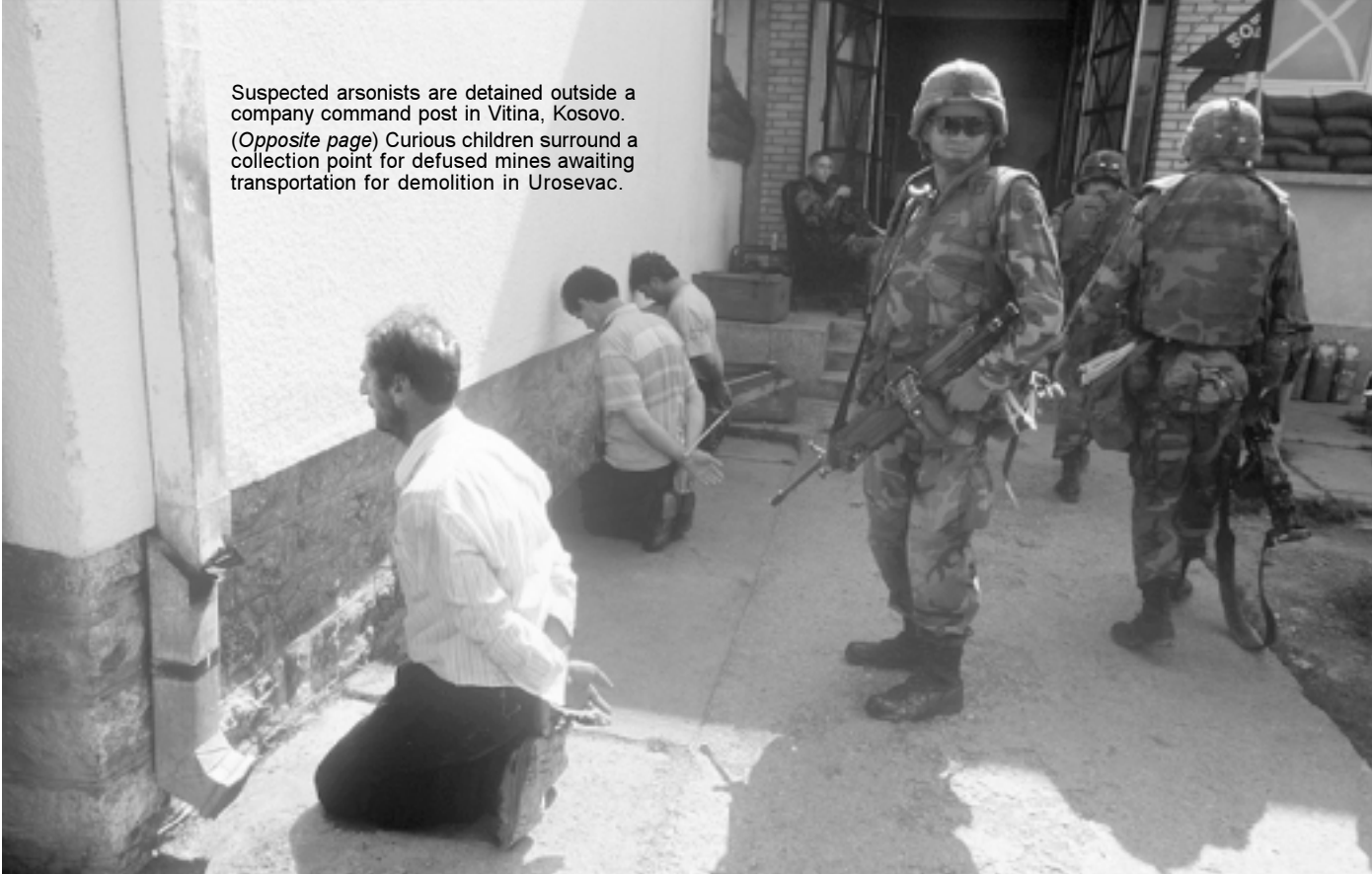
US Army

A squad of MPs attached to a 1,000-person battalion TF is clearly not enough to enforce the law. [Crime prevention] should begin when there are sufficient MPs in the AO to perform this task. . . . [The] most difficult stage of maintaining domestic law and order involves using an interim international police force, then training and integrating a local police force. Neither force has materialized in Kosovo. European nations have committed to deploying a 5,000-person international police force to help patrol Kosovo but have provided only about 2,500.

The CMOC also worked to reopen, maintain and operate both the public service and public utility portions of the infrastructure. The principal elements of public service include the medical system, transportation network and schools. The most vital utilities include electric power, water and telecommunications.

Reconstructing the province began at the TF level. CA personnel chaired daily meetings with representatives from participating NGOs and international and regional security organizations at the RICs. These meetings established work priorities and allocated scarce resources among many competing demands and agencies. The predominant US government agency in Kosovo is the US Agency for International Development. It has the largest financial base in the region, while PVOs and NGOs lack funding for almost every endeavor in the province. The CA teams work to ensure unity of effort in applying limited resources to numerous needs.

Restoring control to civilian authorities is difficult. The challenges are determining legitimate authority and defining normal, peaceful relations. Two

organizations working in Kosovo that were in conflict with one another before the bombing campaign now work effectively with US CA teams to establish an interim provisional government. One is the Kosovo Diplomatic Observer Mission, an element from the US Department of State. The second is an NGO, the Organization for Security and Cooperation in Europe (OSCE). Both made significant contributions during the one-on-one negotiation process between KFOR commanders and the various provincial factions. Both organizations have extensive contacts in the region because of their previous presence and understand many political, ethnic and religious sensitivities. They work diligently with military commanders, CA teams and UN administrators to form a combined Albanian-Serbian interim government.

International organizations, such as the UN, have been effective in initiating economic redevelopment in Kosovo. Examples include making the German mark and the Yugoslav dinar official currencies, appointing judges and international jurists for a new legal system and imposing new customs duties to

help finance administrative functions. Bosnia is an excellent example of the link between socioeconomic conditions and PKO. Improving living standards was one means of easing tensions between the warring factions.[15] To assess and manage the degree of economic recovery, CA personnel in Kosovo monitored the repair and reopening of small businesses and stores, the number of privately owned

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garden plots and commercially owned farms, the price of goods in the open market, fees for services and the amount of vehicle traffic in and around the cities.

KFOR is committed to getting factories opened and reestablishing the work force. One significant difficulty is the inability to pay workers. KFOR is also committed to restoring self-sufficiency by assisting farmers with normal harvests. CA assets are dedicated to repairing tractors and other equipment and to obtaining resources to prepare fields for planting. CA personnel are instrumental in getting the public transportation system operational by managing fuel, schedules and loads. KFOR also works with the International Medical Cooperation and Doctors Without Borders to restore the local hospitals to normal operating capacity. The hospitals are critically short of supplies and equipment, although medical personnel are reasonably available. The same situation applies to opening schools. Efforts are constantly made to acquire and repair suitable buildings so that teachers can resume classes. These indicators of economic normalcy are useful in prioritizing resources. Getting people off the streets and productively engaged is the first step.

Restoring electric, water, waste removal and telephone services were exacerbated by their substandard conditions before the NATO bombing campaign. Most utilities required extensive repair or replacement of items such as pipes, generators and microwave towers to facilitate restoration. CA personnel consolidated work requests, managed the labor and contractor work force, and procured supplies and equipment. One recent example involved

an inventory of the pipe factory in Urosevac to find the proper gauge pipe to repair the city's water line. Once the correct pipe was located, US military personnel transported the pipe to the damaged section and then worked with NGOs to repair the system.

Maintaining Law and Order

The first stage of maintaining law and order routinely involves deploying regular combat troops to neutralize ethnic violence. These troops enforce or monitor compliance with the military provisions of a peace treaty. This stage should begin immediately after hostilities cease and end when domestic crime replaces ethnic violence.

The second stage is preventing domestic crime. MPs should lead the force because they are tasked with law enforcement duties both during peacetime and war. MPs are better trained in traffic control, arrest, detention and investigation than combat soldiers. Augmenting TF commanders with additional MPs to perform these duties allows combat forces to concentrate on treaty implementation. However, the problem with this augmentation is that it pulls an already stretched MP force from home station duties or taps into overextended reserve forces. A squad of MPs attached to a 1,000-person battalion TF is clearly not enough to enforce the law. This stage should begin when there are sufficient MPs in the AO to perform this task and end when an international police force arrives.

The third and most difficult stage of maintaining domestic law and order involves using an interim international police force, then training and integrating a local police force. Neither force has materialized in Kosovo. European nations have committed to deploying a 5,000-person international police force to help patrol Kosovo but have provided only about 2,500.[16] The UN Mission in Kosovo (UNMIK) has been more successful in establishing the Kosovo police force but has not fully integrated it into law enforcement activities or sustained its program. The first class graduated on 16 October 1999 and had 173 new officers from a variety of ethnic backgrounds.[17] This stage should begin when an international police force takes responsibility from the MPs and end when a host nation police force is sufficiently trained to assume routine domestic law enforcement duties. A functioning host nation police force is a prerequisite for US troop withdrawal. UN administrators are responsible for this process but have not been successful in coordinating their efforts with the international community or KFOR commanders.

A CBS film crew covers a July 4th cookout in Vitina.

The embedded media program allows reporters to live and travel with commanders and units throughout the AO, and to see and feel the emotions and difficulties that TF Falcon faces each day. The embedded media program is a meaningful and effective way to decipher and exploit information under favorable conditions. Open access tells the real story, helps reinforce a positive attitude and has worked favorably in Kosovo.

The MOE for identifying the level and types of crime is closely linked to statistics. The crime rate in Kosovo has been significantly reduced since KFOR arrived. According to NATO's Secretary General, about five murders occur each week compared to 50 in June 1999.[18] This statistic indicates that it is time to shift responsibility for law enforcement from KFOR to international and host region police forces.

Regional Harmony

The UN coordination problem with the police forces indicates a larger problem with synchronizing administrative functions provincewide. Fundamentally, it is a problem of authority and controlling and coordinating all organizations operating in a given region, including the UN, NATO, NGOs and PVOs. The MOE for this problem is forming a joint and combined staff under UNMIK's coordination and the UN's supervision. This process is clear to the UN and KFOR but requires more NGO and PVO cooperation. Each organization should be categorized by function; each functional area should have a lead organization. Organizations with the largest financial backing will tend to dominate their functions. The staff's standing operating procedures can be determined and developed over time, but its ability to direct administrative efforts for the benefit of all parties will enhance and expedite transferring control back to legitimate civilian authorities. The international community should ban organizations that fail to comply with established procedures from the province or isolate them from support organizations.

Common Government Goals

The true MOE for transitioning from military commanders to civilian leaders is a general election. This requires a phased approach once military commanders take responsibility for their respective AOs upon occupying the province. During the first phase, commanders deal immediately with all factional leaders equitably and form a group of representatives from each municipality. Forcing both sides of a dispute to work together toward a common goal is critical to establishing an interim government. Determining and accepting common goals are challenging and dynamic while simultaneously attempting to restore political legitimacy. For example, military efforts to restore public services in Kosovo aligned factions within the disputed territory toward a common goal. This process eventually led to identification and cooperation of representative leaders, which in turn, allowed UNMIK to move toward the

The UN coordination problem with the police forces indicates a larger problem with synchronizing administrative functions province-wide. Fundamentally, it is a problem of authority and controlling and coordinating all organizations operating in a given region, including the UN, NATO, NGOs and PVOs.

second phase of forming an interim government. These efforts assisted the interim governments in performing their duties.

The prerequisite MOE for conducting subsequent elections is voter registration, perhaps using the RICs to begin the process. The RICs became nerve centers for the municipalities and could have been used without cost to document public names and addresses. OSCE and KFOR leaders disagreed at the outset of the normalization process about when an election could be held. Military leaders urged OSCE to pursue elections within six months of NATO's occupation of the province; OSCE personnel believed that elections would not be an option for at least one year. Using the RICs would have expedited the election timeline.

A Successful Media Program

There are two schools of thought concerning military interaction with the media. One school proposes an uncooperative relationship with the press, denying access to many operations and forcing reporters to get information from secondhand sources. Information is disseminated in a "pull" rather than a "push" fashion. The other school of thought,

known as the embedded media program, welcomes media involvement in all operations to portray images and stories as they actually occur. This technique tends to lend credibility to operations and enhances the message's effectiveness with the public. The embedded media program allows reporters to live and travel with commanders and units throughout the AO, and to see and feel the emotions and difficulties that TF *Falcon* faces each day. The embedded media program is a meaningful and effective way to decipher and exploit information under favorable conditions. Open access tells the real story, helps reinforce a positive attitude and has worked favorably in Kosovo. The MOE for gauging a successful media policy is a functional, embedded media program.

Throughout the past 18 years, US military forces have expertly prepared to conduct PKO as an element of US diplomatic strategy. The greatest concern continues to be restoring some form of normalcy with limited resources and dealing with competing demands that are usually associated with functions outside of military jurisdiction. This reality affects everything from establishing an elected government to providing humanitarian assistance. Organizations such as NATO and the UN must be better prepared to provide sufficient political and economic support to adequately resolve a crisis; problems like Kosovo are not going away any time soon. Minorities will be increasingly unwilling to live with arbitrary borders when conditions seem intolerable.[19] Operational commanders can significantly enhance their chances for success in future PKO by applying these proposed MOEs and implementing the associated recommendations. *MR*

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Intelligence Challenges of
Civil-Military
Operations

Adam B. Siegel

I T IS THE SUMMER of 1994, and the United States is threatening to invade Haiti. A young, inexperienced US Army officer is assigned to run a brigade civil-military operations center (CMOC).

The young officer realizes he needs information on the civilian actors in the brigade's area of operations. Knowing nothing about the mayors, school principals, local administrators of public services, relief agencies or even where international relief agencies have warehouses, he turns to the brigade intelligence officers. They cannot help. The young officer contacts other government organizations and is given information about activities in Port-au-Prince, nothing about the areas where his brigade will operate. He contacts relief organizations and is given telephone numbers for relief workers in Haiti. He attempts to contact the relief workers but is stopped short—the brigade intelligence staff tells him that he is threatening operational security.

The intervention begins. The young officer's brigade deploys to Haiti. Again, he lacks information, this time about the judges, principals and criminal activity in Haiti's civilian society.

Several days after the brigade arrives in Haiti, soldiers of the brigade detain a Haitian for trying to sell marijuana to soldiers. It is not until after the Haitian is on an Army helicopter en route to Port-au-Prince that the young officer learns of this. He wonders if anyone even knows whether this is illegal in Haiti. After all, no one has provided him with an English-language version of the Haitian law code.[1]

Over the past decade, international military forces have intervened in complex situations that combine conflict with substantial human suffering. Whether employing blue-helmet UN forces or multinational coalitions under UN mandate, these stability and support operations have presented military commanders with challenges different from traditional

Unlike the multinational forces that drove Saddam Hussein out of Kuwait in spring 1991, the majority of recent international military operations have relied on civil-military cooperation as fundamental to success. During these operations, the civil-military team must be concerned with the size, capabilities and intentions of enemy combat forces as well as numerous civilian-sector issues . . . that would not normally concern a commander during combat.

warfighting operations. Information, analysis and intelligence challenges are similar to many of the other issues faced by militaries around the world as they grapple with the reality and difficulties of interagency and interorganizational operations. Unlike the multinational forces that drove Saddam Hussein out of Kuwait in spring 1991, the majority of recent international military operations have relied on civil-military cooperation as fundamental to success. During these operations, the civil-military team must be concerned with the size, capabilities and intentions of enemy combat forces as well as numerous civilian-sector issues.

Peace support operations have three fundamental intelligence challenges that may not exist in a NATO-Warsaw Pact confrontation or other traditional warfighting operations:

● Civil-sector issues. Unlike warfare, developments in the civil sector are critical for the development of the military operation.

● New partners and sources. A military force will not be isolated from other elements of a civil-military intervention; the intelligence community cannot be isolated from other elements of the force.

● Numerous partners and sources. In civil-military operations (CMO), intelligence managers must coordinate and cooperate with more organizations and sources than in conventional war.

After years of civil war punctuated by several interventions, NATO operations in Bosnia-Herzegovina began with a substantial and well-developed international presence. This included an

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In Bosnia-Herzegovina, senior NATO intelligence officers managed a network of information sources and intelligence partners more complex than that managed in a conventional conflict. These included the Allied Military Intelligence Battalion, national intelligence centers—collocated with SFOR headquarters in Sarajevo—national civilian intelligence agencies, civilian organization information sources and numerous staff elements.

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intelligence presence on the ground by NATO nations involved in UN operations in the former Yugoslavia. This was an alliance-run operation that benefited from more than four decades of Cold War technical, doctrinal and procedural interoperability. The four- and three-star headquarters in Sarajevo derived from already existing multinational command structures.

These characteristics seem to differ from non-NATO interventions in the 1990s. US-led interventions in Northern Iraq, Haiti and Somalia occurred where no major international presence existed. No established, well-developed intelligence infrastructures were in place to support CMO. Differences also existed across the societies in which international interventions occurred. Yugoslavia was a modern, industrialized European nation, with a functioning government; Haiti, Liberia, Cambodia and Rwanda were not nearly as well developed and government was completely absent. A third difference was the government's structure.

Despite these differences, important similarities exist between NATO and non-NATO interventions. More than 10 NATO nations had intelligence cells in each headquarters, and each cell had its own rules and procedures for sharing information with NATO and other nations involved. Each of the national elements maintained a significant degree of autonomy and were often convinced, rather than commanded, by higher headquarters to take certain courses of action.

During interventions in the 1990s, military forces have had to operate with other international actors, including international organizations (IOs), government organizations (GOs) and nongovernment organizations (NGOs). These other organizations were often on the ground to greet the military forces when they arrived.

During CMO, the intelligence community will have to collect and analyze information about a wide set of issues that would not normally concern a commander during combat. During Operation *Restore Hope* in Somalia, military commanders required information on issues that included refugee health, the development of tribal consuls and the effects of food distribution on the local economy. During Operation *Uphold Democracy* in Haiti, military commanders were concerned about reconstituting the local police and judicial system and about the potential flow of drugs throughout Haiti. During Operation *Joint Endeavor* in Bosnia, organized crime, government formation, house evictions, refugee voting patterns and reconstruction were major concerns for commanders. These issues all require unique information and analysis techniques uncommon to a typical military force. These new concerns did not replace, but were in addition to, intelligence requirements such as developing enemy orders of battle.

Partners and Sources

One of the most notable CMO challenges is working with international agencies and unusual ad hoc staff sections.

In Somalia, international and national agencies included UN organizations and government relief and development agencies. In Haiti, the US-led multinational force worked with the International Police Monitors and US Justice Department. In Bosnia, partners included the International Police Task Force (IPTF), the UN Mission in Bosnia-Herzegovina, the Office of the High Representative and the European Community Monitoring Mission.

Internally, intelligence officers worked with engineers, the civil-military task force (CMTF) and analysts from the Office of the Chief of Staff. Psychological operations and public affairs (PA) personnel also played a role in collecting and analyzing information. These partners merge in a complex emergency to work as a team to execute a CMO.

In addition to the qualitative challenges of civil-sector issues and new information and intelligence partners, the intelligence component will have a quantitative challenge: numerous intelligence sources, intelligence partners and clients for information.

A captain from the 3d Special Forces Group teaches English to a group of Haitian soldiers in Gonaives, Haiti, October 1994.

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An operation, which is strictly military, enjoys a relatively clean intelligence architecture, with a clear concept of who is responsible for which tasks and who has authority. Such clarity might be impossible to achieve in a multinational CMO. In Bosnia-Herzegovina, senior NATO intelligence officers managed a network of information sources and intelligence partners more complex than that managed in a conventional conflict.[2] These included the Allied Military Intelligence Battalion (AMIB), national intelligence centers (NICs)—collocated with Stabilization Force (SFOR) headquarters in Sarajevo—national civilian intelligence agencies, civilian organization information sources and numerous staff elements. Future peace support operations are likely to pull together a similar assortment of intelligence organizations, agencies and assets that will present a challenge for integration and management.

Intelligence challenges. These challenges create a different environment for the intelligence organization within the military command for which many military personnel have trained. The intelligence challenge is part of the larger challenge for military professionals adapting to the CMO de-

mands that seem to dominate the current international military environment.

Several obstacles emerge when providing adequate intelligence support to military commanders during CMO. Many military officers and civilian defense officials seem inclined to distinguish between the military mission and the civil mission. This type of distinction certainly occurs within the US debate. Many of the concepts related to mission creep derive from the idea that military tasks should be finite and should not significantly involve the military in the civilian sector.

In reality, these operations are civil-military missions. Intelligence staffs operating within the traditional intelligence framework will likely resist examining the civilian sector. This will leave them poorly prepared to deal with the questions that the commander will inevitably ask about civil affairs.

Different concerns and requirements. Intelligence officers prepare throughout their careers for conventional warfare, but the reality of the contingencies during the 1990s will surprise many. The warfighting mission does not require analysis of government corruption, police brutality, organized

crime, refugee movement patterns, international development funding, the local economy or spontaneous riots. Many intelligence processes, such as intelligence preparation of the battlefield, remain relevant for dealing with these questions but will

> *In a complex emergency involving multinational forces, such authority will not necessarily be apparent. While the intelligence staff will continue to work for the military commander, it might be required to share intelligence; however, US security restrictions might hamper such sharing. Consequently, US-released information might be perceived as being too heavily censored to be useful.*

have to be applied differently.[3] One challenge for the intelligence staff will be determining what questions are relevant to the new situation. The commander may be caught in the same trap of separating military and civilian missions; the intelligence staff will need to help the commander understand the questions he should be asking.

The intelligence staff will have to cope with a new set of questions and develop different analytical methods to support the commander's intelligence requirements for decisionmaking in CMO.

Every military organization has some form of intelligence structure. In a tactical combat force, these personnel have trained to support combat operations by assessing enemy capabilities and perceiving enemy intentions. In a contingency, the brigade commander will require other types of intelligence to support his decisionmaking, including voting patterns, relocation sites, school schedules and crowd control measures. Traditional intelligence techniques, training and sources do not necessarily address these issues.

The training that intelligence personnel need to prepare them to perform their duties in CMO should be different from the training that prepares them for conventional combat operations. Most tactical military units do not have the intelligence capacity to tackle these questions. Most nations' intelligence personnel have experience with many of the relevant economic and political questions that will emerge in a transition operation. These personnel, however, frequently specialize in strategic, not tactical, questions. These specialists are often limited in number, making their availability problematic. This suggests that military intelligence staffs will require augmentation to deal with new issues.

In some cases, the intelligence staff has outsourced such questions. The Operational Analysis Branch, Allied Rapid Reaction Corps, developed a means to track activity in the civilian sector in Bosnia in 1996. The chief of staff's assessment cell developed relationships with international organizations to collect and analyze information for SFOR. Such outsourcing is not inappropriate but should be coordinated to ensure the intelligence staff has all available information.

New sources required. New assessment and investigation call for new sources. International agencies and NGOs are rich sources of information and databases. In an operation with an established government, such as Bosnia, the government ministries might provide information that will help build the overall intelligence picture.

The Internet is another valuable tool. The intelligence staff will literally have a world of data at its fingertips to support analysis. Information technology has made accessing the Internet relatively easy from anywhere in the world. Demographic data, press reports, historical material and maps are readily available; however, the credibility and reliability of sources and data must be checked.

New sources are not only outside the force but inside as well. Other staff sections will gather information, increasing the amount of information that staff elements will gather collectively. During combat operations, for example, the public affairs officer (PAO) will rarely be on the front lines. In Haiti or Bosnia, on the other hand, PAOs frequently escorted reporters throughout the theater. The intelligence staff does not normally request information support from PAOs and typically does not think of PAOs as tactical information gatherers. Unless the headquarters establishes procedures or relationships that ensure the movement of PAO information, it is not likely that it will ever be incorporated into the intelligence picture to support command decisionmaking.

Unclear Boundaries

The CMO intelligence officer must be skilled in collaborating without clear lines of responsibility or authority. When considering conventional conflict, the intelligence staff clearly understands that it works for the commander and that the staff has the authority to request intelligence support from national or allied collection assets.

In a complex emergency involving multinational forces, such authority will not necessarily be apparent. While the intelligence staff will continue to work for the military commander, it might be required to

A patrol questions Kurdish fighters about Iraqi troop movements near Swaratuka, Iraq, summer 1991.

Intelligence officers prepare throughout their careers for conventional warfare, but the reality of the contingencies during the 1990s will surprise many. The warfighting mission does not require analysis of government corruption, police brutality, organized crime, refugee movement patterns, international development funding, the local economy or spontaneous riots. Many intelligence processes, such as intelligence preparation of the battlefield, remain relevant for dealing with these questions but will have to be applied differently.

share intelligence; however, US security restrictions might hamper such sharing. Consequently, US-released information might be perceived as being too heavily censored to be useful. This practice led NGO personnel in Bosnia to view US threat briefings as marginally beneficial; they believed they received more complete information from the IPTF and from each other.[4]

With the presence of more significant partner agencies, the intelligence staff might be directed to provide more than just the occasional briefing to an NGO forum. It might be asked to help such agencies as the IPTF to establish its own intelligence mechanisms. Again, deciding what information and intelligence the intelligence staff should share is a serious concern. By publicly briefing NGO staffs, the information is no longer secure. The reality of the civil-military partnership suggests that if the military does not share information, neither will NGOs.

Some organizations are more open to such partnerships, and countries are increasingly involving them in CMO. They become de facto intelligence organizations.

One fallacy of civil-military relationships is comparing the seemingly confused nature of civilian organizations with the supposed clarity of the military command and control structure. Rarely is a distinction made among the national intelligence organizations participating in a multinational force. Actually, the intervening multinational force consists of numerous organizations. In Bosnia during 1996 and 1997, these militaries included:

● NATO Implementation Force (IFOR) and SFOR.

● National support elements and commands.

● A UN mission.

● Military forces assigned to support the Organization for Security and Cooperation in Europe (OSCE) mission.

This list lends more clarity to the actual environment than existed in reality. IFOR included elements from 33 nations, often from more than one service in each country. The main headquarters had a NATO intelligence staff and more than 10 nations

> *Typically, intelligence personnel work with the J3 and J5 during conventional combat operations. This should change in a CMO responding to a complex emergency. Intelligence personnel will likely have to establish relationships with other staff sections to ensure an adequate flow of information. . . . This has to be an educational process, on both sides, . . . [and] in many cases, this will also be a sensitive process.*

maintaining their own NICs within the headquarters. Each nation had specific regulations on sharing intelligence material, and there was only one incomplete intelligence information movement between the NICs and the NATO force.

Changing staff relationships. The J2 staff will coordinate with organizations different from those of a traditional combat operation. Typically, intelligence personnel work with the J3 (current operations) and J5 (plans) during conventional combat operations.

This should change in a CMO responding to a complex emergency. Intelligence personnel will likely have to establish relationships with other staff sections to ensure an adequate flow of information to support intelligence analysis. This has to be an educational process, on both sides, one that emphasizes the importance and value of such contacts. In many cases, this will also be a sensitive process.

Lawyers, doctors, civil affairs officers and PAOs do not ordinarily associate with intelligence activities. In a warfighting environment, this rarely impacts the intelligence staff's ability to support the commander; however, during civil-military missions, these and other staff functions, such as engineering, logistics, purchasing and personnel, collect information as part of their normal business, information that could be critical for developing a robust intelligence picture. The intelligence staff must develop contacts with sister staff sections and work to support them as well.

All this suggests that staff relationships should be different in a CMO than in a conventional combat operation. As one civil affairs officer on the Joint Task Force 190 staff in Haiti phrased it: "The intel-

ligence guys remained behind their barriers, and none of us had the clearances to go in and talk with them. On the other hand, it isn't as if they came and spoke with us."[5]

In Haiti and elsewhere, intelligence staffs have frequently remained isolated from elements of the command staff. This hampered operational success both by limiting the flow of information to the intelligence staff to support analysis and by limiting intelligence support to new clients.

New Clients

Along with new sources and new partners, the intelligence staff also has new clients for its products and may have to develop new products to support its new clients.

For example, during past operations, the United States has experienced a problem with intelligence material not being releasable to foreign nationals, governments or non-US citizens (NOFORN), which restricts the ability to share material with partners in a coalition operation. In CMO, the issue will not only be sharing classified material with military partners but also how to share sensitive but unclassified material with civilian organizations.

The problem will be multilayered. NGOs in Bosnia-Herzegovina found briefings from the IPTF more valuable because the IPTF was more forthcoming than was IFOR or SFOR, who had to clear information for public release before discussing it during NGO meetings. Clearly, the same rules could not be applied to discussions with the UN High Commissioner for Refugees, Office of the High Representative, World Bank, OSCE and other major civilian organizations on the ground as partner organizations with the NATO military force.

The problems are not just external but internal as well. Normally, sensitive material is not discussed with civil affairs or PA representatives who regularly interact with outside organizations. And, just as intelligence personnel may not routinely use these new staffs for intelligence support, these new staffs may not be comfortable asking for intelligence support and may need to be educated on how to ask.

Despite all these tensions, an intelligence staff might need to provide intelligence support to several different types of new clients:

● NGOs. Will the intelligence staff provide material to NGOs on the security situation and potential threats to NGO personnel or activities?

● World Bank. Will intelligence personnel be asked to support fiscal audits for the World Bank to determine whether local governments are diverting

A Honduran teacher and US soldier distribute school supplies during a *FUERTES CAMINOS* exercise.

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funds to illegal arms purchases? Will they help the World Bank understand and track corruption?

● Election officials. Will the intelligence staff be asked to monitor elections and assess their fairness?

● Contractors. Will the intelligence staff need to investigate ownership of buildings for the command's contracting officers so that the command does not rent a building owned by a war criminal or drug lord?

With all these different actors on the ground, the military intelligence manager will face a significant new challenge on how to coordinate information collection, analysis and intelligence production to support the commander and new clients. Even without examining new clients, there is the difficult challenge of weaving together the several different civilian, military, national and multinational intelligence organizations that will be involved in an operation to create a unified picture to support the commander.

Balancing the old with the new. CMO intelligence requirements do not replace traditional intelligence requirements found in conventional combat operations. For example, in CMO, not only do collection managers gather information about conventional forces, but they may also have to track refugee movements or monitor elections.

Balancing traditional requirements with emerging demands in a civil-military environment will remain a challenge. Intelligence staffs will focus on threats to the force, which are often traditionally defined as armed threats. Even here, however, the military intelligence staff will be working with new issues such as understanding terrorist and unconventional threats to the force. The intelligence staff may have to develop analytical tools to study criminal threats to force personnel. In a complex emergency, the intelligence staff will have no choice but to shift at least some focus from military to civilian analysis.

Augmenting intelligence staffs. To manage new analytical challenges, augmenting lower-level staff positions with civilian experts may be a consideration. Relevant specialties could include regional experts, political scientists, relief or development specialists, organized crime experts and economists.

Since the operational environment is civil-military, there should be combined civil-military intelligence teams at all levels. It seems likely that few governments have enough functional area specialists on the government payroll to meet all these requirements. Perhaps this is an arena in which to develop reservists with the requisite skills.

Advances in information technology may even allow the command to rely on remote augmentation. Future intelligence managers may have a staff of analysts who manage Internet communications and video teleconferencing. These analysts would not necessarily be government employees but university professors or businessmen.

Information technology. The world is in an information revolution, making massive changes in communication and information processing. This has important implications for intelligence communities around the world. These effects should extend into CMO as well. For example, intelligence staffs cannot ignore the Internet—available data are too important. This requires the headquarters to be wired and the intelligence staff to have unclassified computers for searching the web. The intelligence community should create and maintain electronic databases with material collected from these new sources. In an operation that extends over several years, such databases might provide the only real continuity in an operation where the military staff rotates at least twice a year. Intelligence staffs might also exploit commercial databases to support information requirements.

Such databases again raise the issue of sharing with partners. If the intelligence staff is simply in a receive mode to fill its databases, other organizations might become reluctant to continue supplying the information. Thus, the staff may attempt to maintain a shared unclassified, nonsensitive database for all players to use while reserving a separate, more comprehensive database for internal use. In fact, the intelligence staff might support creating

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a website for sharing the nonsensitive material with all interested parties. Such openness would likely foster cooperative information sharing.

Military officers preparing for the battlefields of the 21st century have found it difficult to adapt to the realities of CMO. To support decisionmaking, these operations demand a different concept about what information should be collected, how it should be analyzed and what constitutes intelligence from that analyzed information.

These challenges, however, are on multiple levels. The first challenge is to recognize that there are new challenges. After this comes a long educational process. Intelligence officers will have to educate not only themselves and their staffs but also other staff sections. There is even the challenge of educating the commander on priority intelligence requirements peculiar to CMO.

Building relationships within the staff, however, might be simple compared to the challenge of dealing with the multitude of other organizations that will be involved alongside the military force, organizations that can provide critical information but will also solicit information in return. Military officers are aware of these new requirements. This knowledge has to be translated into training and education so that preparation does not fall to on-the-job training. Military forces should also identify which issues lie outside military expertise and preparation. Identifying such requirements will develop a structure for appropriately augmenting the military force to provide befitting intelligence support. **MR**

NOTES

1. It turned out the attempted marijuana sale was illegal. A bilingual, English-Creole version of the Haitian law code was available in bookstores in Haiti.
2. In this context, the reference is to the IFOR and SFOR CJ-2 in the November 1996 through mid-1997 period.
3. US Army Field Manual 34-130, *Intelligence Preparation of the Battlefield* (Washington, DC: US Government Printing Office, 8 July 1994).

4. Many IO and NGO staff personnel commented that they appreciated NATO security briefings more as a sign of NATO interest in NGOs than for the information they provided.
5. Comments made by a civil affairs officer from Joint Task Force 190 to the author in Haiti, Spring 1998. There appeared to be a more integrated relationship at the brigade level in Haiti.

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US Army Civil Affairs Ministerial Advisory Teams Deploy to Haiti

Brigadier General B.B. Bingham, US Army Reserve;
Colonel D.L. Rubini, US Army, Retired; and
Colonel M.J. Cleary, US Army Reserve

THE MILITARY HAS TROUBLE coming to terms with post-Cold War peacekeeping in places like Somalia, Haiti, Bosnia and Kosovo. It is easy to understand the unease. Soldiers train to close with and destroy the enemy as they did in the Gulf. Peace operations, on the other hand, require restraint and a minimum of force. It is difficult to ask young American soldiers to be both warrior and constable.[1] In Haiti, Operation *Uphold Democracy* once again placed demands on the US Army's civil affairs (CA) branch for specialized talent to work with heads of a foreign government at the ministerial level in civil administration. A similar high-level CA team deployed to Operations *Desert Shield/Storm* to work with ministries of the Government of Kuwait (GOK). The Kuwaiti task force helped jump-start the GOK ministries by providing essential services and reestablishing stability. CA operations in Haiti built on the Kuwaiti task force's experience. After US soldiers arrived in Haiti, they "ran the place."[2] More and more, reliance for success in this new setting has been placed on US diplomat-warriors. CA soldiers have the doctrine, training, experience and personal commitment to deal with civilian organizations and agencies.[3]

CA offers something not found in the rest of the Armed Forces: "skills needed to manage a country's infrastructure—sanitation, public transport, legal systems, health care systems, import/export systems, commerce and other public services."[4] Skilled Reserve soldiers have provided such services in Panama, the Persian Gulf and Haiti.[5] CA was the military's executive agent in working with the Haitian ministries.

The CA Ministerial Advisory Team (MAT) was formed in cooperation with the US Embassy and the US Agency for International Development (USAID) to assist the ambassador in advising the Government of Haiti (GOH) in reestablishing government func-

> *Thirty-four CA professionals were assigned [to MAT]. In civilian life they were urban development specialists, environmental scientists, educators, engineers, doctors, lawyers, bankers, business leaders and law enforcement experts. For more than five months, the MAT soldiers devoted their years of experience in private practice, law enforcement and government work to restarting and reforming the GOH.*

tions. These CA MATs worked with all Haitian ministries in cooperation with USAID and was the bridge between the US government (USG) and GOH until USAID programs could be brought online. MAT objectives helped accomplish objectives in the broad sense. Specifically, MAT pursued USG and host country objectives to establish a safe, secure environment and promote conditions for economic growth. The MAT mission was to:

● Provide startup assistance to the new GOH ministries using CA technical advisers to perform initial assessments and assist in organizational planning.

● Recommend strategies that would facilitate links with USAID and other long-term development assistance providers.

Thirty-four CA professionals were assigned. In civilian life they were urban development specialists, environmental scientists, educators, engineers, doctors, lawyers, bankers, business leaders and law enforcement experts. For more than five months, the MAT soldiers devoted their years of experience in private practice, law enforcement and government work to restarting and reforming the GOH. They completed assessment of 12 ministries, including justice, finance and banking, commerce, education, foreign affairs, agriculture, health, public works and interior.

From October 1994 through February 1995, the first MAT—MAT I—provided organizational assistance and prepared technical assessments and plans that:
- Determined priorities.
- Completed funding projections.
- Defined GOH interministerial tasks and US Interagency Task Force (IATF) tasks.
- Facilitated continuity and handoff.

With their civilian expertise and military capabili-

> *CA can spot the NGOs and PVOs that have staying power and the competence to manage a CA project. USAID and FNs can then support NGO and PVO implementation. This interplay of CA project design, NGO or PVO implementation and USAID funding and oversight has yet to be fully appreciated, but it is clearly [an] effective way to use all resources.*

ties, the MATs supported the US civilian agencies in missions that those agencies were not designed to accomplish alone. While CA cooperation was clearly desirable in this working relationship, it was never intended as an equal partnership.[6] Department of State (DOS) was the lead agency, and by law, the military was not allowed to spend money on foreign aid projects as USAID did.[7] The MAT advisers contributed without controlling and did not get involved in running the government. The MAT limited the scope of its missions and managed both GOH and civilian agency expectations so as not to displace their primary responsibilities.

But the military was needed in Haiti long after DOS and USAID resumed their agency programs. This became necessary because the end state in Haiti was stability, and this would not happen without continued military involvement. Author Jennifer L. McCoy stated: "For two hundred years, Haiti endured a classic predatory state. The state preyed on its people without providing political or economic goods. Lacking accountability, governments used their power in a negative manner to destroy rather than create. . . . To dismantle the predatory state and create a democratic one requires . . . a universal respect for the rule of law. The underlying problem in Haiti is that the judicial system is completely dysfunctional and distrusted by people and that the security provided by the [Multinational Force] MNF and [UN Mission in Haiti] UNMIH . . . is artificial."[8]

Stability is achieved by establishing a safe, secure environment and promoting conditions for economic growth. To achieve stability in Haiti and elsewhere, "there will be longer periods of US military engagement before an operation is transferred to civilian agencies."[9] Law and order are the essence of security and a prerequisite of military and political legitimacy.[10] A safe, secure environment means that law and order has prevailed. Law and order are achieved when the police, courts and prisons are competent, honest and subordinate to civilian control. Haiti had a long way to go. To achieve stability, Haiti had to be able to maintain law and order. It had to allow and encourage its people to prosper. Haiti had to provide government services, and it had to govern for the benefit of the governed.

MAT's Relation to Tactical CA

The civil-military operations center (CMOC) was responsible for CA programs involving the military. The CMOC received all requests for military assistance from foreign nationals. It validated requests for military assistance. It then matched each request to military capabilities and converted the request into tasks. CA action officers considered the labor, facilities, materials, skills and funding available from one of the following:
- Host nations (HNs).
- Nongovernment organizations (NGOs).
- Private volunteer organizations (PVOs).
- Donor nations.
- US civilian agencies.
- US military.

Analyzing capabilities and interfacing with organizations and agencies define civil-military operations. The CMOC, located in the headquarters, stays in close contact with the J3 and J4 to clarify military capabilities and define tasks.

A separate CA center was created during Operation *Uphold Democracy*. The humanitarian assistance coordination center (HACC) differed from the CMOC in that the HACC was the principal point of contact for NGOs and PVOs. The HACC tapped into the NGOs and PVOs experiences, capabilities and broader insights into Haiti's needs. Without authority over civilians, the HACC served as a liaison with NGOs. The HACC led by persuasion and by coordinating efforts to obtain results. It was located in the generally accessible USAID building, a nonmilitary location familiar to NGO personnel that dispelled appearances of military control. The MAT worked closely with the CMOC and HACC to add military capability to all other elements of assistance, making the most sense in terms of HN aid and development.

MAT soldiers from the US Army Civil Affairs and Psychological Operations Command meet with the US Ambassador to Haiti, the Honorable William Lacy Swing.

With their civilian expertise and military capabilities, the MATs supported the US civilian agencies in missions that those agencies were not designed to accomplish alone. While CA cooperation was clearly desirable in this working relationship, it was never intended as an equal partnership. Department of State was the lead agency, and by law, the military was not allowed to spend money on foreign aid projects as USAID did.

Common Elements of MAT Assistance

Initially, the MAT held coordination meetings with USAID and the US Embassy. The meetings were held with the GOH ministers to confirm their interest in having advisers. The advisers started by conducting initial assessments and identifying interim tasks. While working on interim tasks, they developed long-term strategies for USAID/USG and UN assistance. They coordinated with NGOs and PVOs to avoid redundancy. At tour's end, the advisers prepared leave-behind plans with appropriate hand-off and final reports and briefings. The ministerial advisers structured their analysis of the ministries on:

● The ministry's operational capabilities.

● Ministry organization, administration and management.

● Funding and budget.

Haiti needed everything. All ministries had a low or nonexistent level of service, decayed infrastructure and virtually no organization or financial management. The GOH had been disorganized, corrupt, inactive and incompetent. Jean-Bertrand Aristide's administration, which followed, bore the same characteristics. Even so, the advisers found a mix of capable, enthusiastic reformers at various levels, but their efforts were individualized, uncoordinated and unsupported. The reformers welcomed MAT assistance and the opportunity for reform. The personal contact with the CA MAT experts gave the reformers heart and energy to initiate change, but change was slow in coming. The key to success lay in sustainment and follow-up after the MAT advisers left. MAT advisers returned on subsequent missions and found exhausted reformers replaced with loyalists, reform legislation paralyzed, and continued corruption and self-interest.

From February 1995 onward, the US military's role subsided as UNMIH stood up. The USAID programs for judicial supervision and training had matured. Was there any appropriate role left for the military to perform? If so, it was to support the DOS and USAID in a manner that recognized their predominant role and responsibilities. The military's status as a junior partner in this relationship did not have sufficient definition or guidelines. Within the Department of Defense (DOD), there was debate

A typical Justice of the Peace building in Haiti.

[MAT] information became the basis for the USAID projects and plans for judicial training and mentoring teams. The first MAT in Haiti—MAT I—determined the interoperability of the police, courts and prisons. These three form a triad that is the heart of any criminal justice system. The triad acted on citizen complaints, investigated crimes, issued arrest warrants and decided the disposition of cases. The information collected was distilled into a matrix of indicators gauging the performance of the judicial system.

on what that role should be, based on the following criteria:

● Unique skills and experience of Reserve and Active Component personnel, especially CA.

● Military capabilities beyond that of civilian agencies (logistics, transportation, soldier skills and especially CA with its in-depth civilian expertise).

● Utility as a military training mission.

● Value to GOH in its recovery effort.

● Accomplishing US foreign policy objectives.

MAT's Role in Interagency Operations

DOS is the lead agency in implementing US foreign policy.[11] USAID is responsible for project development that accomplishes foreign policy objectives. USAID can determine priorities by exercising its power to fund or not to fund. The goals of these two agencies might not be the same; in fact, they might conflict with open or hidden agendas of other IATF participants. The military is a junior partner in this setting and has no command or control authority over IATF participants. CA is the military's executive agent in engaging HN officials to support IATF programs.

Uncoordinated, these differing sources of aid can flow downriver in a torrent of lost energy and diluted effort. Unfocused, the project accomplishments have a shotgun effect—many scattered hits but no real impact. The military does not fund programs but must quietly assert itself by employing underused resources to achieve HN strategic objectives.

Because the US military knows which US, foreign nation (FN), NGO and PVO resources are available, it can recommend, without usurping the IATF, courses of action to develop a strategic plan for the minister to adopt. The strategic plan can apply these resources to long-term development of the HN infrastructure and human resources.

Besides being a quiet reconciler on the IATF, MATs can do more than give advice and assistance, even though constrained from spending military money. MATs can envision long-term projects that fit IATF strategic plans, but usually CA soldiers are

in country for short tours only. Suitable NGOs and PVOs are long-term entities that can implement and manage projects. CA can spot the NGOs and PVOs that have staying power and the competence to manage a CA project. USAID and FNs can then support NGO and PVO implementation. This interplay of CA project design, NGO or PVO implementation and USAID funding and oversight has yet to be fully appreciated, but it is clearly a more effective way to use all resources.

MAT projects must be short-term and achievable within limited deployment timeframes, and they must deliver something meaningful that develops Haiti's ability to provide government services. MAT managed the GOH ministers' expectations in understanding US military capabilities. The contributions MAT missions made, both as IATF participants and as ministerial advisers, were enormous. MATs helped the HN ministries develop confidence, capabilities and realistic plans. MAT missions were valuable in helping US policy makers avoid war and maintain stability.[12]

The Ministries

Justice. US officials saw an administration of justice as key to a safe, secure environment in Haiti. MAT advisers completed magistrate and prison assessments. Their information became the basis for the USAID projects and plans for judicial training and mentoring teams. The first MAT in Haiti—MAT I—determined the interoperability of the police, courts and prisons. These three form a triad that is the heart of any criminal justice system. The triad acted on citizen complaints, investigated crimes, issued arrest warrants and decided the disposition of cases. The information collected was distilled into a matrix of indicators gauging the performance of the judicial system. The teams' observations laid the foundation for later missions.

From February to May 1995, a second MAT—MAT II—deployed to Haiti to focus specifically on the judiciary. MAT II's mission was to assist the GOH in assessing the judicial system, identifying weaknesses, recommending solutions and where possible, helping to implement improvements and reforms. In concept, MAT II served as the bridge between the USG and the Haitian Ministry of Justice (MOJ) as USAID and the ambassador's IATF-Justice brought programs on line.

Succeeding MATs deployed to Haiti through March 1997 to develop long-term strategies for the MOJ inspector general and customs. This continued the momentum of judicial reform consistent with
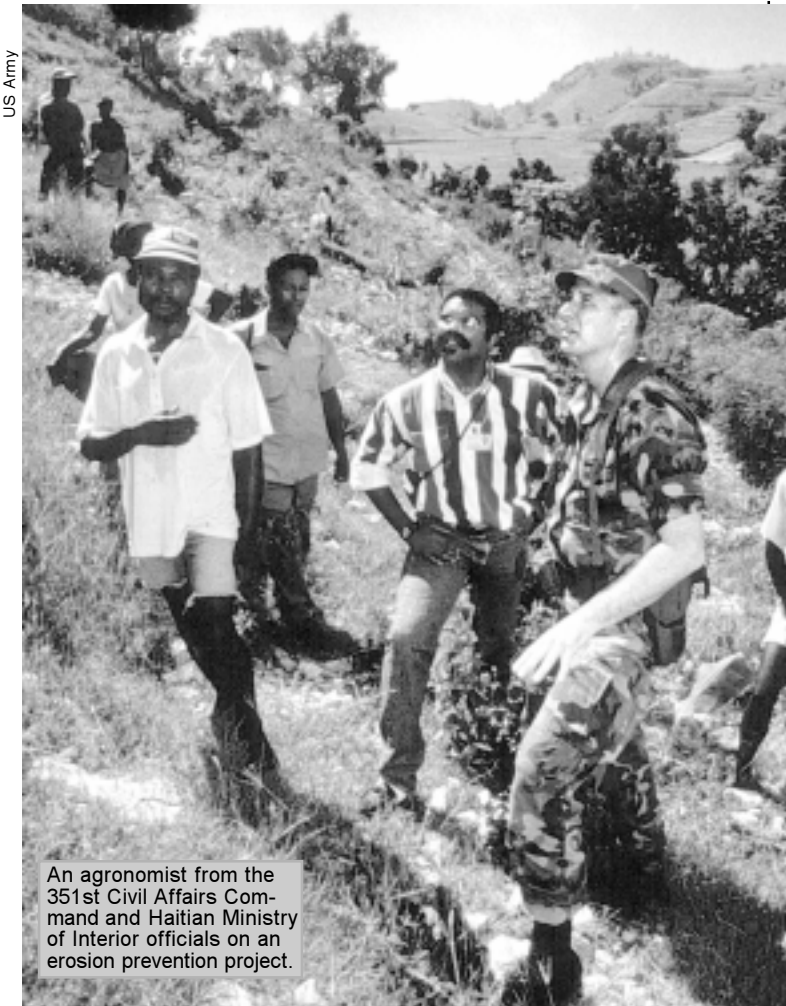
An agronomist from the 351st Civil Affairs Command and Haitian Ministry of Interior officials on an erosion prevention project.

Haiti needed everything. All ministries had a low or nonexistent level of service, decayed infrastructure and virtually no organization or financial management. The GOH had been disorganized, corrupt, inactive and incompetent. Jean-Bertrand Aristide's administration, which followed, bore the same characteristics. Even so, the advisers found a mix of capable, enthusiastic reformers at various levels.

both the ambassador's priorities and the military mission to establish a safe environment. MAT-J's low-key presence in the Haitian ministries and in the countryside promoted the rule of law, judicial vitality and government stability without appearing to be an occupation force. In doing so, it helped dismantle the predatory state and break up the cycle of retribution and violence that Haiti has experienced throughout its history.

Public works. The task of assessing the deficiencies of Haiti's national infrastructure was massive due to long-term neglect. Facility assessments focused on Port-au-Prince urban planning, roadway maintenance, water treatment, port operation and funding. During the Ministry of Public Works' initial assessment, it discovered that many other organizations had conducted studies and made recommen-

dations to improve Haiti's infrastructure; however, funding to implement the programs was lacking. Most of the budget paid for salaries instead of capital improvements. Although the UN Development Program identified specific projects, it was questionable

> *Any rehabilitation program must include appropriate design and construction of drainage and procedures for overweight trucks. While heavy trucks cause more road damage than autos, weight is only part of the problem. Without proper drainage, a small pothole widens quickly and threatens the road's structural integrity. . . . As the road network develops, regular inspections, clean culverts and quick repairs are essential to prevent small problems from becoming large ones.*

whether the associated budgets provided adequate funding. The MAT recommended priorities, but the GOH did not develop any specific plan to determine which areas should be focused on first.

The national major port facility in Port-au-Prince remains the single largest revenue producer in the country, with ships paying the highest import fees in the Western Hemisphere. It is corrupt throughout. Analysis of port operations focused on infrastructure improvements, work rules, and management, and in January 1997, MAT VI examined the customs function.

MAT V operated from June to September 1996, working with the Ministry of Public Works, Transportation and Communication, the Ministry of Environment and the presidential adviser for infrastructure. MAT V advised the GOH on selecting landfill sites, collecting waste and managing traffic, which included installing traffic lights, establishing traffic patterns and operating weigh stations. The team also helped to develop motor pool operations and equipment maintenance. Liaison was maintained with the US Embassy and USAID. The team's plan for accomplishing public works projects over the next five years included:

• Potable water systems.
• Landfill development and management/trash collection.
  • A garbage truck motor pool.
  • A functional fire-fighting system.
  • Permanent truck weigh stations.
  • Infrastructure.
  • Recycling operations.
  • Port-au-Prince beltway.

However, due to lack of resources, the GOH has shifted its emphasis from developing new landfill sites to extending the life of the existing one. Limited progress has been made in this area and in highway management. Planning for highway weigh stations has begun, but any rehabilitation program must include appropriate design and construction of drainage and procedures for overweight trucks. While heavy trucks cause more road damage than autos, weight is only part of the problem. Without proper drainage, a small pothole widens quickly and threatens the road's structural integrity. Beyond road rehabilitation, regular road maintenance also needs to be addressed. As the road network develops, regular inspections, clean culverts and quick repairs are essential to prevent small problems from becoming large ones.

Public health. The public health adviser found the Ministry of Health in chaos. The health care system had deteriorated, and Haitians' health situation was catastrophic. Eighty percent of the medical equipment was not operational; infant mortality rate was at least 15 percent by age five. NGOs and PVOs provided humanitarian assistance. Advice to the ministry focused on immediate biomedical equipment repair, a management vision and plans to provide essential services. A proposal for training GOH biomedical equipment technicians was completed and later implemented. The Pan American Health Organization funded five candidates who were later trained in the United States.

The MAT adviser assessed Haitian health facilities located outside Port-au-Prince. He helped identify and resupply critical medical supplies, inspected food processing plants and dairies, and stored and distributed veterinary and other critical vaccines. The most critical issue was the total lack of trained biomedical repair technicians and repair parts for medical equipment. Nearly all parts were donated, and equipment often arrived dismantled without manuals or trained personnel to assemble it. Testing and calibration equipment was nonexistent.

The municipal water supply in Haiti was near total failure. Underground distribution pipes were contaminated, and health facilities stored water in unsterilized concrete or fiberglass cisterns. Municipal sewage disposal was open-culvert and gravity-operated, a design that poses serious public health problems.

Commerce. The MAT commerce team advised GOH's Ministry of Commerce and Tourism from October 1994 through September 1996. In MAT I, the team worked at the highest levels of the GOH

Brigadier General Bruce B. Bingham, commanding general 358th Civil Affairs Brigade, and Master Sergeant Serge Louseau of the 358th's public works team meet with the mayor of Port-au-Prince to discuss traffic control in the city.

The task of assessing the deficiencies of Haiti's national infrastructure was massive due to long-term neglect. Facility assessments focused on Port-au-Prince urban planning, roadway maintenance, water treatment, port operation and funding. During the Ministry of Public Works' initial assessment, it discovered that many other organizations had conducted studies and made recommendations to improve Haiti's infrastructure; however, funding to implement the programs was lacking. Most of the budget paid for salaries instead of capital improvements.

to bring together private-sector tourism with the government sector. They assisted in reestablishing the National Office of Tourism and in transitioning it into a cabinet-level department, the Secretary of State for Tourism. Additionally, the team readied the GOH for two important international conferences, the Summit of the Americas and the Caribbean Latin America Action Economic Conference. Haiti's successful participation in these events marked its reemergence in the world economic arena.

In MAT II, the commerce team assisted the Secretary of State for Tourism in staffing and organizing that office, producing promotional materials and planning for Haiti to host the General Assembly of the Organization of American States. The team also assisted the US Embassy and the US Department of Commerce for Secretaries of Commerce trade mission to Haiti. In MAT V, the team again assisted the Ministry of Commerce and, with the assistance of Haiti's private-sector business organizations, produced a promotional videotape to boost Haitian exports and attract foreign investment.

International funding for developing projects and creating jobs has been frozen for more than two years because of the international community's demands for economic reform and for privatizing Haiti's nationalized industries. Consequently, growth in investment, employment and trade has been minimal. The Ministry of Commerce and the Secretary of State for Tourism remain hampered by a lack of vision, organization and resources. Increasing commerce and tourism is best achieved by private enterprise, not government programs.

Finance and Central Bank. MAT I prepared the Ministry of Finance and Central Bank for evaluation by the International Monetary Fund (IMF). The team found that the GOH needed to modernize its financial systems and increase tax collections, which had decreased during the previous few years. MAT advisers recommended that Central Bank improve

the currency in circulation and government check-cashing procedures, but later MATs found little improvement. By 1996, the international community was withholding assistance from Haiti until the government demonstrated its ability to increase tax rev-

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Animal health directly impacted public health and the economic well-being of Haitian farm families. Humans can contract anthrax, which is endemic in large areas of Haiti, directly from infected animals, contaminated animal products or environmental contamination from spores. . . . [CA veterinarians] formulated proposals for training lab technicians and establishing a diagnostic lab and began networking with NGOs and PVOs.

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enues.

The *Direction Generale des Impots (DGI)* operates as a decentralized service of the Ministry of Economy and Finance. It collects all taxes except customs duties but is unable to determine the amount of revenue it should collect. The focus has been on building an audit capability and strengthening the *DGI's* stature through internal audit procedures.

Interior. Currently there is no emergency management system in Haiti. Should a catastrophe occur—category III hurricane or greater—the probability of significant loss of life and damage to property is great. Such an event could destabilize the entire government, thus negating US efforts.

When Tropical Storm Gordon struck Haiti on 12-13 November 1994, there was considerable loss of life and property. In response, MAT advisers devised an intensive training effort in nine department capitals and six major population centers, an effort that most local officials supported. To date, 16 cities have participated in disaster preparedness training, seven cities have participated in two training sessions, and risk management surveys have been conducted for three. This awareness has resulted in the Organization of Pre-Disaster and Rescue's ability to alert departments of potential storm threats and, on one occasion, to deploy a small damage assessment team to an affected area. MAT worked to resolve the following issues:
- Coordination and control.
- Communications and alert notification of emergency personnel.
- Emergency public warning information systems.

- Evacuation and medical support.
- Search and rescue.
- Damage control.
- Law enforcement.
- Emergency management.
- Resource management.

MAT also worked to develop and promulgate the GOH National Emergency Plan and update the disaster preparedness planning database. This increased disaster awareness fostered dialogue among Haitian government entities, NGOs and PVOs; however, lack of funding and friction among local and national agencies has hurt participation.

Agriculture. The MAT advisers to the Ministry of Agriculture focused on reforestation and livestock. This mountainous country was largely deforested by overpopulation. Deforestation increased demand for firewood, the principal fuel source. Likewise, there is a limited agricultural base as the population has grown beyond environmental capacity. The upland forests are clear-cut, resulting in erosion of fertile soil.

The team facilitated a joint assessment of environmental needs among major contributors, project implementation groups and the Ministry of Agriculture. It recommended:
- Providing alternatives to clear-cutting.
- Preventing theft of remaining rain forest.
- Establishing sustainable agricultural practices.
- Preserving the watershed.

CA veterinarians found veterinary services almost nonexistent. The team formulated proposals for training lab technicians and establishing a diagnostic lab and began networking with NGOs and PVOs. The team proposed a cold-chain program to set up solar refrigerators in major cities to store vaccines. Animal health directly impacted public health and the economic well-being of Haitian farm families. Humans can contract anthrax, which is endemic in large areas of Haiti, directly from infected animals, contaminated animal products or environmental contamination from spores. A direct benefit of the cold-chain program was a lower incidence of communicable animal disease in the human population and increased economic gain for the animal owner.

When the MAT V agriculture team returned to Haiti in July through September 1996, it analyzed and updated animal vaccine programs for rabies, anthrax and brucellosis. Specifically, MAT V assisted the US Support Group—Haiti veterinarian with Operation Mad Dog II, a rabies vaccination program, and assisted in investigating pig mortality reports. It also identified engineering requirements

Infantrymen of the 3d Division advance cautiously through the devastated German city of Zweibrucken, 20 March 1945. US and British occupation forces had to manage nearly 6 million displaced persons from all over Europe in addition to over 11 million Germans expelled from Poland, Czechoslovakia and eastern Germany.

Why is this the military's job? President Franklin D. Roosevelt decided to implement military government missions during World War II. At first, Roosevelt wanted civilian agencies to control conquered or liberated areas. After all, this appeared to be State Department business. However, the War Department persuaded Roosevelt that . . . only the US Army had the logistics to operate in devastated areas. Only soldiers could address issues that had both military and civilian implications. The mission was much larger and more complex than merely controlling or sustaining foreign civilians.

needed to rebuild selected irrigation systems. Finally, the team suggested ways to obtain veterinarian and technician training.

Foreign affairs. The MAT adviser helped devise a plan to resettle more than 100,000 migrants. The MAT also reviewed all treaties in force with the Dominican Republic. A ministry reorganization plan was drafted to establish regional hubs, a desk officer system, new administrative procedures and a foreign service institute equivalent. The minister's priorities were to reintegrate Haiti into the international community, improve its image abroad, promote foreign investment and negotiate agreements to conserve foreign exchange.

Education. Numerous private schools operate without government oversight. The MAT found that Haitians place a high cultural value on education and will pay for their children's tuition before they will buy food for themselves. At the same time, two of

three children do not go to school because there is no money. The best estimate of average income is $300 per year; tuition is $50 per year—this was a significant bar to individual initiative. There was an 80-percent illiteracy rate, and it has worsened. This ministry was new with little experience in public administration, but the minister and staff had educational expertise and a strong working relationship with USAID. The education advisers prepared a template for a national education inventory and a donor-beneficiary link with development organizations. The team implemented the inventory by conducting trips with the minister and staff to remote cities.

A Never-Ending Debate

Why is this the military's job? President Franklin D. Roosevelt decided to implement military government missions during World War II. At first, Roosevelt wanted civilian agencies to control conquered

or liberated areas. After all, this appeared to be State Department business. However, the War Department persuaded Roosevelt that civil affairs was Army business. The Army began training soldiers and recently inducted civilian specialists to be civil administrators. Experience in North African validated the need for experts with critical civilian skills, and more experts became soldiers because only the US

Haitians say, "How soon you want the troops to leave depends on how soon you want them to come back. . . . There is no quick fix in Haiti." . . . To the extent that a crisis is dynamic and fluid, political guidance aimed at achieving a solution may change to keep pace. This runs counter to traditional military thinking that commanders should receive clearly defined missions and be left to carry them out without changes from political authorities. Military thinking in stability operations like Haiti must account for the end state —stability.

Army had the logistics to operate in devastated areas. Only soldiers could address issues that had both military and civilian implications. The mission was much larger and more complex than merely controlling or sustaining foreign civilians. The Army could deploy such persons; civilian agencies could not. Necessity often determines policy; necessity prevailed, and the Army deployed military units.

This debate has repeated itself for every major deployment since World War II, but next time necessity might not determine policy. The executive branch will someday again direct the US military to "restore the legitimate government of . . ." or "establish a safe and secure environment and promote conditions for economic growth." Like it or not, the Army will comply. It will engage its CA experts to establish a stable government to avoid war. Military professionals should recognize that the CA mission is to provide stability until civilian agencies can establish their programs. The mission is coordinated with the objectives of the US Ambassador and USAID. CA operators do not work alone but work alongside NGOs and PVOs to develop the mission handoff to the civilian agencies. Thus, the CA mission does not duplicate or subsidize DOS or USAID efforts during the transition period.

Mission Creep versus Changing Mission

No other country has superpower or honest broker status. No other US government agency except

DOD has such a vast logistics base and broad spectrum of CA capabilities. In short, no one else can do the job. Writing for the *Wall Street Journal*, Carol Ann Robbins states: "The US public sees peace operations as a legitimate mission of the US military. Americans are willing to commit their diplomatic, political, and economic resources to help others. We proudly and readily allow our young sons and daughters in uniform to participate in humanitarian enterprises far from home. In no other way could the Somalis, for example, have been saved so quickly from starvation in 1992."[13] The American public will not accept the military's claim that it is some other agency's job. The strategic politico-military end state of peace operations is stability, and if not achieved, the operation will ultimately fail even if military legitimacy is successful at the operational and tactical levels.

The end state in Haiti is stability. Clearly, Haiti is still not able to maintain stability. Haitians say, "How soon you want the troops to leave depends on how soon you want them to come back. You [the United States] are a country looking for a quick fix. There is no quick fix in Haiti."[14] If Haiti were to fall apart, the American public would see the military effort, together with the efforts of the civilian agencies, as a failure.

In *Joint Force Quarterly*, Robert B. Oakley states: "There is no sign of diminution of the troubled state phenomenon. . . . The severe problems [of troubled states] threaten world stability . . . and more tangible US interests, including those of strategic importance. . . . The armed forces can anticipate being immersed in multinational, humanitarian and peace operations, though they may consider them as improper uses of resources or an unwelcome diversion from what they regard as more appropriate traditional [combat] military roles."[15]

In the July-August 1997 *Military Review*, several authors criticize the military because it treated stability operations as mission creep.[16] Mission creep is portrayed as a negative phenomenon that can be eliminated through careful planning and analysis. There is some validity to this, but mission creep accrues more to logic of a dynamic situation in which the original mission's success depends on picking up additional missions. Poor staff work and capricious politicians are not always to blame— only reality and logic. To the extent that a crisis is dynamic and fluid, political guidance aimed at achieving a solution may change to keep pace. This runs counter to traditional military thinking that commanders should receive clearly defined missions and be

left to carry them out without changes from political authorities. Military thinking in stability operations like Haiti must account for the end state—stability.

General John J. Sheehan, US Marine Corps, stated: "We are entering an era in which a commander's understanding and ability to master the cultural, economic and political dimensions of a conflict or crisis is as important as mastering the traditional firepower solution. Ask any platoon or company leaders who served in . . . Bosnia or . . . in Haiti about what tools they used to succeed in those complex, multinational peace enforcement and peacekeeping situations. You will likely find that lethal weapons were only a small part of the total tool kit."[17]

The Army's CA branch is an ounce of preven-

> *The MAT found that Haitians place a high cultural value on education and will pay for their children's tuition before they will buy food for themselves. At the same time, two of three children do not go to school because there is no money. . . . There was an 80-percent illiteracy rate, and it has worsened.*

tion. MAT missions cost less than conventional force deployments seeking the same objective. They involve fewer personnel and are an important tool for the commander to use to avoid war and maintain stability. It is the force to send to overcome the problems of a conventional mind-set. ***MR***

NOTES

1. Bernard E. Trainor, "The Perfect War Led America's Military Astray," *The Wall Street Journal* (2 August 2000).
2. Colin Powell, *My American Journey* (New York: Random House, 1995), 602.
3. Rudolph C. Barnes Jr., *Military Legitimacy—Might and Right in the New Millennium* (Frank Cass & Co Ltd., 1996), 40 and 135 citing Andrew S. Natsios, "The International Humanitarian Response System," *Parameters* (Spring 1995), 68 and 79.
4. CA is divided into 20 functional specialties that are not equivalent to Active Component career specialties: civil defense, labor, economics and commerce, food and agriculture, property control, public communications, transportation, public works and utilities, public education, public finance, public health, public safety, public welfare, civilian supply, dislocated civilians, legal, civil information, arts and monuments, cultural affairs and public administration.
5. General Wayne H. Downing, then Commander, US Special Operations Command, "Joint Special Operations in Peace and War," *Joint Force Quarterly* (Summer 1995), 26.
6. Joint Publication 3-07, "Interagency Operations," *Joint Doctrine for Military Operations Other Than War* (Washington, DC: US Government Printing Office, 16 June 1995), IV-7.
7. United States Code, Title 10. For an examination of how commanders and units can deliver derivative benefits to local nationals while avoiding the misuse of operations funds, see Colonel Denise K. Vowell, *Military Review* (March-April 2000), 38.
8. Jennifer L. McCoy, "Haiti: Prospects for Political and Economic Reconstruction," World Peace Foundation Report No. 10 (November 1995), 1 and 19.
9. Robert B. Oakley, "Developing a Strategy for Troubled States," *Joint Force Quarterly* (Summer 1996), 83.
10. Barnes, 43.
11. This section was prepared substantially by James P. Smith, Esq. 426th CA Battalion who deployed on MATs I, II and III. See also Presidential Decision Directive (PDD) 56, "Managing Complex Contingency Operations," which is designed to streamline interagency planning. The PDD's intent is to establish management practices and to achieve unity of effort among agencies of the US government and international organizations engaged in peace operations.
12. *US News & World Report*, 12 January 1998, "The Pentagon's strong role in domestic disaster training is drawing fire from civilian agencies. . . . With help from the FBI and other agencies, military specialists are training emergency workers in 120 cities to cope with an attack from biological, chemical, or nuclear weapons. But the training . . . has sparked conflicts over lines of authority. 'The military just doesn't understand the police and fire fighter worlds. . . . They don't even understand the federal civilian community. . . . They just charge ahead no matter what anyone says.' . . . DOD officials counter that they have the government's top expertise in coping with weapons of mass destruction and that's why Congress gave them a leadership role. But some officials may be going too far. After one field exercise, over enthusiastic DOD officers were bluntly reminded that they do not command civilian officials. Coordination of disaster training has now sparked an investigation by the General Accounting Office."
13. Powell, 605.
14. Carol Ann Robbins, *Wall Street Journal* (30 October 1996).
15. Oakley, 81 and 82.
16. Lawrence A. Yates, "Military Stability and Support Operations: Analogies, Patterns and Recurring Themes," *Military Review* (July-August 1997), 51, 52, 55 and 60. See also several articles appearing in the same issue detailing these criticisms throughout the Haitian and Bosnian operations: LTC Douglas Scalard, "When Doctrine Isn't Enough"; Robert F. Baumann, "Operation *Uphold Democracy*: Power Under Control"; John T. Fishel, "Operation *Uphold Democracy*—Old Principles, New Realities"; and Congressman Ike Skelton, "The Constitutional Role of Congress: Lessons in Unpreparedness."
17. General John J. Sheehan, US Marine Corps, formerly Commander, US Atlantic Command, Remarks to Naval Institute Symposium (4 September 1996), 3 and 4.

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Coming of Age in the Desert:

The NTC at 20

Colonel Mark P. Hertling, US Army; and
Lieutenant Colonel James Boisselle, US Army

The authors provide an update on the venerable National Training Center and report how commanders and soldiers are trained to fight in the 21st century.

AFTER THE VIETNAM WAR, the Army was in dreadful condition. Depleted from years of fighting and incapable of fulfilling its role as either a deterrent or a potential winner against the existing Soviet threat, the Army needed dramatic changes. US Army Chief of Staff General Creighton W. Abrams began developing a bold plan for improving and preparing ground forces to counter conventional adversaries.

Abrams' vision touched on every aspect of the Army. The US Continental Army Command (CONARC) would be separated into two new and distinctly different commands: US Army Forces Command (FORSCOM) and US Army Training and Doctrine Command (TRADOC). FORSCOM would maintain current operational readiness, and TRADOC would envision the future battlefield and prepare the Army to fight the next war. To meet future demands, techniques and procedures for acquiring new equipment became focused and geared toward capabilities. Likewise, leader development needed further analysis and both academic and operational changes.

The vision continued to evolve as various senior-level leaders saw the need for change in training techniques. The idea was born of a Fort Hood, Texas, training initiative called Red Thrust, which showed what might happen if a soldier familiar with enemy doctrine assisted opposing force (OPFOR) soldiers in preparing for an aggressive role. What if the Army had a place where large units could fight an established, well-trained, professional enemy—an enemy better trained than any in the world? What if the fight was executed under stressful, demanding, relevant conditions while observed by doctrinal experts who could elicit

lessons from each fight? If unit leaders could learn from mistakes by using video replays, might they not find better ways to apply doctrine and execute missions? This practice would certainly transform training.

During the late 1970s, the chief of armor recommended to the TRADOC commander that Fort Irwin, California, be considered as a maneuver area suitable to the training vision. Based on this recommendation, the National Training Center (NTC) was established at Fort Irwin in 1981. Since then, the unforgiving Mojave Desert has hosted a generation of leaders and units that have experienced high training standards, a dedicated and relentless OPFOR, relevant tactical scenarios and after-action reviews conducted by highly qualified observer/controllers (O/Cs). Throughout 20 years of training Army units, the NTC has been the center of excellence with a distinct warfighting focus: highly realistic, stressful, combined arms training opportunities. The NTC has produced countless tactically competent and confident soldiers capable of applying lessons learned at the NTC.

The nature of warfare has changed dramatically over the past 20 years, and as national threats have evolved, so has the NTC. It is critical that the NTC continues to evolve while remaining relevant in today's dynamic operational environment.

The NTC was established at Fort Irwin in 1981. Since then, the unforgiving the unforgiving Mojave Desert has hosted a generation of leaders and units that have experienced high training standards, a dedicated and relentless OPFOR, relevant tactical scenarios and after-action reviews conducted by highly qualified O/Cs.

Training Today's Army

In 1981, the NTC could train only two battalion-size task forces. Today, the NTC has grown to include various combined arms teams and capabilities. All those teams are necessary, given the diversity of rotations and the types of units that train at the NTC. For example, from July 2000 through August 2001, the NTC will have trained:

• Six heavy/light rotations—brigade combat teams (BCTs) that have both mechanized and light infantry battalions, providing unique integration challenges to leaders and soldiers.

• Two fully digitized rotations for the 4th Infantry Division (ID) (Mechanized [M]), including the division capstone exercise (DCX).

• A two-brigade (infantry and aviation) rotation from the 101st Airborne Division (Air Assault).

• The 3d Armored Cavalry Regiment (ACR)—for the first time in its entirety, with one squadron playing simulation in a command post exercise (CPX) role over Death Valley.

• One division cavalry squadron and one light cavalry squadron, each under operational control (OPCON) of a parent BCT.

• Airborne operations, with a battalion from the 82d Airborne Division OPCON to a heavy BCT.

• Two National Guard rotations: 218th Separate Infantry Brigade, South Carolina Army National Guard, which includes Reserve Component (RC) soldiers from 27 different states and the 256th Infantry Brigade (M), Louisiana Army National Guard.

• US Air Force Joint Surveillance Target Attack Radar System (JSTARS), close air support, and combat search and rescue.

• Two Marine recon platoons, reporting to a BCT and a division assault headquarters.

• Two Army Special Forces teams.

• Two RC theater-opening force modules.

During all rotations, the goal of each campaign scenario is to focus

A soldier scans Somali workers for weapons before allowing them onto Sword Base, Mogadishu. US forces and "nonaggressive" clan leaders agreed to allow an equal number of members from each clan to work on Sword Base and other facilities.

Although focused at the upper end of the conflict spectrum, units training at the NTC find training conditions characteristic of today's operational environment. For example, RSOI is no longer an administrative exercise. From the first day of the RSOI process, deployed US forces encounter terrorism, guerrilla infiltration, media inquiries, host nation officials, NGOs, skeptical civilians, tactical ballistic missile threats and information operations.

training on the wartime mission-essential task list (METL) and potential combat operations. According to the Army Chief of Staff's "Combat Training Center Future Vision," the warfighting focus of units traveling to the NTC will remain at the major theater war (MTW) level.[1]

Although focused at the upper end of the conflict spectrum, units training at the NTC find training conditions characteristic of today's operational environment. For example, reception, staging, onward movement and integration (RSOI) is no longer an administrative exercise. From the first day of the RSOI process, deployed US forces encounter terrorism, guerrilla infiltration, media inquiries, host nation officials, nongovernment organizations (NGOs), skeptical civilians, tactical ballistic missile threats and information operations.

RSOI week culminates with stability and support operations (SASO) that include escorting convoys, clearing roads, operating checkpoints, locating mass graves, relocating civilians and delivering relief supplies. This extensive range of conditions and threats continues into the force-on-force phase of the rotation, enhancing units' force-protection knowledge and capabilities. These training conditions reflect the complex global environment.

The OPFOR

Among the most recent and significant changes at the NTC are OPFOR tactics and operations. Once a fairly predictable force modeled after the massed and relentless Soviet formations, today's OPFOR formations have various flexible entities that include infantry forces; small, independent reconnaissance elements; raiding detachments; flank threats from adjacent friendly unit sectors; deception elements; and unpredictable formations that attack based on conditions, not on predetermined timetables. While still highly competitive, the OPFOR is now a freethink-

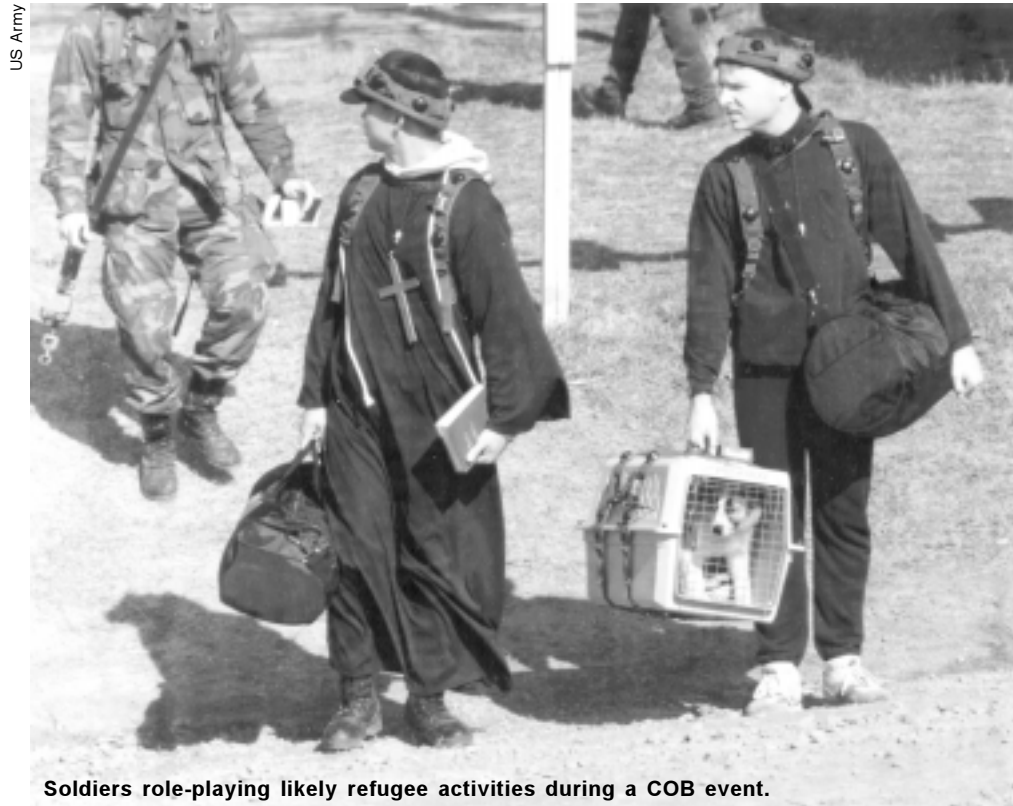ing enemy that exploits every weakness in the blue force's (BLUFOR's) plan.

Additionally, the OPFOR now conducts continuous operations that allow the rotational units to collect intelligence and maintain running estimates on subsequent operations. In the past, a BLUFOR fight against a defending enemy would be complete after one battle and would continue against a seemingly new enemy that appeared to the rear of the initial OPFOR position. Today, both initial and subsequent defending forces are present on the battlefield so the BLUFOR can conduct reconnaissance that contributes both to current and future operations. This element of continuous operations also challenges rotational units to develop subsequent plans rapidly to reduce OPFOR preparation time.

Soldiers role-playing likely refugee activities during a COB event.

The OPFOR's transition reached a new level during the DCX in March-April 2001. During that training rotation, the 4th ID (M) demonstrated its enhanced command, control, communications, computers, intelligence, surveillance and reconnaissance (C^{4}ISR) capabilities. The OPFOR conducted continuous operations throughout the exercise, mixing conventional, unconventional and asymmetrical capabilities to defeat the BLUFOR. The OPFOR supplemented its conventional forces with tactical unmanned aerial vehicles (UAVs), precision-guided munitions, guerrilla forces, information operations and increased reconnaissance to inflict casualties, destroy high-payoff targets and influence US public opinion. Such training keeps the OPFOR relevant and familiar with threats that US forces will face on future battlefields.

Battlefield Conditions and Asymmetry

While the DCX was a unique rotation, every unit faces battlefield conditions, and enemy asymmetrical capabilities can offset technological superiority and training. Each battlefield condition and asymmetric threat is interwoven into campaign scenarios to replicate the MTW environment that commanders and soldiers may face. For example, in today's complex environment, every commander must consider media influence on military operations and public opinion. Media teams from the fictitious International News Network (INN) operate within the brigade's battlespace throughout the rotation seeking stories.

During RSOI, unit leaders review INN reports that contribute to the unit's intelligence picture and understanding of the area of operations. Additionally, radio, television and print media teams interview commanders and soldiers and conduct on-site reporting.

Like the media, civilians on the battlefield (COB) are an ever-present condition during contingency operations. . . . COBs train each brigade headquarters and elements of each battalion how to care for and treat civilians. Currently, each rotation incorporates more than 40 COB events that include refugee movements, information peddling to both friendly and OPFOR units, injured civilians seeking medical attention, visits by the UN and elected officials, and altercations among civilians.

Because of advanced air and ground weapon platforms and improved situational awareness enabled by ABCS systems, current NTC battlespace is too small to portray adequately the area of operation required by improved heavy forces. [However, newly added acreage] allows scenarios to include more continuous operations to stress intelligence-collection assets and intelligence battlefield preparation.

During combat operations, the INN team pays close attention to battlefield activities and reports stories involving civilians, NGO representatives and fratricide. Unit leaders quickly realize the benefit of command media messages and proper procedures for escorting and briefing journalists because the stories are seen by rotational units, enemy forces, terrorists and local civilians.

Recently, the media's battlefield role has expanded at the NTC. The NTC invited several major universities to send journalism students to act as embedded media with rotational units. While still in its early phases, this program could provide excellent training, telling the Army story to a larger audience and preparing leaders for future battlefields.

Like the media, civilians on the battlefield (COB) are an ever-present condition during contingency operations—and during NTC training rotations. COBs train each brigade headquarters and elements of each battalion how to care for and treat civilians. Currently, each rotation incorporates more than 40 COB events that include refugee movements, information peddling to both friendly and OPFOR units, injured civilians seeking medical attention, visits by the UN High Commissioner for Refugees and elected officials, and altercations among civilians.

Civilian activities have penalty or reward mechanisms triggered by the training unit's behavior. If unit representatives treat COBs with dignity and respect, the unit will receive useful information concerning guerrilla activities, blacklisted individuals or upcoming military operations. If not treated well, COBs will plant misinformation or withhold important information. In recent rotations, COBs who did not find relief from perceived mistreatment disrupted unit rehearsals and combat operations; those treated well sold or gave useful information to unit leaders.

The OPFOR also carries out guerrilla operations. The People's Pahrumphian Guerrillas (PPG) operate a 40-person cell in a brigade's battlespace throughout the rotation, attempting to destroy high-payoff targets such as attack helicopters, radars, and command and control nodes, while preserving their ability to fight. If the training unit adequately protects these critical assets, the PPG attacks less-well-protected targets such as logistics convoys. The PPG also attempts to persuade mistreated COBs to join the terrorist cell.

Military Operations on Urbanized Terrain

Closely related to the civilian operational environment is the military operations on urbanized terrain (MOUT) environment. Each training rotation includes four MOUT events. Three NTC MOUT facilities allow units to plan, prepare and execute company-size operations. Two sites support force-on-force training that includes security procedures, room clearing, reacting to snipers, reacting to belligerent civilians and negotiating with local leaders. Training at these sites normally occurs as part of a BCT's SASO during RSOI week. Each rotation also includes a fixed-site decontamination event for chemical companies. The third MOUT site of six wooden buildings supports force-on-force and live-fire training for light infantry companies and military police platoons. The live-fire exercise at Lima Ville is normally a raid to destroy a guerrilla element.

The NTC plans to expand MOUT training within a few years. While the installation master plan addresses significant infrastructure additions

Reporters from The Associated Press, *Time*, CNN, the *Baltimore Sun*, National Public Radio and other media outlets being briefed by an OPFOR member at the NTC.

to MOUT facilities before Fiscal Year (FY) 2004, scenario design has recently employed the combat support engineer units from rotational brigades and RC vertical and horizontal engineers to improve existing MOUT sites. These activities expand host nation coordination requirements and security concerns during RSOI week, further stressing BCT planning and execution.

Expanding the Training Environment

A significant milestone in the NTC's evolution occurred in August 2000 with a simulation "wraparound" during the 1st Brigade, 4th ID (M) rotation. With help from the National Simulation Center (NSC), Fort Leavenworth, Kansas, the NTC replicated friendly and enemy forces operating in the division's area of interest, which extended beyond the NTC's maneuver space. Before this, the NTC's notional division headquarters had generated flank awareness for the player brigade through operations and intelligence reports. The August 2000 rotation marked a distinct expansion of the training environment as the 4th ID's tactical command post (DTAC) assumed the role of higher headquarters, feeding reports to 1st Brigade through a suite of Army Battle Command System (ABCS) digital communications links.

The rotation also marked the first use of simulated tactical UAVs and JSTARS. NTC and NSC technicians connected the Fort Irwin instrumentation tracking system to the NSC's Digital Battle Staff Trainer (DBST), which displayed the training unit's UAV and JSTARS pictures of actual friendly and enemy vehicles in the maneuver area and simulated vehicles in the contiguous battlespace. The division could see and interdict enemy forces as part of a true deep fight, and 1st Brigade gained accurate situational awareness before committing to the close battle.

The success of the simulation wraparound paved the way for using simulations during future rotations that would require a larger battlespace for the digitized division and an ACR. In April 2001, the simulation

During combat operations, the INN team pays close attention to battlefield activities and reports stories involving civilians, NGO representatives and fratricide. Unit leaders quickly realize the benefit of command media messages and proper procedures for escorting and briefing journalists because the stories are seen by rotational units, enemy forces, terrorists and local civilians.

allowed the entire 3d ACR to deploy and train at the NTC with two ground squadrons, the air squadron in the live area and one ground squadron in simulation. The simulated squadron's commander and his staff deployed and fought from their command post, issuing orders and instructions to their subordinate units via Janus simulation. The regimental commander and staff gained a greater appreciation for the regiment's aviation and logistic requirements.

Enlarging the training area is not limited to the virtual world. A 15-year effort to make the NTC's maneuver area more environmentally friendly has added acreage to the eastern and southwestern portions of the reservation. Because of advanced air and ground weapon platforms and improved situational awareness enabled by ABCS systems, current NTC battlespace is too small to portray adequately the area of operation required by improved heavy forces. The additional maneuver space allows scenarios to include more continuous operations to stress intelligence-collection assets and intelligence battlefield preparation.

Joint Training

The diversity of NTC training operations offers unique opportunities to conduct joint training. Joint training during FY 01 has included US Air Force (USAF) tactical fighter wings; JSTARS; USAF battlefield surveillance programs, such as Compass Call; the Airborne Battlefield Command and Control Center (ABCCC); USAF combat search and rescue; and US Marine Corps (USMC) force reconnaissance elements.

One significant area of service integration is close air support. The NTC's Detachment 2, USAF Air Ground Operations School (Team Raven), observes approximately 2,000 fighter sorties annually and coordinates training for tactical air control parties associated with Army units training at the NTC.[2] Since 1981, rotational units have operated with their go-to-war USAF air liaison officers and tactical air controllers. Today, each force-on-force and live-fire battle at the NTC incorporates close air support, which challenges the coordination efforts of leaders and staffs.

The JSTARS platform is another significant USAF contribution at NTC. Scheduled to support six of the 10 training rotations in FY 01, JSTARS allows training units to incorporate information from the common ground station (CGS) located in brigade tactical operations centers into battlefield estimates and decisions. Through simulation, JSTARS will also support two additional training rotations, giving more brigade commanders and their staffs valuable training with the system.

Recently, the training partnership between the NTC and the China Lake Naval Air Warfare Center has solidified. Adjacent to the NTC's western boundary, this expansive fighter aircraft range allows Army aviation units to conduct deep attacks against OPFOR targets 70 to 90 kilometers beyond the forward line of troops. Two rotations in FY 01 included these deep attacks in their scenarios, resulting in critical lessons for Army aviation.

The USMC reconnaissance elements will participate in NTC rotations within the year, sharpening warfighting skills and gaining experience working with Army units. Platoons from the 1st Force Reconnaissance Company; I Marine Expeditionary Force; and 3d Force Reconnaissance Company, 4th Marine Division will train in June and August

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2001. During combat operations, they will report to their company headquarters that is located with the division headquarters and staffed by NTC personnel.

Operations Group: Paralleling the Changes

Like the training center itself, the NTC Operations Group is evolving with the Army's training doctrine and the global environment. With more than 680 military and civilian members, the operations group has modified its organization, training and procedures to facilitate each training unit's operational missions. O/C teams have added trainers for COB, operational law and the media. Additions to the technical support functions include a simulation control cell that ensures seamless interaction between virtual and live battlefields. Contractors work hand in hand with military counterparts as civilian role players and technical experts.

Perhaps the most valuable tool for training units is the feedback and observations O/Cs provide during after-action reviews. O/Cs provide comments supported by cause-and-effect links that allow leaders and units to understand what happened and discuss ways to improve. O/Cs also provide feedback on critical combat skills, SASO missions, COB and the media. In preparation for the 4th ID's DCX, O/Cs received detailed training in unit-specific ABCS and Force XXI Battle Command Brigade and Below systems. These digital systems enabled O/Cs to provide meaningful insight and feedback to training units equipped with the latest digital technologies.

Toward the Future

The first 20 years of training at the NTC reflects the evolution of Army training, doctrine, units and leaders, and it is already planning for the next 20. The NTC's founding fathers envisioned a center of excellence to produce flexible and decisive leaders through rigorous training, a relevant battlefield, simulated combat stresses and a tough OPFOR. They had it right, and so do we. The NTC is dedicated to preserving Abrams' vision by staying relevant to our Army and the nation's threats. *MR*

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NOTES

1. General Eric K. Shinseki, *Army Chief of Staff Combat Training Center Future Vision* (Washington, DC: Office of the Chief of Staff, US Army, March 2000), 4.
2. Web Page, Detachment 2, USAF Air Ground Operations School, 26 December 2000, <www. irwin.army.ravens>.

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OUTSOURCING THE SINEWS OF WAR: CONTRACTOR LOGISTICS

Lieutenant Commander Stephen P. Ferris,
US Naval Reserve; and David M. Keithly

To meet the Army's logistical needs, Ferris and Keithly urge Army logisticians to identify and maintain proficiency in a few essential logistical functions—core competencies—and outsource the rest to commercial contractors, a practice they cite as a commercial best practice.

THE RECENTLY LAUNCHED revolution in military affairs (RMA) has fostered increased interest in developing an integrated logistics system.[1] Both military commanders and civilian policy makers are attempting to increase logistics efficiency by reducing unnecessary spending on the military tail, but regrettably, existing studies of what might constitute an integrated, 21st-century logistics system are often inadequate.

An integrated logistics system must be as dynamic as the warfighting community it supports. In this sense, the RMA is predicated on a revolution in military logistics (RML), which integrates force sustainment, force projection, technology application and acquisition dexterity.[2] The Army is already developing a streamlined logistics system that links the logistics community's various components into networks. Increasingly, this system must be joint to meet the demands of dynamic, information-age warfare that requires new levels of interconnectivity and interoperability.[3] The Global Combat Support System that will soon be on line represents a major step toward achieving the RML.[4]

The RML system will be distribution-based, using what are generally referred to in the private sector as commercial best practices to enable leading-edge organizations to perform to world-class standards.[5] Electronic commerce, direct vendor delivery, load optimization, integrated supply-chain management and automated identification technology are the chief components of commercial best practices the RML seeks. Ultimately, the RML will generate a virtually seamless distribution system and an integrated information network with real-time asset and activity tracking.

The RML requires the military logistics system to focus its attention on managing information and distribution rather than inventory.[6] This focus will, in turn, require sophisticated technology to provide the necessary asset visibility, point-of-service tracking, automated materials handling and intermodal information networking necessary for a 21st-century logistics system.[7] Mass is counterbalanced by veloc-

ity as asset flows obviate the need for large stocks of inventory. Assets are moved so efficiently that allocation pipelines effectively become RML warehouses; large stockpiles formerly held in anticipation of service requirements become unnecessary. The services will no longer sustain the force structures to requisition, supply, and transport parts and equipment in the battlespace. Increasingly, third-party logisticians will assume many of these tasks.[8]

The RML further assumes that materiel managers will have accurate data from digitized weapon systems, real-time situational awareness and uninterrupted contact with the operators they support. RML repair managers will use the seamless information network to synchronize skills, labor, parts and special equipment, ensuring that assets are at the right place at the right time.[9] Such aspects of the RML will require a work force trained to use and maintain this technology.[10] Purchasing this equipment and training the work force compete against weapon systems for limited Department of Defense (DOD) budget dollars. Training dollars must be allocated to ensure that service personnel are educated to operate this technology, further squeezing warfighters' training budgets. Support services must expand to handle increasingly sophisticated equipment.

Competition between logistics and the warfighting components for resources ultimately impacts DOD's core competencies, a business concept C.K. Prahalad and Gary Hamel cogently analyzed in 1991.[11] They define core competency as an essential combination of skills and technology. They underscore that organizational success is determined by excellence in a small number of core competencies. Because these competencies are so crucial, the organization must maintain a preeminent operational capability in them. Noncore competencies are outsourced. Outsourcing noncore competencies is an established commercial best practice that can lower costs and facilitate the acquisition of cutting-edge technology. Prahalad and Hamel further argue that the race for the future is partly a race to build and use core competencies.[12] Because these competencies are so important to an organization's well-being, it must prevent them from withering.

An organization's core competencies should have unique capabilities, and the organization should perform them to world-class standards. Organizations should conduct periodic reviews to assess whether they are investing enough resources—time, money, training—to maintain proficiency in core competencies and plan ways to improve the skills on which

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they rely. When judiciously exercised, outsourcing heightens performance, produces a streamlined work force and provides the best personnel. As a rule, specialization contributes to economies of scale and helps simplify organizational structures. Proper logistic outsourcing will permit the armed services to focus on their respective core competencies. In short, outsourcing frees personnel to focus on what they do best.

Recent thought has raised questions concerning what functions of the military logistics infrastructure should be included in this set of core DOD competencies.[13] If DOD is to retain the Armed Forces' warfighting capability as a core competency, the private production of defense services should expand. As the 21st-century battlespace changes, so too must the logistics network.

That All May Labor as One

The influence of the RML, along with current pressures on the military to do more with less, has caused the defense community to notice private enterprise's commercial best practices that can sharpen an organization's competitive edge. The commitment to commercial best practices, a commitment expressed in service logistics mission statements, is a critical element of the RML sweeping through the armed services. Among the most widely implemented best practices are outsourcing specialized logistics functions and fully integrating contractors with military activities. The Army, for instance, uses contractors for base operations (BASOPS) support activities and has used contracts extensively with Brown and Root to furnish logistics support for its operations in Bosnia through the Logistics Civil Augmentation Program (LOGCAP).[14] The Army also has a prime vendor support arrangement for the Apache helicopter with Boeing and Lockheed Martin. The Navy is institutionalizing logistics contracts

> **P**robably the chief issue from an operational standpoint is the need for unqualified vendor reliability. Contractors must keep their employees in theater and on the job when hostilities begin. Indeed, they must be able to provide even more personnel as demands for support mount. Further, a parent company's subcontractors must be as dependable and steadfast as the primary contractor if operations are to continue unabated. If personnel shun dangerous work or insist on repatriation, the support system will break down.

through Paladin Fleet Management.

More indicators of the Army's growing commitment to outsourcing can be found in its publications. Draft Field Manual (FM) 110-10-2, *Contracting Support on the Battlefield*, contains doctrine describing how the armed services should use and manage civilian contractors in the battlespace.[15] US Army Training and Doctrine Command Pamphlet (TRADOC Pam) 525-53, *Combat Service Support*, specifies that "Civilians . . . will provide an ever-increasing number of capabilities in support of future Army operations. Use of these support personnel will require their integration into the battle command environment and into the CSS framework, as well as mission training for the civilians involved."[16]

Recent emphasis on cost efficiency in DOD has not produced either a reduction in the military's operational tempo or the infusion of new personnel from a Reserve mobilization. The shortage of support personnel to meet operational demands will linger into the foreseeable future. DOD will increasingly be required to assume tasks with insufficient resources, and the logistics community must minimize the costs of their services. Logisticians find themselves under increasing pressure to deliver combat service support at the lowest possible cost while satisfying all acceptable specifications and criteria. Mounting demands and the need to trim budgets have induced DOD to consider alternative mechanisms for delivering logistic support.

The RML requires a comprehensive examination of commercial best practices to handle 21st-century warfare. Integrated supply-chain management, electronic commerce, automated identification technology, direct vendor delivery, load optimization and smart simple design are facets of commercial best

practices the armed services must examine in implementing the RML.[17] Information technology now available from global enterprises provides the means to facilitate supply-chain management, integration and optimization. Using software to manage the supply chain should coordinate several diverse processes, including supply and demand planning, transportation and distribution management, and scheduling. Management-costing techniques can reduce inventory and total product time, increase on-time deliveries and revenues, and improve customer service.[18] Commercial best practices that specifically apply to the RML can help military logisticians:

● Better manage stocks, resulting in significant reductions in procurement.

● Improve contracting methods to secure lower prices through bulk purchasing or increase their use of competitive tendering.

● Reduce operating costs through more efficient use of capacity.

Ultimately, the decision on which private-sector best practices will be adopted or contracted will depend on military needs.

War Lays a Burden

Military contractors—private citizens and commercial firms providing the sinews of war—operated in North America long before the United States was established.[19] Since contractors furnished food, clothing, shelter and labor to the British forces in America in the early 18th century, the colonists had experience with contractors and were aware of the advantages and disadvantages of their use.[20] Several years after the outbreak of the American War of Independence, the Continental Congress concluded that contracting with commercial firms was necessary to provision and outfit the military forces, and accordingly, major contracts were concluded by 1781.[21] Two years later, General George Washington observed that his army's supply had improved with the contracting system. Yet, experiences with private contracting even early in US history reflected many of the difficulties that would continue during periods of force expansion or mobilization: inconsistent contractor performance; the contracting parties' insufficient clarity regarding requirements and costs; lack of experience on the part of military officers in dealing with contractors; and finally, the inclination of some contractors to cut corners or overcharge the government.[22]

At the time that war broke out in 1812, national arsenals were supplying the Army with arms and ammunition, but private firms provided subsistence,

A civilian contractor delivers fuel to the US Army's Coyote Station near Tuzla, Bosnia.
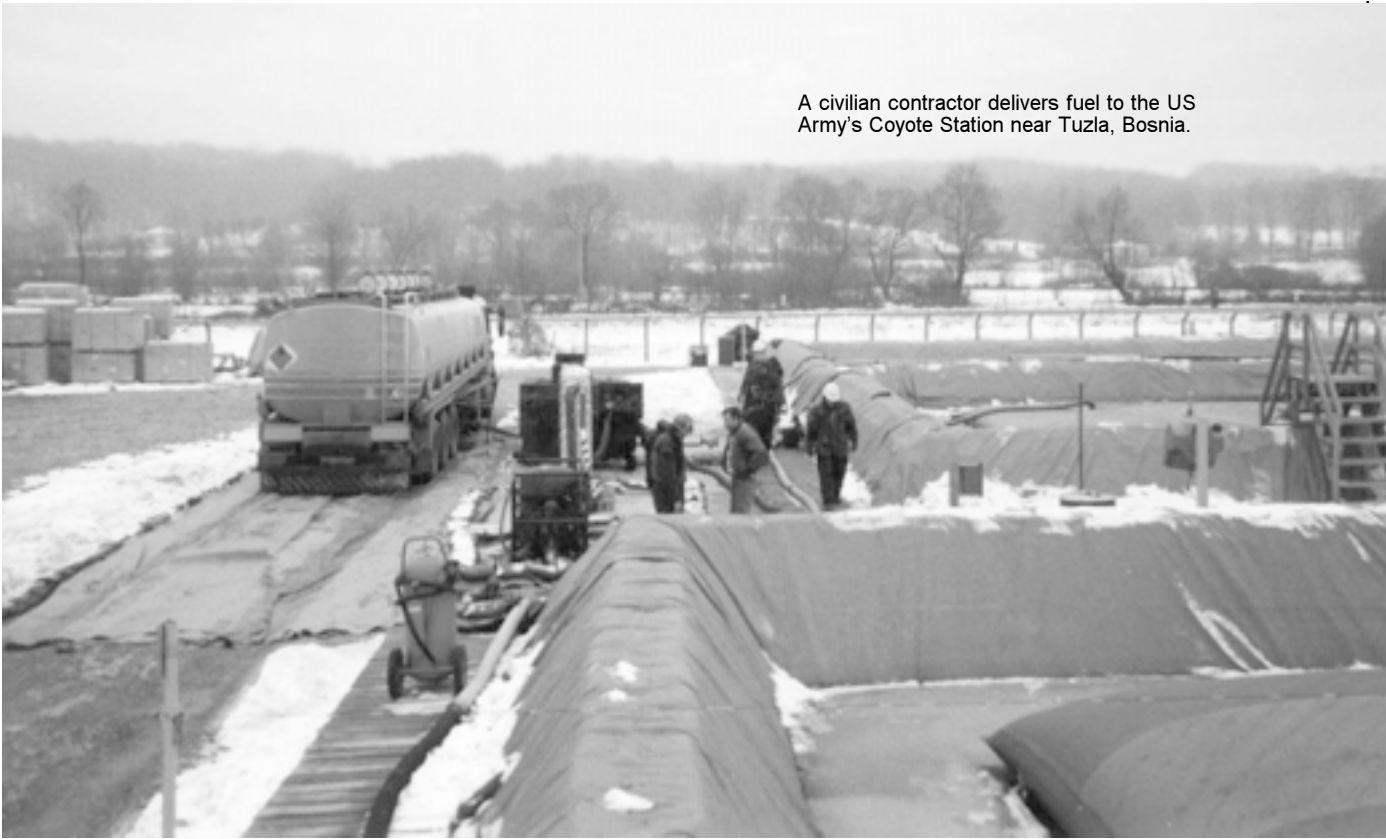
Among the most widely implemented [civilian] best practices are outsourcing specialized logistics functions and fully integrating contractors with military activities. The Army, for instance, uses contractors for base operations support activities and has used contracts extensively with Brown and Root to furnish logistics support for its operations in Bosnia through the Logistics Civil Augmentation Program. The Army also has a prime vendor support arrangement for the Apache helicopter with Boeing and Lockheed Martin.

clothing and transport. Unsatisfactory contractor performance prompted the creation of the Quartermaster, Subsistence, Medical and Ordnance Bureaus of the Army Staff in the 1820s. The Navy had similar institutions in place before this.

The Civil War further increased the use of contract logistics by both the Union and Confederate armies, whose growth in the 1860s necessitated increased use of battlefield contractors in a number of areas, especially construction, labor and transportation. Yet, contract expansion was not commensurate with the increased size of both the Union and Confederate armies and the number of freed slaves available for military work details. From the end of the Civil War until the turn of the century, the Army continued to supplement its own resources with private contractors to provide subsistence and transport.

The Army relied on railroads, commercial wagon trains and its own wagons driven by civilian teamsters to supply Western installations.[23] In 1912, the Quartermaster, Commissary and Pay Departments were consolidated, and the Quartermaster Corps was created as an organization of enlisted personnel detailed to work at logistics tasks.[24] Despite a high level of civilian mobilization during World War II,

contractors appeared with increasing frequency in the battlespace because of the growing sophistication of weapons and equipment. Manufacturers' technical representatives became a welcome supplement to military logistics and maintenance units, and civilian contractors were instrumental in establishing ordnance repair facilities in many parts of the world.[25]

The Korean War brought much lower levels of manpower and industrial mobilization, in turn, boosting reliance on battlespace contractors.[26] Japanese civilians, in particular, managed logistics operations in Japan to support US forces in Korea. The Japanese automobile industry, along with a number of other manufacturing sectors, received a large boost from the Korean conflict and ultimately gained world-class status. Because of low mobilization levels during the Vietnam War, military contractors again became indispensable. Given the lack of skilled labor in Vietnam, contracting organizations often hired US and third-country nationals, and by 1969, an estimated 52,000 non-Vietnamese contract personnel worked in Vietnam.[27] Private contractors provided construction, base maintenance, fuel supply, water and ground transport services, and

> **A**t a minimum, contractors in war zones must be afforded medical and life insurance and physical protection against all enemy threats. . . . To reinforce confidence, DOD should expand incentive programs that will encourage contractors to volunteer . . . [Including] special medical and insurance coverage, and universally available hazardous assignment bonuses.

support for high-technology systems in operational zones. The largest contract was for operating and maintaining major installations, and the leading construction contractor was Richardson-Morrison-Knudsen-Brown-Root-Jacobsen (RMK-BRJ). This firm was the predecessor of Brown and Root Services, today's principal Army battlefield contractor.[28] The 1990-1991 Gulf War also used civilian contractors extensively, either engaged directly by the Army or through Saudi Arabian host nation support. Private contractors in the Gulf focused primarily on high-technology equipment support and providing water and fresh food.

Controversies and Dilemmas

Despite America's lengthy history with civilian contractors operating in the battlespace, including the Army's extensive experience with LOGCAP, the practice remains controversial.[29] A number of issues complicate efforts to institutionalize contractors in the battlespace and in routine military operations.

Probably the chief issue from an operational standpoint is the need for unqualified vendor reliability. Contractors must keep their employees in theater and on the job when hostilities begin.[30] Indeed, they must be able to provide even more personnel as demands for support mount. Further, a parent company's subcontractors must be as dependable and steadfast as the primary contractor if operations are to continue unabated. If personnel shun dangerous work or insist on repatriation, the support system will break down. Because private companies are motivated by profit and are responsible primarily to their shareholders, financial losses might cause a company to terminate its involvement in a war zone.[31] Contractors wishing to be relieved of their responsibilities can resign; soldiers cannot. Hence, primary contractors are only as trustworthy as their subcontractors.

During the Gulf War, one primary contractor, fearing missile attacks, withdrew all its personnel, alleging that concern for its employees outweighed the profit motive. Although this instance represents the exception and, in fact, was the only one documented during the Gulf War, DOD must recognize the potential for contractor "skedaddle." At a minimum, contractors in war zones must be afforded medical and life insurance and physical protection against all enemy threats. Reports abound about contactors not receiving gas masks, chemical gear and other protective equipment during the Gulf War and their insurance coverage becoming invalid following medical evacuation from the war zone. To reinforce confidence, DOD should expand incentive programs that will encourage contractors to volunteer. Included among such incentives could be special medical and insurance coverage, and universally available hazardous assignment bonuses.

Reliability issues are ultimately ones involving unity of purpose.[32] Functional combat support presupposes an alignment of wartime intent and objective between DOD and its civilian contractors. The requisite overlap of purpose will occur only when civilian contractors are more systematically integrated into the military's peacetime operations. Such integration will bolster the mutual trust that is needed between the military and its contractors to withstand political or military crises. The armed services should establish long-term relationships with contractors that emphasize confidence and steadfastness. The long-term payoff will be more predictable performance during conflict, although the systems and means for assessing contractor wartime readiness are rudimentary at best. More careful monitoring of contractor preparedness in peacetime will further contribute to durable civilian-military relationships. Additional legal provisions specifying that contractors be held accountable to the armed services will enhance the military's confidence.

The second obstacle to institutionalizing contractors in the battlespace is the reluctance of commanders and DOD policy makers to contract logistics services to a civilian firm that is a sole-source provider. Lack of competition among service providers might adversely affect the level of service after the contract is signed and does little to encourage pricing efficiency by the vendor. If, however, a number of high-quality suppliers are available, DOD should be more comfortable with the quality of the service and the contract's price.[33] Competition for logistics services should prompt policy makers to select several civilian contractors.

Teamsters driving US Army fuel trucks near Colonia Dublan during the 1916 Mexican Punitive Expedition.

From the end of the Civil War until the turn of the century, the Army continued to supplement its own resources with private contractors to provide subsistence and transport. The Army relied on railroads, commercial wagon trains and its own wagons driven by civilian teamsters to supply Western installations. In 1912, the Quartermaster, Commissary and Pay Departments were consolidated, and the Quartermaster Corps was created as an organization of enlisted personnel detailed to work at logistics tasks.

A third difficulty is contractor vulnerability.[34] Contractor communications are seldom as sophisticated or secure as the military's and, thus, are more likely targets for attack and sabotage. If the enemy successfully neutralizes contractors and alternative suppliers are unavailable to theater commanders, mission accomplishment is degraded. The same often holds true for information-processing systems. Contractor support structures will require additional protection in some cases, and the Armed Forces will need contingency options to maintain supplies—military commanders might need alternative providers on short notice.

One of the initial steps in the logistics response to a crisis is surge support, which involves the ability of the existing logistics base to satisfy accelerated support requirements. Assessing potential capability before combat is complex, however. Even under peacetime contracts, determining civilian contractors' genuine surge capability is a challenge. Moreover, because civilian contractors emphasize cost efficiency, firms often view reserve surge capability as inefficient excess.

How does one address this dilemma? Logistics support should be viewed as operating on two levels.[35] The first is the peacetime level of support that various contracts provide. The second level is surge support that exceeds peacetime levels and can be arranged through specialized contracting. Subsequent contract negotiation can require supplier maintenance of specific assets that satisfy the increased logistics requirements. To ensure this surge capacity, DOD should include these assets in various peacetime exercises and assessments. Contractors should become accustomed to operating alongside military forces during a crisis by participating in simulation exercises.[36] Developing mutual trust in realistic peacetime simulations permits the military and its contractors to anticipate each other's reactions under adverse circumstances. Involvement will invariably increase the cost of the program since suppliers will demand compensation for removing

> **C**ontractors should become accustomed to operating alongside military forces during a crisis by participating in simulation exercises. Developing mutual trust in realistic peacetime simulations permits the military and its contractors to anticipate each other's reactions under adverse circumstances.

productive assets from service, but this compensation is likely to be less than the cost of retaining excess capacity within DOD.

Third-party logistics will continue to present legal and doctrinal problems. The tempo of change in warfare is outpacing service doctrine and eclipsing the international legal system. There are many critical questions that service doctrine fails to address such as legal issues associated with the status of contractors in the battlespace. In truth, some questions will simply go unanswered, and a lingering ambiguity will surround contractors' status in a war zone. Moreover, contractor personnel, in many cases, are subject to federal and host nation laws, the laws of war and status-of-forces agreements.[37] Service and joint doctrine regarding contractor status must continue to evolve. It must also incorporate contracting into doctrine as a component of force application and provide impetus for policy development in certain spheres. Growing incidences of contracted logistics support in the future makes it impossible to ignore these essential issues.

International law has not evolved in the area of contractor status and consequently has little to offer. International law does not recognize contractors as combatants and affords them little protection under the Geneva Accords, the Hague Convention or other international agreements, although during times of war, military employees fall under Common Article 3 of the Geneva Convention. Yet, contractor personnel in the battlespace are subject to enemy attack and capture, and are bound by obligations to United Nations human-rights conventions as agents of the government employing them. If armed for self-protection and wearing uniforms, contractor personnel could be mistaken for military personnel or regarded as espionage agents or terrorist mercenaries.

Slipping through the legal system occurs as well. Under current US law, civilian contractors do not fall under the Uniform Code of Military Justice (UCMJ) unless Congress declares a state of war.

Other penalties or censures must address improprieties, nonperformance or personal misconduct. Military contracts frequently specify that contractor personnel are to abide by military commanders' instructions and guidelines; however, control is largely indirect, and accountability is administrative.[38] The primary contractor usually has direct supervisory authority; military commanders cannot expect the same level of obedience from civilians as they would from troops. The UCMJ is the military's most fundamental enforcement instrument and, to some extent, must apply to contractors during operations. The question is, to what extent?

There is mounting concern about force protection. What legal obligation does DOD have to third parties? Should civilian contractors receive the same kind of physical protection in the battlespace as military logistics forces? A common contract clause stipulates that military commanders must provide physical security for contractor personnel, and contractors are reluctant to be responsible for their own security. Contracts seldom specify, however, that civilian personnel receive the same protection as military personnel, a significant legal loophole, especially in the complex management environment in which military commanders operate.

Contractor protection will, in some cases, attenuate the commander's ability to commit forces to support the unit's principal military mission, and commanders are loath to risk casualties for civilian support services, much less degrade mission accomplishment through troop diversion. Moreover, rear-area troops can be used to protect equipment, guard and hold territory, and stiffen combat units as casualties mount.[39] Contractors cannot fulfill such tasks, a harsh reality that planners must consider. Commanders should conduct risk assessments to ascertain the extent to which civilian contractor support is feasible and to gauge the additional measures necessary for force protection. These additional costs can be included in calculating whether civilians or soldiers should provide logistics support.

Managing Contracted Logistics

Managing civilian logistics support comprises two issues. The first is identifying those activities that are appropriate for privatization or civilian outsourcing. The second focuses on the administrative decisions and policies required to implement logistics outsourcing. The latter involves more complicated tasks, ranging from contract design to performance monitoring and process redesign. Both issues involve critical decisions that impact the military-civilian logistics interface.

Brigadier General Mahlon Gates of the 1st Logistical Support Command cuts the ribbon on the fourth Cam Ranh Bay pier built by the DeLong Corporation in Vietnam.

Because of low mobilization levels during the Vietnam War, military contractors again became indispensable. Given the lack of skilled labor in Vietnam, contracting organizations often hired US and third-country nationals, and by 1969, an estimated 52,000 non-Vietnamese contract personnel worked in Vietnam. Private contractors provided construction, base maintenance, fuel supply, water and ground transport services, and support for high-technology systems in operational zones.

Limitations on commanders and staff officers' time are inducing DOD to attend to those activities that are most central to its mission and customers. DOD is seeking to return to its core competencies. It must direct its resources toward remaining a world-class provider of warfighting competencies. Outsourcing to civilian contractors is vital for DOD to attain world-class performance in noncore or peripheral activities.[40] If these less central functions require using highly specialized assets, DOD will encounter difficulties contracting with outside vendors. Noncore activities using less specific assets remain the best candidates for civilian outsourcing, although the possibility of developing long-term relationships with DOD might encourage private firms to bid for contracts even if they require specialized skills and resources.

The primary rationale for outsourcing or privatizing components of military logistics support is to obtain better value for the funds expended. The decision should not be driven solely by a desire to reduce direct procurement costs.[41] Contracting logistics can give DOD access to highly sophisticated capabilities, accelerate process reengineering and facilitate strategic refocus. The decision to outsource a unit's logistics should be reflected in its criteria for source selection—supplier's experience, technological capabilities, financial strength, commitment to customer satisfaction, quality monitoring, willingness to provide performance warranties and a solid track record honoring the latter.

Contract design is a central feature of source selection. The contract establishes the nature of the relationship between the military purchaser and the civilian supplier. It must specify performance measures, conflict-resolution procedures, triggers for contract modification/termination and the distribution of savings from process improvement or new technology.

If less central functions require using highly specialized assets, DOD will encounter difficulties contracting with outside vendors. Noncore activities using less specific assets remain the best candidates for civilian outsourcing, although the possibility of developing long-term relationships with DOD might encourage private firms to bid for contracts even if they require specialized skills and resources.

If the contracted service is fairly standardized with little military specificity required, such as painting, then simple fixed-price contracts can suffice. However, if the support is more specific and entails substantial vendor investment, then a longer-term, more flexible contract is both opportune and advantageous. Combining clear communication channels with a well-designed contract can resolve difficulties before they evolve into crises. Careful source selection, judicious contract design, performance monitoring and open communication can address many of the concerns associated with losing organic military logistics support.

Academic literature on strategic alliances states that long-term partnerships can reduce costs and more effectively improve performance than short-term contracts geared to the lowest price.[42] Large-volume purchasers, such as DOD, should be receptive to contractor recommendations regarding product design, process integration and continued improvement in product delivery. In brief, DOD should view suppliers of complex services as partners rather than arm's-length vendors. To maintain adequate incentive for the supplier to continue process improvement, the contractor should share the gains from any such changes. Long-term relationships can provide superior performance while serving as a functional substitute for organic capabilities. Such relationships encourage civilian investment in specialized assets that result in performance enhancements while preserving the financial incentives to maximize corporate value.
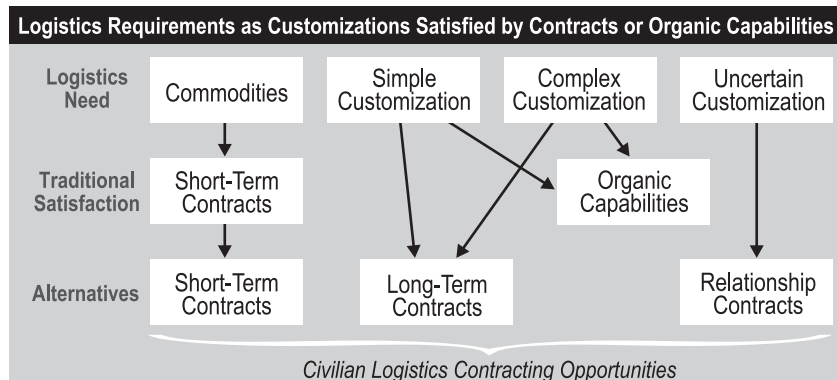
Military procurement practices are scarcely conducive to developing long-term relationships between military users and civilian suppliers. The requirement for overly detailed requests for proposals, coupled with minimal input from potential suppliers, often results in the military's receiving lower-quality service. The current practice of excluding suppliers' past performance data encourages bidders to overstate their capabilities. It also provides a powerful disincentive for firms to invest in highly specific assets that would increase efficiency and raise the quality of services provided to the government. The requirement for full and open competition is difficult to reconcile with the long-term, highly integrated business-supplier relationships common in private industry. Suppliers expect rewards in the present and some promise of future returns. When DOD frequently shifts suppliers, it is likely to lose the loyalty of all industry suppliers.

A Logistics Outsourcing Model

We propose a new contracting model for military logistics to address using private contractors. Our model will determine how civilian contractors can act either in conjunction with or as a substitute for organic military logistics support. It illustrates opportunities for using civilian contractors through more creative contracting arrangements. This model views logistics needs as a kind of customization. The degree of customization would range from zero for basic, common services (laundry) to highly specialized (weapon systems). The model then describes which customized service could be contracted out and which could be satisfied by organic units.

Perhaps the least complex logistics need is procuring basic commodities such as food, fuel and medicines. These are usually uniform or standard goods or goods that require minimal military customization. Such items can be supplied by a simple, short-term contract. More complex than simple commodities are logistics needs requiring

Logistics Requirements as Customizations Satisfied by Contracts or Organic Capabilities

Logistics Need	Commodities	Simple Customization	Complex Customization	Uncertain Customization
Traditional Satisfaction	Short-Term Contracts		Organic Capabilities	
Alternatives	Short-Term Contracts	Long-Term Contracts		Relationship Contracts

Civilian Logistics Contracting Opportunities

Military and contractor personnel review the construction of helicopter pads at East Timor's Dili Airport. (*Inset*) A contract Mi-26 helicopter and C-130 Hercules parked at the airport.

Financial costs associated with the present approach to military logistics concern many observers and represent the chief quandary for decisionmakers. Because the volume of activity in a contractor's chosen area of logistics expertise is high, the contractor can achieve economies of scale in delivering particular goods and services. Economies of scale result in a lower total cost per unit which, in turn, allows contractors to offer lower prices than the armed services would in maintaining logistics capability across all areas.

simple customization—those requirements that cannot be purchased in the civilian market because a greater degree of product differentiation is necessary. Examples include specialty clothing, office supplies or building modifications. Our model shows that these needs can be met either by short-term contracts or internally.

Complex customization, although frequently involving only a matter of degree and sometimes simply of perception, typically necessitates an even broader scope of work; product delivery takes longer. Maintenance services and equipment/property leasing are examples of complex customization logistics needs. Our model indicates that long-term

civilian contracts are an alternative to the organic military capacity for these kinds of requirements. Finally, certain logistics support cannot be fully ascertained in advance because of technological uncertainty, project complexity or environmental unpredictability. For such types of logistics support, relational contracts can substitute for in-house capability. Relational contracts emphasize the terms of the relationship between customer and vendor rather than the specific terms of work and, hence, afford additional flexibility. These contracts may be subsequently renegotiated or modified as circumstances dictate. Weapon systems or a new computer network are examples of candidates for relational contracts.

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Addressing the Challenges

We believe that this model can direct the prudent use of civilian outsourcing and thereby address the many challenges facing military logisticians. Financial costs associated with the present approach to military logistics concern many observers and represent the chief quandary for decisionmakers. Because the volume of activity in a contractor's chosen area of logistics expertise is high, the contractor can achieve economies of scale in delivering particular goods and services. Economies of scale result in a lower total cost per unit which, in turn, allows contractors to offer lower prices than the armed services would in maintaining logistics capability across all areas. Also, efficient state-of-the-art technology and technical expertise obtained through product specialization produces further cost reductions. These cost savings represent dollars the armed services can reallocate to its core competencies and more mission-critical areas.

Contractors' pricing schedules can also be used to establish benchmark costs for other transactions a respective service might make in the future. Benchmarks are measurements that gauge the performance of a function or operation relative to others. "Best practices" benchmarks might be described as the process of finding and studying the best internal and external practices producing superior performance.[43] Benchmarking seeks superior performance by systematically searching for and using best practices and is valuable in assessing a facility's management efficiency or identifying areas suitable for an audit. Contractor pricing benchmarks also provide objective measures for policy makers or senior commanders against which to compare the cost of retaining a specific organic military capability. Emphasis should be placed on benchmarks as ongoing outreach activities.

Because civilian contractors limit the range of their activities, they can develop a set of well-defined and highly specialized capabilities that will often be of higher quality than organic DOD capabilities. Salient among these enhanced capabilities are current technology and the trained staff to use this technology to its fullest. Contractors' ability to specialize in limited areas of logistics support provides the financial incentive for them to invest in state-of-the-art technology and to integrate that technology into their business operations. The contractor, therefore, can provide the supported unit with the latest logistics technology and the technicians to operate it.

Stiffening the Sinews

Rapid technological changes in logistics management and distribution will increase DOD's modernization costs. Because of its extensive logistics operations, DOD cannot afford the technology necessary to maintain a state-of-the-art logistics system. Acceleration of technological change and its accompanying costs will shift decisions to favor contracted logistics support. Focusing on organizational core competencies or increased emphasis on the armed services' warfighting mission will accelerate contracted civilian support.

Too frequently military leaders regard their organizations as machines that can be geared up and fine-tuned. This makes some sense when the organization, like a machine, does the same things again and again, but this practice is a fool's errand in the complex environment of 21st-century warfare. The US military must be able to change, adapt and solve problems.[44] The organization should not be regarded as a machine but as a brain that directs the body. If traditional military strategies were based on growing a bigger body with little regard for brainpower, strategies should slim down the body while growing the brain.

Although it does not address all critical logistics questions, our decisionmaking model can be used to assess the most efficient use of resources and to help determine the optimal combination of contractor support and organic DOD logistics capabilities. As the nature of 21st-century warfare emerges and service doctrine becomes more closely aligned with the RML, the military logistics community must develop new strategies to deal with the new realities. Our model contributes to that end by determining the possible mix between organic and outsourced logistics capabilities. Yet, it has been said that knowing the mechanics of war, not the principles of strategy, distinguishes good leaders from bad.[45]

In addition to engendering significant cost reductions, contracted logistics properly incorporated

into military strategy acts as an effective force multiplier.[46] Contracted logistics affords the flexibility to increase or decrease force support rapidly.[47] It can reinforce existing military capabilities and furnish a multiplicity of supplies, and if necessary, alternative supply sources, while providing specializations and capabilities the military services do not have. Private companies are quick to adapt to complexity, as many 21st-century wars will be. With the continuing development of weapon system capabilities, US military forces will show their teeth in terms of firepower to which contractors will contribute substantially. Crucial from the onset, though, is the need to establish the right mixture of force structure and contractor support in specific situations and under particular circumstances. In an era of more lethal weaponry and sophisticated information technology, the logistics footprint involves not merely mass and volume but balance and blend as well. *MR*

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FOG

Information Age technology continues to mesmerize Army leaders with the promise of absolute situational awareness and perfect understanding of enemy order of battle and intent. Kiesling contends the so-called fog of war, a phrase Clausewitz never used, is really the friction of war—friction that occurs in the commander's mind, not on the battlefield. Kipp and Grau argue that instead of technology providing solutions to the commander's problems, it often adds to them, generating a friction all its own.

On War Without the Fog

Eugenia C. Kiesling

CARL VON CLAUSEWITZ's *On War* is more often cited than read.[1] Less obvious is that people tend to read *On War* following those famous citations by people who have not read it themselves. Struggling through a difficult book and already apprised of the work's key points, newcomers seize upon the familiar aphorisms: absolute war, war as an extension of politics, the trinity, and role of fog and friction. Unless blessed with unusual resources of time and intellectual energy, they discover little beyond these well-advertised truths—and find them whether or not they are there. Following is one admonitory demonstration that what is assumed to be in *On War* can eclipse the text itself.

> *Like most useful military concepts, "fog of war" normally is attributed to Clausewitz, who receives credit for the alliterative "fog and friction"—friction referring to physical impediments to military action, fog to the commander's lack of clear information. The only problem with this neat formula is that he neither uses fog of war nor gives fog significant weight in his argument.*

The so-called "fog of war" is one of the most pervasive and natural metaphors in the English language.[2] War is inherently volatile, uncertain, complex and ambiguous. For this condition, contemporary US military usage offers the acronym VUCA, to which anyone would prefer the terse elegance of fog. For 19th-century writers, fog of war has the added merit of evoking the opacity of the black powder battlefield. It is not surprising that the phrase is popular and widely used. Like most military concepts, "fog of war" is normally attributed to Clausewitz, who receives credit for the alliterative "fog and friction"—friction referring to physical impediments to military action, fog to the commander's lack of clear information. The only problem with this neat formula is that Clausewitz neither uses fog of war nor gives fog significant weight in his argument.

Friction is, of course, a central element of Clausewitz's theory of war; the word appears at least 13 times in the text and serves an important analytical purpose. Fog is a different matter. Although Clausewitz uses fog four times, he never uses "fog of war."[3] Twice fog refers to a meteorological phenomenon and, incidentally, serves as a type of friction. Thus, "fog can prevent the enemy from being seen in time, a gun firing when it should, a report from reaching the commanding officer."[4] In the second instance, fog is still only water vapor: "It is rarer still for weather to be a decisive factor. As a rule only fog makes any difference."[5]

The third occurance may be mistaken for the conventional fog of war. Speaking of the unreliability of information in war, Clausewitz notes that "all action takes place, so to speak, in a kind of twilight, which, like fog or moonlight, often tends to makes things seem grotesque and larger than they really are."[6] But sentence structure denies that Clausewitz liked the fog of war image. Given a perfectly good opportunity to write, "all action takes place in a kind of fog," he opted, instead, for "twilight," relegating "fog" and "moonlight" to poetic emphasis.[7]

Lieutenant General
Frederick M. Franks
coordinating the
movements of VII
Corps from a Jump
TAC M577 at 0700,
27 February 1991.

Rejecting the friction–fog dichotomy allows a better understanding of what Clausewitz actually means by friction. Instead of mental fog and physical friction, he guides us to see two different forms of friction. On one hand, friction encompasses the physical difficulties of moving and fighting armies. On the other, he links friction with intangible factors—fear, physical hardship and problems of information— that hamper the military commander.

Only one passage in *On War* employs "fog" to describe war's ambiguities. Discussing "military genius" in chapter 3 of book I, Clausewitz writes that "war is the realm of uncertainty; three quarters of the factors on which action is based are wrapped in a fog of greater or lesser uncertainty."[8] The fog metaphor, however apt, is not important in Clausewitz's analysis. He does not suggest uncertainty is more important than the other factors—danger, exertion, suffering, chance—or than their antidotes—*coup d'oeil* and determination. Indeed, Clausewitz swiftly shifts subject; most of the chapter on military genius treats, at great length, the commander's character.

The latter two passages certainly do not give fog the weight necessary to justify the fog and friction scheme commonly ascribed to him. If Clausewitz had wished to use the word "fog" to describe the vagueness, uncertainty, ambiguity and chaos of war, he could have done so in the chapter "Intelligence in War," a chapter in which, suggestively, he eschews the fog metaphor.[9] In short, *On War* does not justify the modern tendency to speak of fog and fric-

tion. Instead, Clausewitz identifies four central elements in his "Concluding Observations": physical exertion, intelligence, friction and danger. These four, he concludes, "can be grouped into a single concept of general friction."[10]

That Clausewitz never mentions the fog of war does not mean that he would deny the importance of the ideas subsumed today under the phrase. On the contrary, uncertainty is central to Clausewitz's argument. In fact, separating fog from friction actually weakens his claims: friction becomes the purely physical hindrances to military action and fog the confusion that arises from absent, misleading or contradictory intelligence. This distinction is alien both to the text and to the spirit of Clausewitz's argument.

Rejecting the friction-fog dichotomy allows a better understanding of what Clausewitz actually means by friction. Instead of mental fog and physical friction, he guides us to see two different forms of friction. On one hand, friction encompasses the physical difficulties of moving and fighting armies.[11] On the other, he links friction with intangible fac-

tors—fear, physical hardship and problems of information—that hamper the military commander.[12] The friction that impedes the army is clearly far less interesting to Clausewitz than that which impedes the commander's mind. Hence he says little about such practicalities as planning and staff work but much about the commander's moral requisites. Clausewitz even treats physical exertion, superficially an example of simple, physical friction, as primarily a psychological concern, writing that "the mind must be made even more familiar with them than the body."[13] The purpose of training is to prepare soldiers and commanders to face mental challenges, "those aspects of active service that amaze and confuse him when he first comes across them."[14] Ultimately, this section of *On War* is not about lubricating an army's movements but about shaping the commander's intellect. Armies require training, preparation and intelligence, but victory ultimately depends on the commander's strength of will to carry out his plans in spite of doubt, danger and uncertainty.[15]

By reducing the commander's many mental pressures to the fog of war, the fog and friction interpretation makes military command seem easier than it is. All friction is physical, and armies know fairly

> *E*liminating fog gives us a clearer and more useful understanding of Clausewitzean friction. It restores uncertainty and the intangible stresses of military command to their rightful centrality in On War. *It allows us to replace the simplistic message that intelligence is important with the reminder that Clausewitz constantly emphasizes moral forces in warfare.*

well how to tackle, if not solve, physical problems. Fog, on the other hand, is simply a matter of poor intelligence. If one believes the contemporary conceit that the information revolution will soon supply military forces with near-perfect information, the fog of war will soon vanish.[16] It is surely no accident that reducing Clausewitz's "fear, danger and uncertainty" to the fog of war leaves only that one element of mental friction susceptible to technological solution.

Eliminating fog gives us a clearer and more useful understanding of Clausewitzean friction. It restores uncertainty and the intangible stresses of military command to their rightful centrality in *On War*. It allows us to replace the simplistic message that intelligence is important with the reminder that Clausewitz constantly emphasizes moral forces in warfare.

How fog came to insinuate itself into the standard military interpretation of the text is worth some reflection. So is the resistance among teachers of *On War* to the suggestion that Clausewitz wrote a chapter on friction rather than one called "fog and friction." Also troubling is that we insist on reading fog into Clausewitz's discussion of the friction of war. In what other key passages are we making similar mistakes? *MR*

NOTES

1. Michael Howard and Michael Handel are merely the most famous people to have made this observation. Thanks to Conrad Crane, Alexander S. Cochran, Martin Cook, Dennis Heath, John Nagl and Jon T. Sumida for their comments on the first draft of this essay.
2. A book picked at random to illustrate this point contains the sentence, ". . . 'fog of war' includes the direct stresses arising from the ordeal of battle, but also censorship, secrecy, deception, propaganda, camouflage, and rumour," Roger Beaumont, *War, Chaos, and History* (Westport, CT and London: Praeger, 1994), 2. Note that Beaumont treats fog of war as if it has an accepted definition.
3. A claim that will undoubtedly inspire readers to find additional examples.
4. Carl von Clausewitz, *On War*, Michael E. Howard and Peter Paret, eds. (Princeton,NJ: Princeton University Press, 1976), 120.
5. Ibid., 143.
6. Ibid., 140.
7. Ibid., 122. Clausewitz's choice of metaphor involving light rather than fog in chapter 8, book I, suggests that he rejected fog as a metaphor for battlefield uncertainty. "In war," he points out, "the experienced soldier reacts rather in the same way as the human eye does in the dark: the pupil expands to admit what little light there is, discerning objects by degrees, and finally seeing them distinctly. By contrast, the novice is plunged into the deepest night." The image of a pupil responding to light works better than that of fog for his purposes because there is no mechanism by which some people can see better in fog than other people do.
8. Ibid., 101.
9. By noting in "A Guide to Reading *On War*" that "Chapter Six introduces the element that others have called 'the fog of war,'" Bernard Brodie assumes the equation rejected here, Ibid., 649.
10. Ibid., 122.
11. Ibid., 119-21.
12. Ibid.
13. Ibid., 122.
14. Ibid.
15. The emphasis on the moral over the physical appears throughout the work, but see especially, Ibid., 100-110.
16. For such an argument, see Admiral William A. Owens, *Lifting the Fog of War* (New York: Farrar, Straus and Giroux, May 2000).

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The Fog and Friction of Technology

Jacob W. Kipp and
Lieutenant Colonel Lester W. Grau, US Army, Retired

Blessed be those happy ages, that were stranger to the dreadful fury of those devilish instruments of artillery, whose inventor, I am satisfied, is now in hell, receiving the reward of his cursed invention.
—*Don Quixote*, Cervantes

Merely because technology plays a very important part in war, it does not follow that it alone can dictate the conduct of a war or lead to victory.
—Martin van Creveld

THE APPLICATION of modern technology by by armed forces is supposed to reduce manpower requirements, provide transparency to the battlefield, and lessen risk and casualties to the force wielding the higher technology. In some past instances, technology actually has done just that—but usually at a price and to a comparatively limited advantage. Often its exact impact on military art has been badly misjudged. Magazine rifles, machine-guns, quick-firing artillery, smokeless powder and railway mobilization were supposed to give the offense a decisive advantage and lead to short, decisive wars. In fact, they promoted stalemate and attrition and deadlocked industrial war in Europe—World War I.[1]

Today, faced with a period of rapid technological growth, armed forces are trying to stay abreast of technology by incorporating that which is pertinent and then applying it to the current revolution in military affairs.[2] The siren song of technology is that it will eliminate the fog and friction of war. The reality is that the military's application of technology has usually created its own fog and friction. Advances in technology expand the battlefield, transform the relationship between time and space and create new demands on command and control.[3] With the pace of scientific and technological innovation constantly accelerating, military institutions face a perpetual challenge of change, and the very nature of that challenge becomes more problem-

atic as weapon systems become more complex.

Armed forces are conservative institutions, often slow to change. Sometimes the military's slow-paced change is justified since many technological advances are developed and realized over generations, not overnight. At other times, the military's reluctance to change is similar to that same reluctance found in any organization or traditional profession. Technology is tempting, but it is outside the formative experience of the senior members of the profession.[4] Often budgets are tight, and generals and politicians are sometimes reluctant to invest in new, unproven technology at the expense of the tried and true. Sometimes new technology is

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Just in case the platoon leader feels he does not have enough input and direction, he will soon have a portable computer to tell him what his situation really is. The platoon leader serves the technology by constantly monitoring and responding to his radio and inputting data into his computer, causing a clear struggle between controlling his platoon and serving technology's demands. Both require his attention, but neither receives it fully.

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inconvenient because it gets in the way of how things are done. Often technology is developed for one use or theater but has greater impact in another.

Maximum combat effectiveness is not the only driving force behind new technology. Transportation technology is often the determining factor. The US Army's first major combat in World War II was in North Africa—a theater in which it had not planned to fight. In 1940, the US Army found itself mobilizing to confront the German armored and airborne forces that the *Wehrmacht* had used so effectively in the Battle of France. The ideal US Army

force structure developed after World War I was the square division. The Army leadership had trained and maneuvered with the square division, but it was too big and cumbersome to ship overseas on existing naval transport. Therefore, General Lesley J. McNair reconstituted the division as a lighter triangular division so that it could be more readily deployed on naval transport. The US Army stormed ashore in North Africa using this new force structure.[5]

Technology transportation issues continued throughout World War II. The US M4 Sherman tank was no technological match for German armor, but this was not because the United States could not design and build a better tank. It was because the Sherman tank fit easily into Liberty ships, and a major change in design would have meant severely reduced production while factories retooled for the new model. McNair, as chief of ground forces, championed the concepts of streamlining and pooling to create a deployable force but also force-fed a new piece of technology—an undergunned tank destroyer built on the Sherman chassis—and a questionable doctrine for employing tank destroyer battalions.[6] The driving factor was that the Sherman chassis could be readily transported by sea.

Servant or Master?

Technology is supposed to serve the user's needs. Even so, technology usually requires a number of dedicated personnel to maintain it, repair it and often decipher it. These personnel are often highly paid technicians who are hired in lieu of combatants. Often, the newer the technology, the greater the number of dedicated personnel and the longer the repair, calibration and maintenance time required. Field positions are frequently selected to accommodate technology rather than for advantages of the terrain. Newer technology is almost inevitably more expensive than the technology it replaces, so technology upgrades usually mean that other necessary equipment is not purchased or sufficient technicians are not hired. Very often the new technology brings with it unique logistics requirements, which create new demands on combat support.

Technology is supposed to ease the commander's burden by providing information to aid his decisionmaking; this certainly is the promise of the new generation of automated control devices and electronic sensors. The result, however, is often too much data. No one person can cope with a constant data feed. Today, a platoon leader whose platoon is in contact must control his platoon's fires, maneuver it, preserve its fighting strength and accomplish his mission. These are historic platoon leader tasks. Thanks to older technology, the platoon leader can

radio for artillery fire, close air support, medical evacuation and reinforcements. Thanks to newer technology, his commanders from company to theater level and above can offer sage wisdom and

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The commander has traditionally relied on experience and intuition to shape his course of action. Artificial intelligence and decision templates have no such intuition, nor do they possess much capacity for initiative to exploit a developing opportunity. To aggregate combat power, the modern commander must think in terms of systems, but he remains the vital key to combat success.

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counsel directly to the platoon leader while his platoon is fighting for its life. Some can fly high above their positions to offer encouragement and give orders based on their lofty view.

Just in case the platoon leader feels he does not have enough input and direction, he will soon have a portable computer to tell him what his situation really is. The platoon leader serves the technology by constantly monitoring and responding to his radio and inputting data into his computer, causing a clear struggle between controlling his platoon and serving technology's demands. Both require his attention, but neither receives it fully. The demands technology places on the platoon leader are relatively light, but technological demands increase with each higher level of command. Technology has changed over the centuries, but man has not. He is still the same basic naked ape who quickly tires, exhibits stress and makes irrational judgments when forced to respond to more than five simultaneous stimuli. Commanders try to cope with technological demands by positioning more screen-watchers on their staffs and in support units, but the impact on the commander is still significant.

The unasked question often is, "Does the value technology adds exceed the time penalties it imposes on the commander?" One answer is to remove the commander from the loop when conducting precision fire by permitting artificial intelligence to make the combat decisions while the commander serves as an override. This solution overlooks the probability that a thinking opponent is trying to deceive the commander. The commander has traditionally relied on experience and intuition to shape his course of action. Artificial intelligence and decision templates have no such intuition, nor do they possess much capacity for initiative to exploit a developing opportunity. To aggregate combat power, the

modern commander must think in terms of systems, but he remains the vital key to combat success. Technology promises much—the paperless office, the perfect intelligence picture, the rapid destruction of enemy forces, the collapse of civilian morale—but it rarely delivers.

Technology is seldom a complete answer. New systems must interface with other systems, but they are not developed primarily for that interface. Weapon systems are developed as complete packages that can perform their intended missions independently. Once they are purchased, military professionals must determine how best to integrate the new system with existing systems to achieve the maximum effect. Often the best combined arms solution will not be able to employ the full parameters of the new system's capabilities. For example, the recent history of technology reveals personnel carriers that cannot stay up with new tanks, new artillery that outranges forward observers' ability to observe and body armor that protects a soldier but is too heavy to fight in. The operating parameters of technology may be developed for one locale or type of combat but employed in another. The top-secret World War II Norden bombsight was developed over the cloudless plains of Oklahoma and Texas but employed over the cloudy, complex terrain of Germany and in the 100-knot jetstreams over Japan. The FM tactical radio that can transmit and receive for a distance of 30 kilometers over open ground cannot communicate two blocks away in a city full of high-rise buildings.

Application, Not Technology

New technology seldom lives up to its sales hype, and it is seldom perfect. Rather, it is usually "sold on the come"—buy the prototype, and the next version will be optimal for the battlefield. Following World War I, Brigadier General Billy Mitchell, Deputy Chief of the Army Air Service, wanted to develop a heavy bomber. Having claimed that bombers could sink capital ships, Mitchell received the chance to prove it in July 1921 using Martin bombers against former German warships. While Army pilots were successful in their attacks, Mitchell had not abided by the rules of the test, which were to drop a 1,000-pound bomb from 10,000 feet. Instead, he directed pilots to drop a 2,000-pound bomb from 3,000 feet. Critics cried foul, but Mitchell justified his directive with the belief that future technology would provide a bombsight accurate enough to attack from high altitude and aircraft powerful enough to carry heavy payloads. For now, it was sufficient to demonstrate the potential of air power against ships. In the end, the Navy entrusted the antiship mission to dive-bombers and torpedo planes, but this example illustrates how technology changes from prototype to fielded system.[7]

Frequently, scientists and engineers design new technology with military input but with little initial soldier-proofing. Often the scientists, engineers and military recognize that the new technology has tremendous potential but only have a rough idea of how to employ that technology. Subsequently, technology is developed to accomplish specific tasks, although later use may show that it is better suited for others. Thus, the best German antitank gun of World War II was developed from an 88-millimeter antiaircraft gun. The military potential of the helicopter has not yet been

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A German 88-mm gun fires on British armor in North Africa, circa 1941. The stripes on the barrel indicate five kills to its credit.

Imperial War Museum

B-29 Superfortress bombers on their way to Japan.
(*Inset*) A Norden bombsight in the nose of a B-29.

US Air Force

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fully appreciated and developed, although there is finally some ongoing debate to marry light armored vehicles with helicopter lift to develop the air-mechanized concept.[8] Wing-in-ground technology has been known since the late 1930s but has only been partially developed to recognize its tremendous long-distance, heavy-duty capability.[9] Fuel-air explosives have had a long period of development and are only now approaching maturity and probable wide application.[10]

It takes time and experience to determine the optimum application of new technology. During the early days of World War I, a machinegun firing straight ahead at the advancing foe was only marginally more efficient than a rifle squad firing straight ahead. It was only after machineguns were sited to provide both straight-ahead fire and interlocking fire that they dominated the close battlefield. The tank was the eventual answer to the machinegun, but even it enjoyed only limited tactical success since it was used primarily as an infantry support vehicle. Only after tanks were improved and combined with close air support, self-propelled artillery, mounted infantry, effective communications and airborne assault did tanks dominate the battle-

field. But the primary genius of mechanized warfare was not the technology; it was its application—developing new techniques, doctrine, force structure and flexible leadership to meld the combat potential of the technologies into a coherent, comprehensive force.[11] Military culture proved decisive in effectively applying the concept.[12]

The *Wehrmacht* decisively used the *Reichswehr's* concept of combined arms, mechanized warfare, which the popular press named *Blitzkrieg,* in only two theaters—Poland and then France and the Low Countries. In Poland, victory was achieved by a single, decisive operation that culminated in a matter of weeks by destroying the Polish armed forces. In France, the *Wehrmacht* conducted successive operations, breaking through to the channel and encircling Allied armies on the beaches of Dunkirk. German armor, however, was not committed to destroying those armies. Instead, the German High Command directed the panzer divisions to regroup and redeploy to break through the Somme defenses and capture Paris. However, when the *Wehrmacht* tried to adapt this concept and force structure to the war against the Soviet Union, it resulted in crisis. The *Wehrmacht* had to reduce the panzer division's

combat strength to get enough units to meet the initial operational requirements for Operation *Barbarossa* and subsequently lacked sufficient combat power where needed.

Operational art is concerned with regrouping forces to conduct successive operations leading to strategic decision. In 1941, the *Wehrmacht* planned for a single, decisive set of encirclement battles along

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Today, many argue that a new mode of warfare, dominated by information, will consign mass industrial war to the dustbin of history. They see the Gulf War as the harbinger of this new revolution. It is precisely the new information technology that has made automated command and control and precision fires possible. Yet, most of the arguments in favor of the new technology and systems seem to be one-sided, positing an asymmetrical struggle between those who have information technology fighting those who do not.

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the western frontier of the Soviet Union to be followed by a general pursuit to the Ural Mountains. What the *Wehrmacht* faced, however, were the demands of successive operations in a long war of attrition.[13] The crisis in July 1941 over the campaign's strategic objectives—Moscow or Kiev—was a direct result of the looming prospect of a longer war. Later, when on the offensive, the Red Army conducted successive, mechanized deep operations composed of *fronts* or groups of *fronts* with the intent of destroying a portion of the enemy force—*Wehrmacht* or Allied—throughout the depths of its deployments, that is, corps, army/armies and army group/groups. The key for the Red Army was not only the potential of armored forces but also the criticality of logistics support for those forces involved in offensive operations. Logistics set limits on the depth of attack and time of culmination. Railroads were critical to Soviet logistics and force regrouping. Soviet mastery of railroad movement, combined with tank-led deep operations, were key to Soviet victory.[14]

Technology may perform flawlessly, but the infrastructure or application developed for that technology may be flawed. Radar operators at Opana Point, Hawaii, detected and reported the first wave of the approaching Japanese air armada aimed at Pearl Harbor at 0702 on 7 December 1941. They passed this sighting to their information center, which interpreted it as US B-17 bombers coming in for refueling on their way to the Philippines. Even if the

sighting had been correctly interpreted, there was no central operations room controlling the airspace over Oahu, and there was no way to pass information readily between the US Army and US Navy. US code-breaking efforts had determined that a Japanese attack was inevitable somewhere soon, but the information was so classified that military commanders were only told to increase alert measures. In Hawaii, this resulted in aircraft being concentrated so they could be readily guarded against sabotage. The first wave of the Japanese attack hit these tightly packed aircraft at 0755.[15]

There is often a difference between theory and application when introducing new technology into a unit. What is taught and trained often differs from what is actually done.[16] The "Fort Benning solution" is often ignored in favor of local standing operating procedures, and what works in one locale or climate does not work in another. Other armies have the same problem. British ground forces train on Salisbury Plain in southern England only to deploy around the world where they must adapt to change. The British army provided an excellent example of professionalism and adaptability during the Falklands campaign when they persevered despite serious setbacks at sea and technology that was not up to the demands of the theater.

Military Art and Technology Diverge

"The process of military change, or reform, is extremely complex. Although there is no magic formula for success, there are certain steps that it seems to follow. The first is to determine a generally accurate picture of the nature of future war. To paraphrase [Carl von] Clausewitz, such a determination is the most significant and comprehensive question the erstwhile reformer must address. Even if he gets everything else right, if he misappreciates the essential dynamics of the next major conflict, he may well find his army perfectly prepared for the wrong type of war."[17]

Technology does transform military art but very often in unexpected, unintended ways. The dominant paradigm of war inherited from the French Revolution and Napoleonic wars seemed to confirm the division of military art into two parts: strategy, the art of moving forces to contact, and tactics, the conduct of forces in contact. Victory belonged to the commander who could successfully concentrate forces at a single point with tactical successes culminating in strategic victory. But the 19th century was not kind to that vision or to those who sought victory in that manner. Technological change transformed the battlefield with its greater lethality and lower force densities. This change expanded the

Soldier, UK Ministry of Defense

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British ground forces train on Salisbury Plain in southern England only to deploy around the
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battlefield's length and breadth until traditional command and control was no longer effective.

Mass armies and railroads brought more forces into play and changed the dynamic of mobilization. The strategy of a single point gave way to the strategy of an extended line. Tactical victory lost its decisive edge. Until 1863, commanders in the eastern region of the American Civil War considered themselves disciples of Napoleon and used a drill manual based on Napoleonic tactics and the smoothbore musket. Bloody battles were won and lost, but there was no strategic decision. In 1864, Lieutenant General Ulysses S. Grant moved east and Major General William T. Sherman south, and the war took on a new character. Grant fought a sustained operation before Richmond, intending to break General Robert E. Lee's army by the weight of numbers and industrial power. Sherman and Major General Philip H. Sheridan took the war into Georgia and the Shenandoah Valley to destroy the economic underpinnings of Southern resistance. Military art was shaped by its practical experience with mass industrial war.

Industrial war, like the industrial revolution, was ultimately about control and control systems. Innovations in communications, like the telegraph, made it possible to turn the single wire paralleling the railroad track into a complex system of signals. War underwent a similar revolution with the telephone and radio. However, unlike the business management revolution, where effectiveness set the criteria of success, innovation in the military sphere had to face a thinking opponent seeking to exploit any vulnerability. In the United States, this led to Herbert O. Yardley's developing signal intelligence during World War I. In the 1920s, his legendary Black Chamber intercepted and decoded Japanese message traffic in conjunction with the Washington Naval Conference. In the early 1930s, after the chamber had been closed down, Yardley, out of a job, published his sensational *America's Black Chamber*. This caused 19 governments to change their diplomatic codes and involved Yardley in a number of heated exchanges with editors who considered his revelations treason.[18] Yardley defended himself by saying that what he had revealed no longer mattered; governments were adopting machine encrypting, and that would make timely decryption a near impossibility.

Indeed, many governments took that attitude and considered their machine ciphers beyond attack. However, combined national efforts by England, Poland, France and the United States ultimately broke several invulnerable ciphers. Axis commanders who used coded signals to control tactical and operational forces met with disaster. Admiral Karl Doenitz, an experienced submariner and innovator, headed the German submarine arm. He massed his submarines into wolf packs to attack Allied convoys,

Marines of the 2d Light Infantry Battalion conduct operations in Arrijan, Panama, during Operation *Just Cause*, 20 December 1989.

The Cold War was not without its hot spots —Korea, the Dominican Republic, Vietnam, Grenada, Panama and Kuwait. In all of these, the templates developed from planning against the Warsaw Pact did not work. Technology, force structure, training, tactics and logistics required adjustment, if not complete overhaul, to the templates for them to work. The Cold War was an anomaly. . . . Today, there is a concerted effort to build technology-backed universal templates that will work everywhere.

but when the Allies broke the German submariners' codes, the wolf packs suffered serious losses. But both sides broke codes. On several occasions, U-boat commanders read decoded Allied convoy traffic at the same time the Allies' *Ultra* was decoding the Axis' *Enigma* traffic to send to its antisubmarine forces.[19] No information system is invulnerable, and a thinking opponent can find his way around a technological system.

Today, many argue that a new mode of warfare, dominated by information, will consign mass industrial war to the dustbin of history. They see the Gulf War as the harbinger of this new revolution. It is precisely the new information technology that has made automated command and control and precision fires possible. Yet, most of the arguments in favor of the new technology and systems seem to be one-sided, positing an asymmetrical struggle between those who have information technology fighting those who do not. It is not too much to argue that such a view is the equivalent of taking the European experience of the colonial wars of the late 19th century and saying that these wars would be the "fu-ture war" that modern armies should prepare for.

Such views are absolute in their cast; they reject any notion that military art must be adapted to particular theaters or opponents because the superior force will have a permanent technological delta or margin of victory. This technological arrogance almost inevitably invites surprise. Less-developed opponents will be able to determine an opponent's operational or tactical templates and exploit them. Cookie-cutter solutions do not work universally in different theaters, on different terrain, or against different forces and cultures. In fact, these solutions often increase the fog and friction of technology. The side with the greater ability to adapt, exercise initiative, and enforce tactical and operational innovations discovered during combat will enjoy success. Today's information revolution and information warfare rest upon the work of programmers writing millions of lines of code. Errors are inevitable, and there are already hostile attempts to intervene from outside the system. Algorithms have no nationality or loyalty but can be mastered or exploited by thinking adversaries. Information war has its own

Afghan guerrillas examining the remains of an ambushed Soviet convoy, 1986.

Europaïsche Wehrkunde

fog and friction that must be overcome, not assumed away.

In his book *On War*, Clausewitz observed that "war is a chameleon."[20] Technology cannot alter war's chameleon nature. Indeed, technology is very likely to stimulate the very surprises that make war a chameleon. Retired General Mahmut A. Gareev, Soviet/Russian Army, asserts that the task of foreseeing future war is an absolute necessity for success, but it is also a labor of Sisyphus, driven by the very change technology stimulates.[21] The military professional perpetually rolls the forecasting stone up the mountain of today's uncertainties, and it inevitably rolls back down on him under the pressure of diplomatic, economic, political, social, technological and military change. Those engaged in military foresight are in a perpetual struggle with the challenge of change, assessing whether change in armed struggle is evolutionary or revolutionary and whether it will affect military art. The process is usually a critical investigation, implying that a determined potential opponent's clever mind is seeking to gain a military advantage in a future conflict. Forecasts, by their natures, are incomplete, contradictory and subject to constant revision.[22] Gareev warns: "History knows many sagacious predictions regarding separate aspects of future war, however, to foresee correctly the nature of a new armed conflict in its entirety has practically never been achieved."[23]

Technology and Templates

Systems are optimized to the terrain, climate, force structure and culture of the armed force that will deploy them. Systems optimized for the northern European plain will not work equally well in the Amazon Delta, Sahara Desert, Antarctic wastes, Argentine pampas or Himalayan Mountains. There are also regional differences on how war is conducted; the tactics and technology of the Fulda Gap will not serve equally well on the grassy plains of Namibia or in the jungles of the Philippines.
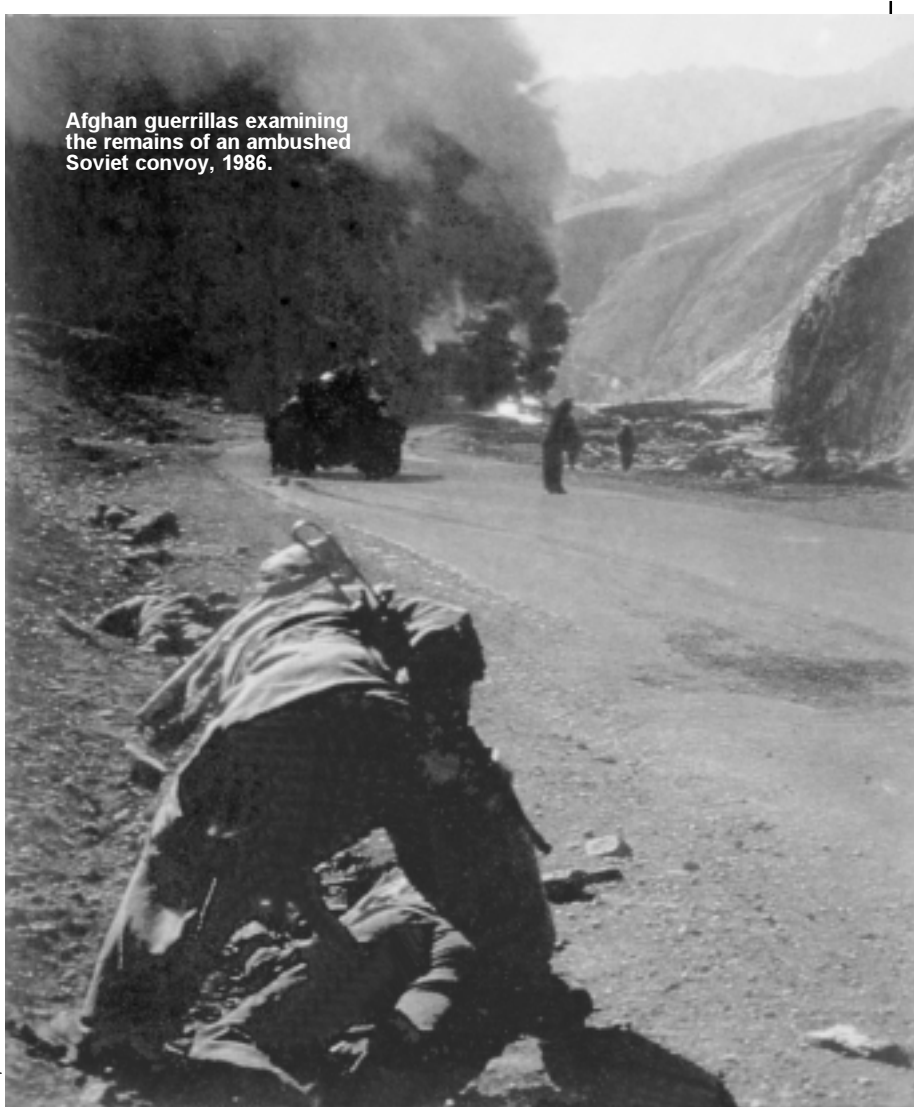
The modern, mechanized Soviet army that entered Afghanistan in late December 1979 was designed and trained to fight a theater war against a modern enemy who would occupy defensive positions stretching across the northern European plain. The

The modern, mechanized Soviet army that entered Afghanistan in late December 1979 was designed and trained to fight a theater war against a modern enemy who would occupy defensive positions stretching across the northern European plain. . . . The Afghan guerrillas did not cooperate by defending positions under massed artillery fire while being overrun by mechanized forces in a lethal advancing line. There were no linear defenses or no front line, and the Afghan guerrilla turned the war into a light infantry contest.

Soviet army planned to overcome this defensive belt by massing artillery to obliterate key sections of the belt and then drive through the resultant gaps to strike deep and pursue the shattered enemy. Tactics, force structure, weapon systems and equipment were designed to function solely within the context of this massive strategic operation. It was to be a lethal, high-tempo offensive that carefully choreographed firepower and maneuver. Tactics were kept simple so they could be reduced to a series of well-rehearsed drills that conscripts and reservists could perform. The tactics were also designed not to get in the way of the operation.

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no light infantry. Soviet equipment often performed poorly in the dusty, hot mountainous terrain, and modern technology often failed to provide an appreciable advantage to the Soviet force. Before the Soviet army withdrew in 1989, it had redesigned or modified weapon systems, adjusted force structure, revised tactics, retrained forces, revised operations, issued new equipment and attempted new approaches to nonlinear combat. Despite the changes, the Soviet army only fought the war to a draw.[24]

During the Cold War, the United States developed its technology, force structure, training, tactics and logistics support for a war against the Soviet Union on the same northern European plain. The Soviet Union was a well-studied, fairly predictable foe with known technology, force structure and doctrine. An unfortunate outcome of this predictability was that the US military developed multiple templates for dealing with the Soviet foe. US military students and planners often used these templates as a planning shortcut or as a substitute for thought.

But the Cold War was not without its hot spots— Korea, the Dominican Republic, Vietnam, Grenada, Panama and Kuwait. In all of these, the templates developed from planning against the Warsaw Pact did not work. Technology, force structure, training, tactics and logistics required adjustment, if not complete overhaul, to the templates for them to work. The Cold War was an anomaly. For most of US history, the likely enemy and theater have been much harder to determine. Today, there is a concerted effort to build technology-backed universal templates that will work everywhere. Observing the impact of trying to move the planning template for introducing US Army forces into Macedonia onto the nearby, but different, undeveloped terrain of Alba-

nia during the Kosovo crisis revealed the fallacy of this effort.

Technology-based templates and technology can be negated, as demonstrated in Vietnam, Korea, Afghanistan and Kosovo. These templates look for a war of annihilation where technology's strengths will rapidly overwhelm the side with the less-robust technology. The side with the less-robust technology can offset this disadvantage by changing the nature of the conflict from a war of annihilation to a war of attrition. This is done by conducting combat where the impact of technology is lessened or neutralized such as using large amounts of trained light infantry or conducting combat on complex terrain such as mountain, jungle, forest, city or swamp. The side with the less-robust technology may also accept asymmetry in casualties to prolong the conflict. The side with the low-technology force does not have to match the superior technology system for system. Rather, it can buy off-the-shelf systems that negate or seriously disrupt key components of the superior technology. Finally, it can match the high-technology force with an economic, media or social counter.[25]

Technology is a Tool, Not a Solution

Currently, the US Army owns the night with its night sights and goggles. It is a tremendous, but temporary, advantage. It also gives a false sense of security. The World War II German armed forces felt secure in believing they had invented an unbreakable cipher system for message traffic. *Enigma* was eventually broken using clues and indicators from a variety of sources, and the Allies defeated the German U-boat campaign by breaking the unbreakable cipher. Conversely, the advantage that technology provides by breaking opponents' ciphers is a two-edged sword. A commander who is used to reading enemy intentions in decoded traffic can be led astray if the enemy deliberately transmits false information. A commander may feel secure monitoring decoded enemy radio traffic while a messenger is passing the real traffic on a land line.

To fully exploit the advantages of technology, a force must correctly determine who its opponent will be, where it will fight the opponent and how it will conduct the fight. Forecasting the nature of future war is the first step in effectively adapting technology. Only then can optimum weapon systems, force structures, tactics and supporting technology be designed. Even if the forecasting is accurate, technology will not solve everything. Innovation, professionalism, determination, and the ability to rapidly reconfigure and adapt will still play a major role in future war. Tests and experiments with honest feedback are necessary to the process and help redirect

ongoing forecasting through successes and failures.

There are no ultimate silver bullets. The US military must study and thoughtfully adapt technology; it cannot afford to lag far behind technological advances. However, new technology will create many challenges. Military technological change is best conducted gradually. Peacetime exercises can help resolve some problems and lead to improved doctrine for using new weapon systems in combat. Unfortunately, the best test of new technology and its application is during combat or crisis—the historic spur to technological development and change when nothing is done gradually.

Technology will be used across the spectrum of combat but will seldom prove equally effective across that spectrum. A determined foe can work around technology to disrupt or destroy it by attacking its critical system nodes. Technology

> *To fully exploit the advantages of technology, a force must correctly determine who its opponent will be, where it will fight the opponent and how it will conduct the fight. Forecasting the nature of future war is the first step in effectively adapting technology. Only then can optimum weapon systems, force structures, tactics and supporting technology be designed.*

can be a strong element of military might, but it is only an element, and the principles of military art still apply. A professional military culture and a clear vision of future war are at the very heart of military foresight and can reduce, but not eliminate, war's fog and friction. *MR*

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Che Guevara and Guerrilla Warfare: Training for Today's Nonlinear Battlefields

Captain Steve Lewis, US Army

Since the American Revolution, US Armed Forces have been confronted, and sometimes confounded, by low-intensity conflicts (LIC) and unconventional warfare (UW).[1] To protect US interests abroad, US military forces will be called on to conduct insurgency warfare and peacekeeping operations and to provide logistic support in a fluid, nonlinear environment.

Nonlinear battle challenges traditional military roles. Thus, logisticians, not infantrymen defending or destroying a supply convoy, would play a more effective part in seizing a key terrain feature than would conventional forces. This point is clearly made in the 1940 version of the US Marine Corps (USMC) *Small Wars Manual*: "[T]hat small wars are, generally speaking, campaigns rather against nature than against hostile armies . . . constitutes one of the most distinctive characteristics of this class of warfare. [They affect] the course of operations to an extent [that varies] greatly according to circumstances, but so vitally at times as to govern the whole course of the campaign from start to finish. [They] arise almost entirely out of the difficulties as regards supply which the theaters of small wars generally present."[2]

Guevara's "Small War"

Cuban revolutionary Che Guevara formulated his principles of guerrilla warfare from 1956 to 1958 during the revolt against President Fulgencio Batista. The war, which contributed to the fall of Batista's regime, helped install Fidel Castro as *El Presidente.*

Guerrilla warfare principles are part of the Marxist dogma to which many insurgent organizations adhere.[3] Because US forces might face similar situations in the future, it is important for commanders to study such tactics in order to be successful on nonlinear, changing battlefields.

Although not considered a strategic military genius, Guevara's effective, realistic principles served him well. They included mobility, movement by night, careful use of ammunition (supplies), flexibility, careful study of the ground and surprise and fury.[4]

Mobility. "The fundamental characteristic of a guerrilla band is mobility."[5] Mobility is the ability to move vehicles, soldiers and equipment rapidly with relative freedom. Guevara's plan was to strike and move freely, avoiding detection. Mobility complemented surprise and flexibility. The guerrillas did not become comfortable or get tied to certain areas. They had to stay one step ahead of government forces. Their mobility put a constant strain on government forces, which had to spread their assets thin.

Mobility allows US forces to keep a potential enemy guessing in the same way. The US usually has an advantage in mobility since its industrial edge allows deployment of all necessary materiel. The ability to establish logistic resupply points (LRPs) at any place and time helps prevent ambushes or traps.

Developing mobility in small units within a support battalion requires the development of circumstances and attitude to ensure each soldier and vehicle has the proper tools to operate in any area at any time. This means having several days worth of food and water for each soldier and equipment and supplies needed for communication, minor repairs, signaling and first aid. Many innovative ideas are currently being explored to increase every unit's mobility and safety.

Comprehensive training geared to developing confidence and initiative develops a person's attitude. To maintain mobility, land-navigation training is critical. Key leaders need to know the unit's mission and what each person's role will be. Well-conducted rehearsals develop soldiers' confidence and encourage planning for the unexpected. For example, no vehicle should stop without knowing where it will go next. If that decision depends on circumstances, the leader must know those circumstances and why he should or should not bypass an LRP.

Movement by night. Movement by night, another important characteristic of the guerrilla band, includes road marches, convoys, reconnaissance, emplacement of operational bases, resupply activities, rehearsals and attacks. Guevara believed his guerrillas knew the ground better than did government forces. Therefore, they would have more success while operating at night against government forces whose "garrison attitude" kept them safely indoors during the night. Guerrillas were free to move forces, conduct surveillance, attack with surprise then withdraw into the night, contributing to the impression that they were everywhere and could attack at any time.

In conventional operations, night operations are a strong component of force protection for the parent unit and for the group conducting the operation. Departing from a brigade support area (BSA) at night limits the enemy's knowledge of what supplies are loaded. If the enemy sees three palletized-load system trucks carrying 120-millimeter tank rounds leaving the BSA quickly, heading toward a certain task force's area of oper-

ations, it might be a tip-off that someone is short of ammunition. Weapons training also should be conducted at night, if possible, to take advantage of the cover darkness provides.

Careful Use of Ammunition (Supplies). "[T]he care which must be taken of ammunition and the method of using it are further characteristics of guerrilla warfare."[6] All armies have restrictions on available supplies, the care and management of which can contribute significantly to any operation's outcome. For example, wasteful movement of unneeded supplies can detract from a battle in the same way as can the absence of needed supplies. Supply bases or depots are also high-payoff targets.

Ammunition was Guevara's most critical supply item. It was only available from government forces, and it was quickly expended. Food, clothing and shelter were available from the local population, and weapons, taken from the government or guerrilla dead, had long, useful lives if properly maintained. But only small amounts of ammunition were available. Guevara trained his soldiers to fire only at certain targets and to never waste ammunition. Fire discipline and marksmanship were critical.

Ammunition is no less important. As one of the most industrialized nations on earth, the United States has an absolute advantage in available supplies. The ability to move a large amount of supplies rapidly is a key strength. However, there is needless waste of military assets, which causes support soldiers to expend unnecessary time and energy and places them in unnecessary danger if they must resupply a unit that could not forecast or manage its resources properly.

That the US Army is so powerful and fast compromises the logistic chain. The farther combat vehicles and troops move from their sources of supplies, the more resources are required to resupply them. Therefore, timely resupply from the forward supply brigade is critical. For example, a tank stationed at a road intersection still consumes fuel even while stationary because it must continue to run its engine to keep its battery charged. If the tank's wing-man is 10 kilometers away, the battalion's support platoon must drive farther distances more frequently to resupply both. In turn, the support platoon is exposed to greater risk and must be protected and resupplied as well.

Flexibility. "Another fundamental characteristic of the guerrilla soldier is his flexibility, his ability to adapt himself to all circumstances and to convert to his service all the accidents of the actions."[7] Flexibility is the ability to adapt to changing circumstances to take advantage of change. Guerrilla armies are usually forced to limit their operations to targets of opportunity early in their campaigns. This requires flexibility and the ability to take advantage of an unguarded government asset or military target.

No operation ever goes as planned, and the skill and wisdom to recognize changing circumstance can change defeat into victory. However, the ability to do this is only present if there is decentralized control and if initiative is encouraged at every level. The higher up the chain of command that information must travel before a decision can be made decreases exponentially the time available to use the information.

To maintain and employ flexibility, US forces must have the proper equipment and training to allow them to seize the initiative and take advantage of changing circumstances. Properly equipped vehicles enable soldiers to maintain contact with higher headquarters and monitor ongoing operations.

Flexibility is further developed through training soldiers to use their mental tools to maximize their physical tools. The ability to call for fire and close air support as well as to coordinate with other units must be taught to every noncommissioned officer (NCO).

Initiative is the most important tool that can be taught and nurtured. A commander, platoon leader or section sergeant must underwrite subordinates' honest mistakes. Soldiers must really believe their boss wants them to seize an opportunity. A battalion commander must ensure his soldiers know he believes in their ability to adjust to a changing environment. A battalion commander who believes in only centralized control could find that his elements are dead or lost and his vehicles out of fuel and ammunition.

Careful Study of the Ground. "[G]uerrilla-defended positions, when they have been selected on the basis of a careful study of the ground, are invulnerable."[8] The value of reconnaissance and preparation, map reconnaissance, terrain walks, rehearsals, familiarity with the patterns of the enemy and the local population and a relationship with the local population cannot be overstated. Guerrilla forces usually are familiar with the people and the terrain in which they operate.

The most useful aspect of a study of the ground is recognizing patterns. Most large organizations, especially military organizations, fall into patterns of conduct. Convoys leave and arrive; guards change shifts; and units receive supplies. Patterns can tell how long it takes a unit to react to an enemy attack and what weapons it will use. Guevara's guerrillas' familiarity with the area allowed them to always have the most reliable information.[9]

US forces must recognize that there is more to the ground than just dirt. During an LIC, they must remember that the local population will be close. They must know who lives in the area of operations, what their politics are, whether they are primarily urban or agrarian and whether operations are aiding or hindering them in their daily lives. Soldiers will be interacting closely with the local populace, so training must go beyond learning to yell "stay away from the wire."

Surprise and Fury. "The form of attack of a guerrilla army is also different; starting with surprise and fury, irresistible, it suddenly converts itself into total passivity."[10] Surprise is doing the unexpected and doing it rapidly—an action that gives no indication or warning when it begins or when it will end. However, surprise cannot be accomplished without mobility and flexibility. Also, movement at night increases flexibility and contributes to surprise.

Even with limited resources and personnel, Guevara insisted on maintaining the edge of surprise. Attacking government forces when they did not expect it was the only way to maximize limited resources. A critical part of his plan was to keep government forces guessing where he would strike next, forcing them to spread their resources thin to cover all, or the most probable, targets.

US forces can keep adversaries off balance by not establishing patterns. Units that establish routines that can be "read" by the enemy can fall victim to surprise attacks. In the mid-1990s, US Army Rangers in Somalia established a dangerous pattern by taking down buildings, thought to contain Somali warlords, in the same way every time. After seeing the US military continuously use the same tactics, the Somalis laid a successful ambush. Somali Colonel Ali Aden said, "If you use a tactic twice, you should not use it a third time."[11]

In 1999, a successful use of surprise occurred at the National Training Center in Utah. The opposing force (OPFOR) set a pattern of attacking the BSA with mortars about the same time every day. Their location was never the same, but their target was usually fuel tankers. The commander deduced the pattern and the next likely area from which the OPFOR would attack. He was right, and his troops destroyed the OPFOR mortar team.[12]

Learning by Example

Leaders can apply Guevara's principles to the ever-changing LIC/UW environment, which has several distinctive characteristics, as the following examples illustrate.

No front lines and no clearly defined battlespace, enemy areas or safe areas. An LIC is not limited to the linear battle; the enemy might come from all sides. Therefore, it is unlikely that the conflict will have defined enemy areas or safe areas. The danger to convoys or supply areas will be just as great as or greater than to infantry soldiers. With no organized uniformed army to defeat or terrain to hold, battles will be ones of individual initiative.

During the Afghanistan guerrilla war to repel the Soviet Army, the *Mujahidin*—Afghan rebels—roamed the countryside. They would choose an ambush site, destroy a convoy then disappear, forcing the Soviets to deploy more soldiers and armored vehicles on every convoy.[13]

Close proximity to local population. In an urban environment or countryside, the area of operations is usually tied to the civilian population. Protecting one civilian group from another requires a close relationship with the protected group. The mission will not be to defeat an enemy's standing army but to maintain peace between two ethnic groups or to support a newly democratic government. Proximity to civilians might also affect logistics, since many receiving and distribution centers will be located in heavily populated areas and might employ local citizens.[14]

Specialized supply requirements. Individual water sources, fresh food, automotive parts, humanitarian-aid items, nonlethal weapons and infrastructure supplies are all nonstandard supply items that might be needed in a low-intensity conflict. A smaller quantity of these items, relative to a conventional war, will be needed over an area far wider than on a conventional battlefield. The US Army discovered this while conducting military operations in urban terrain training. Special ladders and other climbing aids, as well as forced-entry tools, were required.[15]

Specialized requirements for building democracy, such as food, voting equipment and public address systems, might also be needed.[16] The USMC *Small Wars Manual* states, "In most small war situations, almost every accepted principle of warfare on a large scale is subject to modification due to the irregularity of the operation. It is this characteristic that sets the 'small war' in a class by itself. It is obvious then, that a successful supply plan in any small war theater must be ready to meet these irregular conditions."[17]

Greater requirement for individual or small-unit operations. During LICs, combat units are broken into smaller groups and spread over the width and depth of the area of operations. This altered battlespace requires a flexible, fluid supply-distribution channel because if combat units are not massed in small areas, conventional supply-distribution systems will not work. Support soldiers will have to travel longer distances to resupply the widespread combat units.

In the former Yugoslavia, US forces are currently confronting this problem. Since their mission is peacekeeping, forces are spread over a large area for maximum visibility, which creates considerable supply challenges.[18] Creation of flexible supply teams is needed to meet these new demands.

Decrease in US ability to optimize mass or use heavy weapons. US industrial power might not be used because of political constraints or it might be ineffective. For example, tanks that can destroy targets at 2,500 meters might be used as roadblocks, or bombers that can deliver tons of ordnance might not be used at all. Consider the following examples of ineffective firepower.

During France's attempt to defeat the Vietnamese communists from 1946 to 1954, they made considerable use of heavy artillery. However, they were surprised to discover that artillery had little effect on Vietnamese guerrillas. The Viet Minh—the predecessors of the Viet Cong—took cover until artillery barrages ceased then continued their attack. The Viet Minh also "hugged" French bases, keeping too close for the French to call in effective fire. The French also discovered that close air support was largely ineffective against the guerrillas.[19]

In another example, British soldier T.E. Lawrence directed Arab guerrilla warriors to avoid open battles with the Turks because the Turks outgunned them. He opted for attacks on supply and troop trains—areas where heavy firepower was absent.[20]

These examples reveal firepower limitations that could affect US logisticians' abilities to operate in an LIC area. With no heavy or effective firepower, guerrilla fighters might be more willing to risk confrontation, especially with less well-armed logistics soldiers.

Inability to distinguish friend from foe. Guerrilla fighters are civilians. If they are not carrying weapons, they are almost impossible to identify as adversaries. Civilians who are not guerrillas might be passing information to the enemy or to US forces. Each person will have loyalties, and some people will change loyalties daily.

The Russian occupation of Afghanistan provides many examples of "trusted" Afghan citizens committing acts of sabotage against the Soviets. In one instance, a Soviet officer's driver helped Afghan rebels kidnap the Soviet officer. In another, an Afghan employee at the communist party headquarters planted a bomb. After the explosion, and not being a suspect, she got a new job at Kabul University where she planted another bomb. Both bombs caused considerable damage and loss of life.[21]

An increase of nonaligned players. Apart from civilian populations, there are a number of nongovernmental organizations (NGO), government organizations from neutral countries, national and international businesses and religious organizations whose interests might be for, against or neutral to US interests.

The Center for Army Lessons Learned at Fort Leavenworth, Kansas, currently lists 70 NGOs operating in Kosovo alone.[22] While such organizations are for humanitarian reasons, how many could harbor a sniper or saboteur? How many might relay information about US forces if they felt it would further their interests? Also, simply conferring with representatives of extreme political organizations can sometimes lend them a legitimacy that could be detrimental to US interests.[23]

Changes in the military decisionmaking process and battle rhythm. Conventional US warriors are accustomed to a well-established planning and execution cycle known as battle rhythm. A brigade battle rhythm for a major operation is 32 hours for planning and preparation and 21 hours for execution.[24] At the NTC, the battle rhythm is one preparation day and one battle day, then the cycle repeats. In an LIC, many smaller operations might be required, each with varying time lines.[25] Therefore, the schedule that unit leaders have trained to throughout their careers might not apply.

The availability and use of advanced technology. Geographic positioning systems (GPS), night-vision goggles (NVGs), weapons, cellular phones and GPS jammers are available to anyone for relatively low prices and can be purchased from a military surplus catalog.[26] This availability of high-tech weapons presents a serious threat. Guerrilla armies might not be able to afford a tank, but they might be able to afford plastic explosives, NVGs and various small arms.

In a 1999 *Army Times* article, Colonel John Rosenberger, the NTC OPFOR commander, describes available technology: "For $40,000 I can go buy a GPS jammer from Russia. They put it on the market two months ago. It's an 8-watt jammer that will take down both [commonly used GPS] frequencies for about 200 to 250 miles. Well, that levels the playing field. . . . [S]houldn't we be training against the forces that create a loss of GPS capability? You bet."[27]

Training's Importance

A conventional army cannot be thrust into an LIC/UW environment without training or preparation. A UW environment is just that—unconventional. If soldiers are not trained or allowed to think for themselves, the US Armed Forces will lose. There are limited resources abroad and limited amounts of training time. Therefore, the US military must determine the correct training needed for tomorrow's battles and focus on it.

The military can prepare for changes in the plan, but the only way it can really prepare for unconventional war is to teach soldiers to take the initiative. Leaders must ensure that NCOs receive the proper resources and the confidence that they will be trusted with important missions.

US President John F. Kennedy said that unconventional warfare "is another type of war, new in its intensity, ancient in its origins—war by guerrillas, subversives, insurgents, assassins; war by ambush instead of by combat; by infiltration, instead of aggression, seeking victory by eroding and exhausting the enemy instead of engaging him. . . . [I]t requires in those situations where we must counter it . . . a whole new kind of strategy, a wholly different kind of force and therefore a new and wholly different kind of military training."[28] Kennedy's statement shows remarkable insight into the battles of the future. *MR*

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MR Insights

Functional Alignment of Army Branches: A Key for Change

Lieutenant Colonel Chuck Anderson, US Army

In June 1999, shortly after his appointment as Chief of Staff of the Army (CSA), General Eric K. Shinseki said his goal was "to provide strategic leadership [to] keep the Army the preeminent land warfighting force in the world."[1] He postulated six objectives:
- Increase strategic responsiveness.
- Develop a clear long-term strategy to improve operational joint readiness and to implement Joint Vision 2010 goals.
- Develop leaders for joint warfighting.
- Complete the full integration of Active (AC) and Reserve Components (RC).
- Fill all warfighting units.
- Provide for the well-being of soldiers, civilians and family members.[2]

Shinseki then set the azimuth for a more deployable, lethal force that would be properly manned and equipped to accomplish US national military strategy. Given the continuous and growing gap between funding and military requirements, this task would require looking hard at competing programs and capabilities and making difficult decisions on the nature of traditional Army roles and capabilities.

Fight to Win or Adapt to Win?

The Army's ultimate business is to fight and win the nation's wars. However, it is currently involved in many activities that do not match traditional roles. In 1997, Assistant Secretary of Defense John T. White, addressing the Quadrennial Defense Review (QDR) Board, said, "We are at a pivotal point in history where the Cold War recedes in the past and a new century rushes toward us."[3] The QDR challenges the Army to develop new strategy and capabilities for an era that will have fewer resources. According to White, this effort would involve some "hellish" choices and the only sacred cow is a strong defense.[4] To realize his vision and set the Army's fiscal course, Shinseki will have to make these hellish choices.

In *Fighting for the Future: Will America Triumph?* Ralph Peters suggests there is a fundamental asymmetry between the kind of military force we have and the kind we need.[5] Peters' underlying theme is that we are "preparing for the war we want to fight . . . not the conflicts we cannot avoid."[6] Clearly, Shinseki is taking steps to avoid this trap and is trying to bring strategic relevance and balance to the Army without risking the nation's peace and prosperity.

Changes in force structure and traditional roles are inevitable. Inherent parochialism and branch pride will be the most challenging hurdle to negotiate as the Army moves toward becoming a strategic force. As the Army modifies force structure and creates a doctrine tailored for tomorrow's conflicts, it must assess current branches and their contribution to warfighting.

On 22 April 1898, Congress provided that "the organized and active land forces of the United States shall consist of the Army of the United States and of the militia of the several States when called into service of the United States."[7] AC and RC organization and functions have evolved over time to meet the tasks required for "prompt and sustained operations on land."[8]

After World War II the Army's roles and missions were to defeat enemy land forces, seize and occupy terrain, defend land areas, shoot down aircraft, conduct amphibious and airborne operations, provide intelligence and sustain itself over long periods of time.[9] Indeed, the Army has met a range of challenges with competent, confident soldiers trained to perform specific functions that contributed to overall combat effectiveness.

Over time, functions and associated technology generated unique skills and competencies that gave birth to the various branches. The branches became platform-centric, gaining autonomy and specificity in warfighting. Current and forecasted threats, service roles and missions and technology influenced branch perpetuity and relevance, which led to plump budgets for operations and maintenance and future systems. Branch success was measured by the new weapon system on the horizon or an improved budget. Army branch traditions were on the brink of becoming impediments to efficiently linking resources (means) to how we intend to fight (ways). Slight changes in warfighting, training and maintenance are closely scrutinized for a change in branch structure, which could lead to a failure in branch relevance.

A Common Platform

If the Army adopts a common platform, the only significant difference will be the weapons and fire control systems used. A common platform eases maintenance and streamlines training and supply. Just imagine the military occupation skills and officer branches of Infantry and Armor merging to form one branch—maneuver—to groom officers to lead combined arms and mission-tailored battalions and brigades to accomplish the traditional maneuver functions of seizing and holding terrain and closing with and destroying the enemy.

Deep and close fires are coordinated and executed by the strike branch—an amalgamation of the current attack helicopter and artillery branch. Strike officers command units that shape the battlefield through interdiction by lethal and nonlethal means. Strike and maneuver packages are tailored for contingencies ranging from peacekeeping to a major theater war and can easily function as a force package for a joint task force (JTF). Maneuver and strike branches see battlespace in real time achieving information dominance, thereby providing opportunities for commanders to mass the effects of combat power vice massing personnel and equipment.

The branch or function that will significantly contribute to achieving information dominance is the information operations branch, which would combine signal and intelligence functions. Transmitting and receiving information through various media and interpreting and analyzing information is the information operations branch's core responsibility. It also provides red and blue arrays and terrain and weather information in support of maneuver and strike functions.

The ability to sustain a tailored formation for a specific mission is the responsibility of the sustainment branch, which incorporates all current personnel, maintenance, transportation, quartermaster, contractor and ordnance functions, and tailors logistic and transportation packages by shifting and tracking assets to support contingencies. This branch also fuses host-nation, nongovernmental organizations and allied contributions.

The force's multilayered, full-dimensional protection is the force-protection branch's responsibility. It combines air defense, chemical, military police and engineer branches. The force protection branch protects forces and facilities from attack while maintaining freedom of maneuver during deployment, employment and redeployment and provides active and passive defense measures to protect the force as well as the assets to ensure operational and tactical mobility.

From 13 to 5

An amalgamation of the 13 Army branches into five functional components opens constructive dialogue regarding the Army's warfighting formations: corps, divisions and brigades. From the five functional components, formations can be tailored and sustained for worldwide contingencies. The building-block approach to force packages could streamline overhead, such as headquarters, personnel and maintenance support. Most important, the Army functional alignment would further the formation of capabilities-based JTFs.

From a training perspective, the numerous schools also could be reduced to five. For example, Fort Knox, Kentucky, could become the maneuver center; Fort Bliss, Texas, would become the force-protection operational area. An officer's professional growth in each functional area would provide the Army a diverse officer corps for use in a wide range of positions.

The possibilities are endless when branches are combined and aligned functionally. Having purple-suit branches that serve all services might serve as an effective, yet cost-avoiding initiative. Legal and medical branches are prime candidates. Centralizing legal and medical functions across all services would ensure that these low-density, high-demand skills are best aligned with the needs of the military versus the needs of one service. Also, centralized training and modernization would benefit the military force.

If the military is successful in this endeavor, the signal and military intelligence branches also would be considered as a purple-suit functional area. The most logical benefit would be ensuring a common command and control (C^2) architecture with supporting functional inputs from maneuver, strike, force protection, information operations and sustainment. Battle management, C^2, "red" force and terrain and weather analyses would be stream-lined when all signal and intelligence leaders are educated and trained from one source and exposed to the same hardware and software tailored for specific service mission areas. A common, relevant air, ground and sea picture would enhance the effective and efficient use of all service capability in accomplishing campaign objectives.

Functional alignment would reduce parochialism and enhance change in force structure and how the force intends to fight. Traditional branch insignia could be replaced with an insignia exemplifying that each person is a soldier first, trained and equipped to perform a range of functions across the spectrum of conflict.

In light of projected threats, the international and domestic environment and the missions that can be expected, change is on the horizon. All services are adjusting traditional roles by expanding capabilities whether forward from the sea or from space. The race to be more relevant has begun. So, the more capabilities-based the Army becomes, the more relevant it will be in this world of uncertainty. **MR**

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Engagement Force:
A Solution to the Readiness Dilemma

Colonel Timothy D. Cherry, US Army

The military has an important role in engagement–helping to shape the international environment in appropriate ways to bring about a more peaceful and stable world. The purpose of our Armed Forces, however, is to deter and defeat threats of organized violence to our country and its interests. While fighting and winning two near simultaneous wars remains the foremost task, we must also respond to a wide variety of other potential crises.

— GEN John M. Shalikashvili[1]

The Soviet Union's sudden collapse sent many analysts scrambling to come up with new post-Cold War security assessments and strategies. While there was no consensus as to the greatest threat facing US interests, it was evident the US must become a leader in promoting peace and preventing regional conflict.

One new concept that emerged was engagement, which shapes the international environment by promoting regional stability and the peaceful resolution of problems. A recent National Security Strategy document states, "Today's complex security environment demands that all of our instruments of national power be effectively integrated to achieve our security objectives. . . . American leadership and engagement in the world are vital for our security, and our nation and the world are safer and more prosperous as a result."[2]

The new concept led to a revised national military strategy that centered on the terms *Shape, Respond* and *Prepare Now*. General John M. Shalikashvili says, "The National Military Strategy is based on these concepts. It builds on the premise that the United States will remain globally engaged to *Shape* the international environment and create conditions favorable to US interests and global security. It emphasizes that our Armed Forces must *Respond* to the full spectrum of crises in order to protect our national interests. It further states that as we pursue shaping and responding activities, we must also take steps to *Prepare Now* for an uncertain future."[3]

As the Army struggled with promulgating and implementing the new engagement strategy, it was also completing a major downsizing initiative slated to reduce the active Army by 300,000 (from 795,000 to 495,000) and the number of divisions from 18 to 10. What, in effect, happened was the introduction of a new engagement strategy that required increased operational force deployments, but with less force structure with which to execute the new strategy.

Ironically, "the Department of Defense's Bottom-Up Review (BUR) in 1993 based its operational requirements on fielding forces sufficient to win two nearly simultaneous major regional conflicts (MRCs) and to provide overseas presence. In determining force requirements, the BUR assumed small-scale contingencies (SSCs) could be handled as lesser cases by forces earmarked for MRCs, without any negative effect on their capabilities for the primary mission. Since 1989, however, the number of small-scale conflicts, humanitarian emergencies and other similar contingencies has grown from 16 during the Cold War period to 45 from 1989 to 1997."[4] Army leaders did not foresee the Army's increased participation in, and the long duration of, SSCs and the resultant high operational tempo (OPTEMPO). Nor did they foresee their impact on Army readiness.

The Army determined that general-purpose forces would be used to accomplish engagement activities and fight major theater wars (MTWs). According to the 1997 Quadrennial Defense Review (QDR), "US forces must be multimission capable and . . . able to transition to fighting [MTWs] from a posture of global engagement—that is, from substantial levels of peacetime engagement overseas as well as multiple concurrent smaller scale contingencies."[5] However, the Army is structured for warfighting—not SSCs—and must tailor forces substantially for most contingency operations.

Because Army forces train predominately on conventional warfighting tasks, units identified for most contingency operations require specialized training before deployment. Predictably, while units train for and execute SSCs, warfighting skills atrophy and combat proficiency declines. More important, while units are caught in the cycle of preparing for, executing and recovering from SSCs, they are essentially unavailable for MTWs. This recent phenomenon threatens the Army's ability to successfully accomplish its primary mission—fighting and winning two near simultaneous MTWs.

At the center of the Army's readiness dilemma is the mismatch between current mission requirements and forces available. Clearly, General Eric K. Shinseki, Chief of Staff of the US Army, recognizes the Army's readiness and engagement challenges, as evidenced by his recent mandate to fill divisions to 100 percent strength and to stand-up two experimental transformation brigades at Fort Lewis, Washington, specifically designed for SSCs.

The Army is headed in the right direction. However, these initiatives alone will only slow the downward-readiness trend, not reverse it. Recent congressional interest and the upcoming QDR process offer a window of opportunity for the Army to present a viable solution to the readiness dilemma.

Decline in Warfighting Readiness

Before the Gulf War, Army warfighting units (divisions, brigades and battalions) focused primarily on fighting and winning the nation's wars. Reasonable predictability enabled units to conduct long-range planning and implement Cold-War training doctrine.

Four to eight months before the start of the fiscal year, divisions, brigades and battalions produced annual command training guidance with attached training calendars. Quarterly training briefings, which focused on warfighting mission essential task list (METL) assessments, were conducted 30 days before each quarter. Quarterly training plans, designed to improve METL proficiency, were reviewed, modified and eventually became contracts that higher-level commanders approved.

For the most part, units were directed and resourced to conduct required annual external evaluations at battalion and company levels. Maneuver brigades and battalions trained extensively before combat training center (CTC) rotations, and performances reflected this training. Clear mission focus and frequent training events at each echelon enabled units to sustain mission proficiency and remain within the prescribed band of excellence. The Army entered Operation *Desert Storm* as the finest trained force ever fielded by the United States. Its performance in combat validated Army training doctrine.

Because their training was adequately resourced, units achieved a remarkable state of combat readiness. They focused on their warfighting mission and planned and executed their training schedules with reasonable predictability. Unfortunately, this is not now the case. Shortly after the Gulf War ended, the US government cashed in its Cold War peace dividend by reducing force structure and defense budgets. Coping with reduction in forces and concurrent increases in OPTEMPO, units are finding it more difficult to follow the Army's training doctrine.

The Army's combat training centers include the Battle Command Training Program, the National Training Center (NTC), the Joint Readiness Training Center (JRTC) and the Combat Maneuver Training Center (CMTC). These training centers provide the best training a unit can experience short of actual combat. At the core of all training centers is a highly trained cadre of observers and controllers (O/Cs), a professional and competent opposing force (OPFOR) and a state-of-the-art instrumenta-

tion system that can replay what actually happened during each simulated battle. It comes as no surprise that combat training centers are widely credited for the Army's superb performance during *Desert Storm*.

Unit performance during training-center rotations remains the key measure of warfighting proficiency in the active Army. Unfortunately, recent reports coming out of combat training centers highlight the Army's declining readiness posture.

In early 1999, the Army inspector general told senior leaders that "entry-level performance at the combat training centers continues to decline."[6] He cited lack of resources, absent leaders, OPTEMPO, personnel turbulence and defused mission focus as predominate reasons for the decline. According to NTC leaders, declining training budgets year after year, coupled with the demand of noncombat missions overseas, have left combat arms units less trained. "Leaders [at NTC] are unanimous in their view that units are arriving at a much lower entry level than they were just a few years ago."[7]

Negative Impact

The negative impact of the lack of training is noticed at all levels. A mechanized infantry platoon sergeant with 12 training center rotations noticed the difference between previous and current rotations: "[In the past,] we'd spend almost six months training up. Once we got [to NTC], we were ready to go."[8]

The erosion of basic warfighting skills is the most obvious indicator of less-frequent training. According to a former O/C and OPFOR commander, there is an absence of fundamental skills and abilities at every level. Many believe the only solution to the problem is to increase the frequency of training.[9] One of the primary reasons units are showing up at CTCs less trained is the adverse impact of SSCs on the active Army.

SSCs' most obvious impact on the Army is the decline in warfighting proficiency of units earmarked for SSC operations. According to the Department of Defense, the greatest impact of participation in an SSC operation comes from removing a unit from its normal training cycle. Units require repetitive, cyclical col-

lective-training events using maneuver areas, gunnery ranges and simulations in order to maintain combat capability.[10] "Combat arms units (Infantry, Armor, Artillery) that are heavily equipment-dependent face the greatest combat skill erosion when they participate in a peace operation, particularly when they participate without their equipment and perform tasks that are significantly different than the combat tasks to which they train."[11] A recent Congressional Budget Office study on the effects of peace operations found that "Army units have shown a clear drop in their training readiness for conventional war after taking part in peace operations."[12]

Recently, the 1st Cavalry Division deployed to Bosnia to conduct peacekeeping duty for one year and did not expect to reestablish and test required high-intensity warfighting skills until March 2000–five months after returning from Bosnia. Thus, one of the Army's premier heavy divisions expected to be affected for nearly two years by its participation in the Bosnia mission and would not be immediately deployable for wartime tasking.[13]

Further complicating the readiness issue are the second- and third-order effects on other units. According to a recent Center for Army Lessons Learned (CALL) study, sustained SSC operations affect up to three times the actual deployed troop strength. Replacement units usually require from two to six months advance notice for train-up. Once notified, these units normally stop warfighting training to focus on the SSC mission. Once they are pulled out of the conventional training cycle, warfighting readiness begins to erode and continues to decline until the unit returns from the SSC mission. Units returning from SSC operations face decreased readiness for up to six months the length of time it took to recover and reenter the normal warfighting training cycle. So, for each ongoing SSC, there might be up to three times the number of soldiers and units at various states of warfighting readiness and not readily available for participation in an MTW.[14]

SSC deployments also adversely affect stay-behind units. They might

have detached a slice to support the SSC operation or provided fillers to bring the deployed unit up to strength. This could have a minor effect, if just a few soldiers are involved, or a major effect, if subordinate units deploy and the unit can no longer accomplish its wartime tasks.

Stay-behind units also frequently loan vehicles and equipment to the deploying force, and soldiers in units staying at home station must conduct garrison support more frequently, further reducing sustainment-training opportunities. Under the surface, peace operations can significantly affect short-notice deployability and readiness of many other units.[15]

General-Purpose versus Specialized Forces

The 1997 QDR states, "US forces must be multimission-capable, and they must be organized, trained, equipped and managed with multiple missions in mind."[16] The Army's rationale is that peace operations—SSCs—should not detract from a unit's warfighting focus or readiness. On the other hand, the Army recognizes that a significant number of tasks might be different from a unit's wartime METL and that specialized training might be required depending on the particular mission. In these cases, the Army's training philosophy for peace operations is "just enough and just in time."[17]

Units earmarked for SSC missions are normally untrained on most SSC tasks and require extensive training and certification before deployment. Unfortunately, in some cases the mission will not wait, and units are required to deploy so quickly they receive virtually no specialized SSC training. This brings into question the ability of those units to effectively accomplish their missions. The difficulty of force tailoring and the complexity of SSCs have challenged the Army's use of general-purpose forces for SSCs.

As the number of peace operations has increased, so has the complexity of these operations. The nature of today's SSC operations is quite different from conventional warfighting. According to Lawrence A. Yates, "The OOTW [operations other than war] battlefield is more likely to be characterized by the non-linear disposition of troops, the absence of a clearly defined . . . enemy and the presence of noncombatants. The preferred responses to the challenges presented generally fall within the realm of diplomacy, not combat."[18]

Today's peace operations are likely to include tasks such as supervising elections, protecting specified safe areas, interacting extensively with local people, guarding surrendered weapons, ensuring the safe delivery of supplies and rebuilding government agencies or police forces.[19]

Many tasks are much different from those normally associated with conventional warfare, particularly for combat arms units. The fundamental differences between most warfighting and SSC operations are the divergent tasks associated with each. The former requires destruction and killing, the latter requires peace and diplomacy.

In the past, it was generally believed combat units could sustain proficiency on both types of tasks. Recent experience proves otherwise. Therefore, since it is widely accepted that most combat arms units cannot sustain a high level of readiness on both warfighting and SSC tasks, it follows that without specially trained forces available, the Army must accept risk on short-notice SSC operations. One example occurred in 1992. The 10th Mountain Division (Light) (MD(L)) received less than three weeks' notice before deploying to Somalia and spent most of that time executing deployment standard operating procedures (SOPs).[20]

It is difficult to assess the effect that receiving or not receiving peace-operations training can have on a unit's ability to perform its mission. Many factors are involved, including the nature of the operation and the unit's experience. Also, measures of success for a peace operation are not easily identified. Still, "virtually every nontraditional operation case study involving combat units is replete with a litany of complaints that the troops were not prepared or trained to perform many of the noncombat tasks assigned to them. Such tasks included distributing food, manning checkpoints, collecting money for weapons, quelling civil disturbances, reassuring local inhabitants, negotiating with civic leaders, arbitrating between contending factions and rebuilding infrastructure. The 'warrior' mind-set so essential to combat can be the source of anger, confusion, frustration and failure when applied to OOTW operations."[21]

Another change in SSC operations is the introduction of a number of nonlethal systems to help reduce civilian casualties, avoid unnecessary property damage and help protect US personnel.[22] Nonlethal weapons present unique legal concerns and require different rules of engagement (ROE) than Army forces traditionally use. Some systems include sticky foam, aqueous foam, road spikes, stinger grenades, CS grenades and a number of nonlethal munitions (rubber pellet cartridges, bean bag rounds, rubber bullets and wooden baton rounds).[23] This rapidly developing nonlethal system technology requires new doctrine and tactics, techniques and procedures (TTPs) and will make future SSC training even more complex.

The Army has also been challenged with providing the right kinds of forces for both SSC operations and MTWs. The Army's current Cold-War force structure is designed to accomplish its most challenging mission—to fight and win in two MTWs. Forces well designed for that mission are normally not as well designed for SSC operations, even though such operations are seen as less difficult.[24] During Operation *Joint Guard* in Bosnia and Task Force *Able Sentry* in Macedonia, mechanized infantry, armor and cavalry units left their organic tanks and Bradley's behind and operated in Up-Armored wheeled vehicles and lightly armored personnel carriers.

Most combat arms units require extensive force tailoring before conducting SSC operations, which predictably affects their ability to rapidly form and deploy. Predictably, once engaged in an SSC operation, disengagement in the event of an MTW would be at best extremely challenging to execute. Some of the required units for SSC operations include military police, civil affairs, psychological operations (PSYOP), engineer, transportation, quartermaster, water

purification, signal and military intelligence (MI). These combat support (CS) and combat service support (CSS) units are in high demand for SSC operations and incur a disproportionate share of the Army's increasing OPTEMPO. Many of these units are in Reserve Components (RC) rather than the active Army, which further exacerbates the problem.

Some military and civilian leaders have raised concern about the high deployment rate and OPTEMPO of low-density units and the deleterious effect on morale and retention.[25] Specially organized engagement/SSC forces would eliminate the frequent RC tailoring and training challenges by adding these high-demand CS and CSS forces to the active Army.

Engagement Force: Organized, Trained and Ready

A recent Congressional Budget Office (CBO) paper examined four options for restructuring or expanding the active Army to improve its ability to conduct peace operations while staying ready for conventional war (see table).

Option IV increases the active Army by 20,000 and creates four brigades and three standing headquarters designed specifically for peace operations.[26] If this option were selected, it would certainly alleviate much of the SSC burden from the existing active Army force structure. However, even this contingency force would require augmentation during heavy SSC activity. With an

average of 8,500 soldiers deployed since 1990, a force of 20,000 would provide a rotation base of almost 2.5 to 1, which is less than the Army's preferred 3 to 1 ratio.[27]

Option IV would clearly improve the Army's ability to conduct SSCs, but more important, it would increase the Army's capability and readiness for conventional war. However, this option would add significant costs to the defense budget, and SSC forces would be subject to a high rate of deployment.[28] Option II creates a separate SSC force, but the four brigades come from the existing active Army force structure.

An engagement force (EFOR) is a solution to the readiness dilemma. EFOR would be a corps-size force designed and focused solely on SSC operations, particularly OOTW. EFOR headquarters' primary functions would include training and evaluation, command and control and doctrine development.

EFOR would become the Army's proponent for SSC operations and the repository for SSC lessons learned and TTPs. It would establish a school, run by an experienced cadre of officers and noncommissioned officers, that would focus exclusively on mastery of SSC missions and tasks. Primarily a force-providing headquarters, EFOR would devote its full attention to preparing subordinate units for SSC missions through oversight, training and evaluation. EFOR would be subordi-

nate to Forces Command and once committed, its deployed task forces would be attached to a regional commander in chief or subordinate joint task force for the duration of the SSC mission.

EFOR would command two specially organized infantry divisions that would perform many of the same functions as EFOR, albeit at a lower level. Organized specifically for SSC operations, the two divisions would each command three infantry brigades, an MP brigade, engineer brigade, aviation brigade, division support command, tank battalion, signal battalion, military intelligence battalion, civil affairs company and PSYOP company. The divisions would not require organic division artillery, a divisional cavalry squadron or an air defense battalion.

The centerpiece unit would be the infantry brigade, which would look essentially like the prototype interim brigade combat team (IBCT) and would form the base element of the deploying task force. The IBCT would receive augmentation from division troops based on mission, enemy, terrain, troops, time and civil (METT-TC) considerations and would deploy as a tailored brigade task force. Because of the decentralized, complex and politically sensitive nature of most SSC operations, brigadier generals would command each of the three IBCTs. The IBCT would become the force of choice for US participation in

Four Illustrative Approaches to Improve the Army's Conduct of Peace Operations

Approach	Changes	Costs or Savings (Millions of 1999 $)	
		One-time	Recurring
Option I: Cycle the Readiness of Some Active Army Units	Select three existing active Army brigades; cycle each through high state of alert every six months; rely on alert brigade to carry out peace operations.	na	-2
Option II: Reorganize Existing Active Army Forces for Peace Operations	Designate four existing brigades to carry out peace operations, and create three standing headquarters to lead them. (Increase size of active Army by 720 to 900.)	30	90
Option III: Convert Some Combat Units in the Active Army into Support Units	Convert one active-duty heavy division into support units.	940	-60 to -210
Option IV: Add Forces to the Active Army for Peace Operations	Create four brigades designed to carry out peace operations and three standing headquarters to lead them. (Increase size of active Army by 20,000.)	na	1,900

unilateral, bilateral and multilateral SSC operations.

With the capability for six brigade task forces, EFOR would be able to sustain one or two simultaneous SSC operations indefinitely and three or more for shorter duration. Ideally, EFOR could employ the 3 to 1 concept within each division–with one brigade executing, one preparing for and one recovering from an SSC operation. This would also minimize deployment frequency and allow for sustainment training at home station. Uncommitted EFOR elements could also be used by warfighting CINCs to execute theater engagement plans (TEPs).

It is important to emphasize that EFOR units would still maintain their warrior spirit and capability to execute small-unit combat operations. However, the emphasis on large-scale combat operations would be reduced to allow for more training on mission essential noncombat tasks. EFOR headquarters elements would become experts in civil-military, multinational and information operations. Each subordinate headquarters belonging to EFOR would devote full attention to studying doctrine and TTPs and preparing for potential SSC operations. Personnel serving in those headquarters would become specialists in SSC operations. All required CS and CSS forces would be in the active Army and be organic to EFOR. Organized, trained and ready for small-scale contingencies, EFOR would be prepared to respond to any short-notice contingency in support of national security interests.

Who would want to join a peacekeeping force that is always deployed? EFOR would be manned by volunteers. Although it is true that EFOR units would deploy more frequently than the rest of the Army, volunteers should always exceed requirements. People will volunteer for EFOR to participate in real-world missions, and to receive the increased pay associated with hazardous duty, among other reasons. Clearly EFOR is not for everyone, but many would enjoy the challenges and sense of accomplishment associated with OOTW.

Option IV suggests an increase of 20,000 in the active Army to create four specialized brigades and three standing headquarters specifically designed and designated for peace operations.[29] EFOR would require nearly twice that amount to field the corps headquarters, school cadre and two divisions. Although there are a number of possible solutions to obtaining the required resources, I offer the following recommendation.

EFOR should be formed from a combination of new and existing units. The corps headquarters, school cadre and one of the infantry divisions should be created as new units from the increase in Army end strength by 20,000. The 10th MD(L) would round out EFOR. The division would require significant restructuring, but its extensive SSC experience would enable it to transition rapidly. This option would increase active divisions to 11, with two devoted to SSC missions and the remaining nine and RC forces to MTWs.

Could EFOR work within existing authorizations? It might work better than the Army's current strategy of sharing SSC missions across the board. If EFOR were to be formed entirely from existing units, then I Corps, the 10th MD(L) and the 25th Infantry Division would be the most likely candidates. This would still leave eight active divisions (six heavy, the 82d Airborne and the 101st Air Assault) and all RC forces for MTWs.

As Readiness Declines

The Army's MTW readiness posture continues to decline because of increased small-scale contingency requirements. Current strategy of rotating SSC missions across the Army is suspect; it not only sends novices to execute highly sensitive SSC missions, it disrupts the precarious conventional training cycle that enables combat units to sustain warfighting proficiency. These observations are becoming more and more obvious to O/Cs at the Army's combat training centers.

Unfortunately, the real readiness impact will not be clearly visible until the Army is faced with another war. We cannot afford to wait until then. With a more specialized approach, the Army can kill two birds with one stone by providing professionally trained forces for SSCs while maintaining the level of conventional readiness required to successfully execute the two-MTW strategy.

With a trained and ready EFOR, the Army will be better able to implement the nation's engagement strategy and respond to short-notice contingency operations, which could help solve the Army's current readiness dilemma. Its implementation will not be easy. It will require a change in our culture, support from Congress and acceptance from top to bottom. However, implementing EFOR would effect a more efficient Army that could truly achieve full-spectrum dominance. **MR**

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Building the Reserve Objective Force

Colonel Gary C. Howard, US Army Reserve, and Major Gregory K. Johnson, US Army Reserve

In his statement, "The future is no longer what it used to be," Elie Wiesel, Winner of the 1986 Nobel Peace Prize, succinctly describes the state of the US Army over the last several years. The increase in regional conflicts after the end of the Cold War has radically changed the focus of the nation's defense forces. Although much of the objective force is still in the development phase, the US Army is rapidly evolving its legacy force into an objective force that can ensure future security.

The US Army Reserve (USAR) is also changing to ensure that it can fulfill its role. And, even though we do not know exactly what the future USAR will look like, there are specific features that the reserve objective force must have. Because it is a continuing process, we need not wait to incorporate some of these changes.

USAR Readiness

USAR readiness is a direct function of training and operations. A lack of ongoing, high-quality training does not translate simply into untrained reservists. In the end, it means no reservists. If they do not receive challenging training, they will simply quit. Thus, the reserve objective force must develop new ways to improve training and to support soldiers and units.

The US Armed Forces have recently undergone a quiet revolution that makes Reserve Components (RC) ever more critical. More than half of the Army's total strength and nearly two-thirds of its combat service support (CSS) capability—medical, supply, maintenance and transportation—come from USAR and the Army National Guard (USNG) units. The USAR is particularly heavily invested in CSS. In fact, the Army can no longer conduct normal operations, let alone go to war, without the USAR.

Training Soldiers

New demands have changed the meaning of being in the USAR. The old formula—two weeks of annual training and one weekend per month—is not sufficient to ensure adequate readiness. Aggressive mission-focused training must be conducted throughout the year at every drill weekend. Annual training must focus on real-world support missions and integrated multi-echelon exercises.

The first requirement for high-quality inactive duty training is to have an adequate concentration of soldiers, units and equipment. This is often difficult in an RC that is geographically disbursed. To remedy this, we propose that the Army establish a series of facilities called Army training sites (ATSs), which would position a critical mass of units, soldiers and equipment at regional branch-specific training facilities. ATSs could leverage other local resources, such as large population centers for recruiting and proximity to like units from other services and natural features with which to enhance training and readiness. Collocating functionally related units would enhance the effectiveness of distance learning and communication with doctrine schools. ATSs would also provide a valuable training site for Active Components (AC) and a means to promote joint training for AC and RC soldiers. Integrating AC soldiers into RC training would greatly enhance the quality of training for both.

Of particular concern is the lack of intensive, high-quality collective training needed by officers and noncommissioned officers (NCOs). Although the Army school system does a great job training individual soldiers, it must improve the competence and experience of officers and NCOs so they can work successfully at battalion, brigade and division levels. Intensive, year-round training in operations and operational planning must be targeted to key collective training events. Planning and preparing for these events would be accomplished by aggressive collective staff training during weekend drills.

This work would combine the Army's deliberate planning process with periodic command post exercises, field training exercises and other drills at the home station or ATS.

The Army currently suffers from a lack of collective-training opportunities to exercise units at the correct doctrine level. Few operations exist for even a battalion-level headquarters, and in those few, training benefits are often eroded by the philosophy that the soldiers will "get the idea." Unfortunately, they might not get the right one.

Computer simulations offer one cost-effective solution for training. Simulations are rapidly becoming more realistic and bring units and soldiers closer in a virtual world. However, all headquarters need to periodically experience operations using real equipment. The USAR needs to develop new exercises and conduct an overall review to ensure that funded exercises still provide adequate training at all levels.

Some of the best training that reservists get is with their AC counterparts. Outstanding opportunities based on real-world missions often come with AC planning windows of from 90 to 120 day. However, this limitation often runs afoul of the longer USAR planning and budgeting cycle, and many RC units must forego good training.

Supporting Soldiers

To make high-quality training a reality in the objective force, soldiers and units must be well supported. The administrative burden on most USAR commanders, particularly company commanders, is enormous and seriously detracts from their ability to conduct training. Any assistance—more full-time staff or better automated systems—would conserve scarce resources, eliminate training distracters and free commanders to focus on readiness and training.

Soldiers also need some direct support. Many RC soldiers are now provided housing during drill

weekends, and many reserve centers provide quarters to soldiers at little or no cost. This benefit has contributed to retention and morale, especially for younger soldiers.

Another place where investment bears large dividends is in travel expenses. Many soldiers travel long distances to drill sites, and concentrating resources at ATSs will increase these numbers. Mitigating travel costs is essential to the entire proposal. Restoring the ability to deduct travel expenses from federal income taxes would be a good first step. Some direct reimbursement for travel expenses is the logical step beyond tax relief. Housing and travel costs would be offset by gains in recruiting and training, particularly for highly skilled soldiers such as medical professionals.

USAR readiness can be immediately improved on another level as well. The USAR includes several of the Army's most senior functional headquarters, such as the 143d Transportation Command, the 412th Engineering Command, the 311th Corps and the Support Command. Commanding generals of these organizations depend on officers and senior NCOs who live nearby or who can pay their own way to man their staffs. The Army needs the best staff officers regardless of commuting distance or their ability to pay their own travel expenses.

The objective force will also have to redefine the relationship between reservists and their families and employers. The old formula of one weekend per month and two weeks each year has been replaced—many reservists routinely spend far more time than that. Family and career pressures are rapidly reducing the number of soldiers willing to participate. As a result, readiness suffers.

Army Training Site–Transportation

On 2 December 2000, the USAR formally dedicated the Mare Island Army Reserve Center at Vallejo, California. The center incorporates several of the characteristics of the vision of the reserve object force and is a prototype of an ATS–Transportation. The Transportation School selected Mare Island to be its West Coast instructional facility for watercraft military occupation specialties and is locating the Army's second state-of-the-art watercraft bridge simulator there. The concentration of soldiers, equipment and other resources will result in outstanding training synergies to support individual and collective training.

Initially, this unique training facility will be home to eight units, over 700 reservists and 45 full-time employees, all focusing on various aspects of transportation, including port operations and construction, cargo transfer and watercraft.

The center will provide soldiers proximity to outstanding training opportunities in real-world missions conducted at the Military Ocean Terminal; Concord, which is the Army's West Coast ammunition port; the Port of Oakland, which is a major port of embarkation during mobilizations; and San Francisco. The Bay Area also includes a substantial number of transportation-related units and facilities in the other services, access to the Maritime Administration reserve fleet, world-class harbors and the nation's fifth largest metropolitan area.

The Mare Island Center has also taken significant steps to support soldiers. Billeting is available at no cost. A combined personnel and administrative center relieves commanders of a substantial portion of nonmission-focused administrative responsibilities. Similarly, some supply functions have been centralized. A provisional holding company oversees in-processing and trains pre-initial active duty for training (IADT) soldiers in basic soldier orientation. The company serves as the primary interface with recruiting command and school brigades and ensures the publication of timely and accurate orders. These strategies conserve scarce resources and eliminate training distracters. Commanders are freed to focus on readiness and training.

We Must Change and Adapt

As the Army continues to adapt to the world situation, the USAR will also change. Some of the critical elements of the reserve objective force can be identified and implemented now as part of a reserve intermediate force, but we will need to think outside the box to ensure that USAR training and support will be adequate to prepare units for critical roles in the nation's defense. *MR*

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MR Review Essay

The Mystery of Capital

LTC Geoffrey Demarest, US Army, Retired

Those who want to keep up with trends in foreign economic development theory, but do not know where to begin, should read Hernando De Soto's *The Mystery of Capital: Why Capitalism Triumphs in the West and Fails Everywhere Else* (Perseus Books Group, New York, 2000).

De Soto says, "Leaders of the Third World and former communist nations need not wander the world's foreign ministries and international financial institutions seeking their fortune. In the midst of their own poorest neighborhoods and shantytowns, there are trillions of dollars ready to be put to use if only the mystery of how assets are transformed into capital can be unraveled." De Soto's arguments, which are sound, clearly presented and backed by diligent, extensive primary research, extend the free-market theory he first outlines in *The Other Path: The Invisible Revolution in the Third World* (Harper & Row, New York, 1989), which gained him international recognition.

Capital . . .

De Soto and his team of researchers documented exhaustively the fact that for the poor to advance materially they must be able to create capital. And, in most developing countries they cannot. One result can be violent class confrontation. De Soto says, "Class confrontations in this day and age? Didn't that concept come down with the Berlin Wall? Unfortunately, it did not. What the West calls 'the underclass' is [elsewhere] the majority. And in the past, when their rising expectations were not met, that mass of angry poor brought apparently solid elites to their knees (as in Iran, Venezuela and Indonesia). In most countries outside the West, governments depend on strong intelligence services, and their elites live behind fortress-like walls for good reason."

As Property . . .

The reason for an inability to create capital—with consequent class warfare—can in part be found in a lack of formalized property regimes, which in advanced economies survey, record, protect and represent property rights. According to De Soto, "In the West . . . every parcel of land, every building, every piece of equipment or store of inventories is represented in a property document that is the visible sign of a vast hidden process that connects all these assets to the rest of the economy." Because this formalized property culture does not exist for the masses of the world's productive poor people, "most people's resources are commercially and financially invisible. Nobody really knows who owns what or where, who is accountable for the performance of obligations, who is responsible for loses and fraud, or what mechanisms are available to enforce for services and goods delivered." The upshot of a failure to create precise, reliable documentation of property rights, property courts, title insurance, brokerage laws and so on, is a world of "dead" capital. Assets might be literally and measurably in trillions of dollars, but they cannot attract investment.

Equals Prosperity

De Soto does not offer a magic formula, but it is refreshing to read a book on international economic theory without the eyes growing heavy and without suffering tired recommendations about forgiving debts or teaching peasants how to grow more catfish and chick peas. Yet, his book is more than a creative excursion into the dry realm of international developmental theory. His perspective is a powerful, unavoidable challenge to any developmental strategy or project that does not embrace the question of broad-based capital formation.

Why place this book on your military professional reading shelf? For one thing, identifying, mapping, documenting and arbitrating property interests will become a mandatory function of stewardship in places where constabulary interventions occur. Parallel works, such as John P. Powelson's *The Story of Land: A World History of Land Tenure and Agrarian Reform* (Lincoln Institute of Land Policy, Cambridge, MA, 1988), highlight the correlation between civil violence and informality in systems of property ownership. Property, as a theme within the study of violence and conflict resolution, is on the ascent; the linkage between unprotected property rights and violated human rights is being reasserted everywhere.

De Soto's book provides efficient insight into the relationship of material progress, property and human rights in many failing lands. It includes a matured set of specific actions for enlivening dead capital and establishing the legal and administrative framework for mass economic success. **MR**

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Lions Led by Donkeys? Haig's Command Reappraised

Lieutenant Colonel Scott Stephenson, US Army

In the past 20 years there has been a revival of interest in World War I, which has resulted in a significant revision in the understanding of how the war on the Western Front was fought. Through most of the last century, the view of the fighting in Belgium and France was one of futility and stagnation. In the 1980s, historians Shelford Bidwell, Tim Travers and John Terraine prodded us toward a different view, asking that we consider the time from 1914 to 1918 as a period of impressive innovation.[1] The interpretative wave they launched reached high tide recently with Williamson Murray's bold assertion that World War I is *the* "Revolution in Military Affairs" of the 20th century.[2]

The renewed interest in the Great War is accompanied by an effort to rehabilitate the much-maligned men who led the armies on the Western Front. For years historians have looked on senior World War I leaders as "chateau" generals, who hid in the rear while their blunders caused thousands of soldiers to die amid mud, blood and barbed wire.

Against the persistent perception of armies being "lions led by donkeys," recent scholarship increasingly reveals that many World War I officers worked doggedly, often creatively, to overcome the tactical problems that had led to stalemate and trench warfare.

The German officer corps of 1914-1918 has been the chief beneficiary of this rehabilitation. US historians Tim Lupfer, Bruce Gudmundsson and David Zabecki emphasize the role of military culture in encouraging tactical innovation and adaptation in the Kaiser's army.[3] However, as these historians celebrate Teutonic military excellence, they cast the British Expeditionary Force (BEF)

into the role of foil and victim. This is explicitly the case in Martin Samuels' *Command or Control, Command, Training, and Tactics in the British and German Armies, 1888-1918*.[4] Samuels makes the BEF look hapless in comparison with the efficient Germans. Travers blames a flawed military culture for much of the suffering and frustration endured by the British army on the Western Front.

A reaction was inevitable. Led by British scholars, a number of historians have counterattacked the perception of flawed leadership and institutional ineptitude within the British army. Three books representative of the concerted effort to reevaluate the BEF's tarnished image are *Amiens to Armistice: The BEF in the Hundred Days' Campaign,* by J.P. Harris with Niall Barr; *Haig: A Reappraisal 70 Years On,* edited by Brian Bond and Nigel Cave; and *Seeking Victory on the Western Front: The British Army and Chemical Warfare in World War I,* by Albert Palazzo.[5]

Harris and Barr's book is a straightforward campaign narrative that covers the British Army's greatest victory, the Hundred Days' Campaign of late 1918. Bond and Cave's collection of essays provides readers a fresh look at Haig—the much-maligned general who led the BEF through most of the war. Palazzo's book is the most provocative. He cites the BEF's development of chemical warfare as evidence that the British army's professional ethos made it a true "learning organization"—to use the current, trendy phrase.

Although drawn to the BEF's bloody history in the Meuse-Argonne, US readers often overlook the powerful blows the British Empire dealt the Germans during the last

months of the war. Harris and Barr remind us that, although the BEF of late 1918 was the smallest of the major armies on the Western Front, it captured more Germans in the last months of the war than the US or French combined. Indeed, the BEF's role in the final Allied offensive was "predominant." Harris and Barr compellingly support this assertion. From the German army's "Black Day" in August to the general pursuit into Belgium in early November, the British kept constant, brutal pressure on their enemy, driving the Germans into exhausted despair.

In achieving these final victories, the BEF revealed itself to be the world's most technologically advanced army. British industry provided the BEF with lavish quantities of tanks, planes and machine guns, but it was in their prodigious and sophisticated use of artillery that British and Dominion troops showed mastery of the modern battlefield—30 to 40 percent of BEF troops were gunners.

By the end of the war, the British could predict scientifically and accurately how many guns and tons of shell per yard of front were needed to ensure that attacking infantry could penetrate enemy positions. The BEF's methodical use of artillery made their final advance nearly inexorable. Along with the BEF's overwhelming expenditure of materiel, the superlative fighting qualities of Australian and Canadian troops were especially key. Through August and September, Dominion forces repeatedly spearheaded British attacks.

Haig's Leadership

Not least in ensuring British success was the determined leadership of Field Marshal Douglas Haig. Though he would underestimate the rot in German morale at the end of

the war, Haig's steadiness and determination were essential elements in creating the final victory.

Bond and Cave's collection of essays attempts a similar positive evaluation of Haig. The essays suggest that although serious World War I students have sought a more balanced assessment of Haig that balance "has not percolated down to some of the most influential shapers of public opinion, for whom the simplistic myth of 'butchers and bunglers' . . . continues to exert an irresistible appeal."[6] The record needs to be righted, and the editors assembled the contributions of 14 historians who attended a 1998 conference on the subject held at the Imperial War Museum.

The essayists find much positive to say about Haig. John Hussey uses Haig's frequent visits to front-line headquarters in 1918 as powerful evidence against accusations of "chateau" generalship. According to Peter Simkins, by the end of the war Haig and his army commanders formed a competent, reliable partnership capable of effective communication up and down the chain of command. To Michael Crankshaw, Haig was a commander who, "contrary to caricature, possessed an openness of mind to technical innovation and the clarity of vision to concentrate on the applications which offered the best prospects of success."[7] Harris reinforces this point, arguing that Haig was quick to appreciate the tank's potential. Finally, in an unusual, provocative chapter, Cave finds Haig sustained by a Christian faith that the worldliness of the 21st century cannot appreciate.

The editors' desire to strike a balance may have fatally undermined their desire for a positive reappraisal of Haig, however. For example, essayist Gerard DeGroot finds Haig to be inarticulate, unimaginative and fixated on outdated cavalry tactics. Ian Beckett argues that like his predecessor, Haig was intellectually unprepared for the challenge of command on the Western Front. And, according to William Philpott, Haig's view of his French, Belgian and Portuguese allies was one of suspicion, prejudice and even contempt.

Haig's chief supporter in London was Sir William Robertson, yet essayist David Woodward shows that Haig was all too willing to abandon "Wully" when Robertson fell out of political favor. Perhaps most damning is Keith Grieves assessment of Haig's relationship with Lloyd George. Grieves argues that Haig neither understood why it was necessary to balance the manpower needs of the Western Front with those of Britain's industry nor comprehended the need to maintain public support.

One admires Bond and Cave's willingness to present Haig for reassessment, warts and all. The warts are conspicuous, and we must ultimately judge Haig damned by the faintness of the praise found in the collection.

British Army Ethos

Haig was the product of a British military culture that Travers sees as being incapable of readily adapting to the challenges of modern war. Palazzo attacks this interpretation. Although the subtitle of his book, *Seeking Victory on the Western Front: The British Army and Chemical Warfare in World War II,* speaks of Britain's development of gas warfare, Palazzo's objective goes beyond that. By showing how the BEF integrated chemical warfare into its battlefield techniques, he highlights a professional ethos within the British army that give it the institutional adaptability to overcome a capable enemy to triumph on the Western Front.

Palazzo's examination of British use of gas warfare does, indeed, show an army that innovated and adapted. After a false start at Loos, the British continuously refined the use of gas as an important auxiliary to more traditional arms. By 1917, British industry provided a quantity of chemical shell that enabled the British to use gas over wide areas of the front for the purpose of producing casualties, reducing enemy morale and degrading the effectiveness of enemy artillery. Up to 50 percent of the shells used in 1918 were chemical rounds. Had the war gone longer, Palazzo believes British chemical use would have brought disaster to the German army.

Palazzo also argues that British use of chemical weapons was integrated into a broader, prewar British concept of how battles would be fought. In staff college training, British officers were taught that battles would typically have four phases: making contact, fixing the enemy and developing fire superiority, conducting the assault and continuing the pursuit. According to Palazzo, the entire four-year campaign on the Western Front could be packed into this phased development, with only the final phase missing. And, while gas warfare had not been envisioned before the war, British army ethos enabled them to integrate it into the middle two phases.

Many military readers will have trouble with these last aspects of Palazzo's argument. We are asked to believe that Phase 3 of battle, an event of hours in British staff college problems, actually lasted for two years. In his effort to ascribe method to the BEF's struggle to adapt, Palazzo seems to conflate what we now consider to be levels of war— the tactical and the operational. Beyond this, he asks readers to believe that British army ethos supported the integration of technological solutions into its battle concept.

Palazzo defines ethos as "the characteristic spirit and the prevalent sentiment, taste, or opinion . . . that provides the system through which an army interprets the problem of combat and tests the feasibility of solutions."[8] British army ethos was based on courage, honor and an attitude dismissive of professionalism. These attributes, Palazzo writes, enabled the BEF to prevail without doctrine. Lacking doctrine, the British military ethos led them to incorporate gas warfare into a prewar combat concept rather than developing a new way to look at war.

Palazzo asks too much of the reader. In 1918, the British clearly had the world's most technologically advanced army. However, to credit British prewar military culture with eventual success is to ask us to do a mental vault over disasters like the Somme, Passchendaele, Kut and Gallipoli in order to land on the Hundred Days. It cannot be done. The British military ethos must answer for the earlier tragedies before it can take credit for the eventual triumph. Nevertheless, by emphasizing the

creative ways the British army used gas warfare, Palazzo helps remedy the imbalance of credit given to German tactical innovation during World War I.

The authors ask us to reevaluate the "lions led by donkeys" stereotype. They attempt, at least in part, to answer the argument Travers and others make that British military culture proved a formidable handicap to the BEF. The recent emphasis on German battlefield prowess should not overshadow the tactical sophistication the British achieved by the end of war or keep us from remembering who ultimately won. Taken as a whole, these books might not quite convince us that the BEF was a model of flexible adaptation. However, they compel us to reconsider the achievements of the officers and men of the British Empire's greatest army. *MR*

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4. Martin Samuels, *Command or Control, Command, Training and Tactics in the British and German Armies, 1888-1918* (London: Frank Cass and Co., 1995).
5. JP Harris with Niall Barr, *Amiens to the Armistice: The BEF in the Hundred Days' Campaign, 8 August-11 November, 1918* (London: Brassey's, 1998); Brian Bond and Nigel Cave, ed., *Haig: A Reappraisal 70 Years On* (Barnsley, UK: Leo Cooper, 1999); Albert Palazzo, *Seeking Victory on the Western Front: The British Army and Chemical Warfare in World War I* (Lincoln, NE: University of Nebraska, 2000).
6. For a representative sample of that school of thought, see John Laffin, *British Butchers and Bunglers of World War One* (Great Britain: Sutton Publishing, 1988, reprinted 1997) and Denis Winter, *Haig's Command: A Reassessment* (London: Viking, 1991). Winter claims Haig looted the archival records in order to cover his most notorious blunders.
7. Michael Crankshaw, "The Impact of Technology on the BEF and its Commander," in Bond and Cave, 156.
8. Palazzo, 9-10.

Lieutenant Colonel Scott Stephenson is a military history instructor at the Combat Studies Institute, Fort Leavenworth. He received a B.A. from the US Military Academy, an M.A. from Syracuse University and is a graduate of the US Army Command and General Staff College. He has served in various command and staff positions in the Continental US and Germany.

MR Book Reviews

EMBRACING DEFEAT: Japan in the Wake of World War II, John W. Dower, W.W. Norton & Co., The New Press, NY, 1999, 676 pages, $29.95.

Nominated for the 1999 National Book Award for Nonfiction, *Embracing Defeat* illuminates obscure aspects of Japan's occupation after World War II. John W. Dower has written several books about the period but has avoided repeating, in detail, political and social themes. American works about the occupation usually show how American ideas and methods reshaped Japanese society. Japanese works show how those ideas and methods were modified.

Dower has no patience with the view that the United States, personified by US General Douglas MacArthur, bestowed democracy on a grateful Japan, causing it to live happily ever after. In fact, Dower devotes much space to discussing the occupation government's conceits.

Dower adopts a critical view, skewering absurdities and pretensions, such as censorship regulations. For example, it was forbidden to criticize the Soviet Union during the Cold War's early days because it was one of the Allies that had participated in Japan's defeat. In fact, it was illegal to even mention censorship's existence.

By examining what people read, heard and saw, Dower recreates a specific historic moment, showing
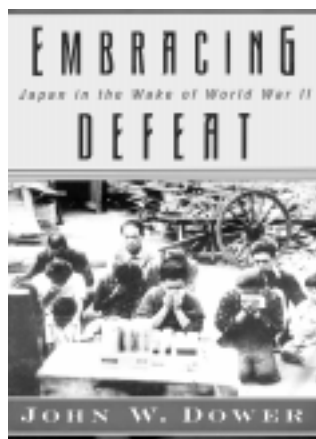
how the occupation affected ordinary urban Japanese during that time of extreme poverty. Photographs enhance the story. They convey the depths of Japan's defeat and immediate postwar conditions more than mere words can say.

Bower also describes the tremendous outpouring of political and literary creativity that occurred during the occupation's early years. Not since the early years of Meiji, 75 years before, were so many political and social issues openly discussed from so many viewpoints.

Bower also devotes considerable space to the Tokyo war crimes tribunal, flawed by the amnesty given to the emperor; the consequences of the new constitution, which continue to reverberate; and the way occupation authorities systematically ignored the advice and counsel of prewar Japan experts.

Given the circumstances, the occupation was loaded with forthrightness, ambiguity, inconsistency, constancy, arrogance and humility. In short, it was human. And, while there might be much to deplore, there is also much to applaud. The occupation decisively changed Japanese society, and its influence is still felt.

Lewis Bernstein,
Assistant Command Historian,
Fort Leavenworth, Kansas

THE AVOIDABLE WAR: Lord Cecil & Policy and Principle 1933-1935, J. Kenneth Brody, Transaction Publishers, New Brunswick, NJ, 1999, 389 pages, $24.95.

British Prime Minister Winston Churchill once said, "One day [US] President [Franklin D.] Roosevelt told me that he was asking publicly for suggestions about what [World

War II] should be called. I said at once 'The Unnecessary War.' There never was a war more easy to stop than that which has just wrecked what was left of the world from the previous struggle."

In 1933, Great Britain and France, with the greatest military forces in the world, lacked the will—not the power—to enforce the Versailles Treaty. They could have prevented Nazi Germany's rearmament and subsequent political and military success. In *The Avoidable War,* J. Kenneth Brody offers insight into historical and diplomatic events that led to the war and shows how it could have been avoided.

Brody's premise is that German dictator Adolf Hitler could have been contained if it had not been for England's peace movement. Brody believes the Peace Ballot altered the global balance of power and played a critical role in the war's origins. The ballot, a public opinion poll, showed that the British people overwhelmingly supported disarmament over vital national interests. Brody provides strong evidence to indicate that the Peace Ballot's results drove Italian leader Benito Mussolini into Hitler's waiting arms, and the key to containing Nazi Germany was lost.

Readers can examine critical policy decisions and their second- and third-order effects. The book serves as a guide to the roles that morality and public opinion should and should not play in domestic and foreign policy decisions.

MAJ Patricia Jones, *USA, Fayetteville, North Carolina*

DEATH GROUND: Today's American Infantry in Battle, Daniel P. Bolger, Presidio Press, Novato, CA, 1999, 359 pages, $29.95.

Daniel P. Bolger's latest book, *Death Ground: Today's American Infantry in Battle,* is a superbly written account of the few soldiers who fight their enemy face-to-face in the most miserable of conditions.

Bolger examines the full spectrum of conflict, from noncombatant evacuation operations in Africa to the combined arms assault of an Iraqi strongpoint during the Gulf War. He covers operations between US Army, Air Force, Marine Corps, Navy and

the joint members of the Special Operations Forces. He includes combined operations with Saudi Arabians and the polyglot of UN forces in Somalia, expertly explaining the historical, strategic and tactical settings and friendly and enemy unit organizations.

In the page-turning manner of an action writer, Bolger details battles in Panama, Haiti, Africa, southwest Asia and Somalia. He gives credit where due to airborne troops, mechanized battalions, light infantry and Rangers and their strengths and weaknesses.

The book's importance lies in its explanation that when foreign policy is carried out by other means, the will
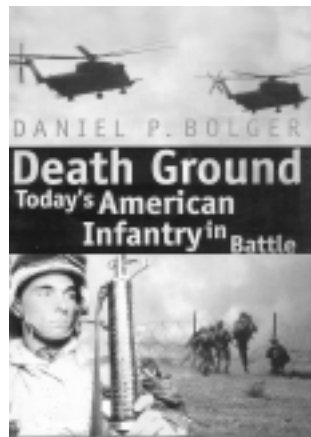
of the nation is imposed by a small percentage of US Armed Forces. Bolger reduces this fact to the logical conclusion: privates, sergeants and lieutenants literally shoulder the burden of national leaders' decisions. This is most clearly demonstrated in the rip-roaring chapter chronicling the 2d Battalion, 14th Infantry's rescue of encircled Rangers and Special Forces troops in Mogadishu, Somalia. This action is the essence of the infantry gunfight, when men armed only with the weapons they carry close with the enemy. This is what I consider the missing chapter in Mark Bowden's gut-churning *Black Hawk Down: A Story of Modern War* (Penguin Books, NY, 2000). The technology on which the nation predicated its Joint Vision is left on another continent; the battle is won by marksmanship, discipline, training and guts.

This book should be on every US soldier's reading list; however, it is

not for the dilettante or the thin-skinned. Many of Bolger's criticisms are harsh and uncompromising.

MAJ Scott C. Farquhar, *USA, Hohenfels, Germany*

WILSON'S CREEK: The Second Battle of the Civil War and the Men Who Fought It, William Garrett Piston and Richard W. Hatcher III, The University of North Carolina Press, Chapel Hill, 1999, 408 pages, $37.50.

The battle of Wilson's Creek, which occurred early in the Civil War in southwest Missouri, is difficult to describe. The battle was actually two engagements fought simultaneously. A further complication is that Kansas and Missouri units fought on both sides of the Civil War and the battle, and at this early stage of the war, Union and Confederate soldiers wore blue as well as gray uniforms. Despite these inherent difficulties, William Garrett Piston and Richard W. Hatcher III provide a readable account of this battle that resulted in a Union defeat and ensured that Missouri would be fought over for the next four years.

During their research, Piston and Hatcher unearthed a trove of original-source material to document backgrounds, ideals and motives that brought the two armies to Wilson's Creek. A reader learns about participants' hometowns and intimate relationships between military units and their communities. A consistent theme in soldiers' correspondence is honor—not letting their towns be embarrassed by either the unit's or the individual's performance in battle.

Much of the book is devoted to the sinews of war and the effects of logistics on warfare. Piston and Hatcher stress the difficulties of conducting operations in the face of shortages of food, water and forage. Compounding those difficulties was adverse weather—debilitating, stifling heat and dust. Equally important was the effect of terrain. The authors establish a clear relationship between terrain and unit performance.

The book's one shortcoming is its inadequate analysis of the battle's consequences for future operations. The battle should have been placed in the context of other Union and Confederate operations west of the

Mississippi River and how important it was to the political situation in Missouri in late 1861.

Piston and Hatcher have provided a service to Civil War historians by focusing on a significant battle in the Trans-Mississippi Theater—a region that has received significantly less attention than the East. They are commended for detailing the tactical battle and the soldiers who fought it.

LTC Richard L. Kiper, USA,
Retired, Leavenworth, Kansas

THE IRON WALL: Israel and the Arab World, Avi Shlaim, W.W. Norton & Company, NY, 2000, 608 pages, $32.50.

The Iron Wall: Israel and the Arab World details the development of Israel's relationship with its Arab neighbors in terms of a theory based on a 1923 book by Ze'ev (Vladimir) Jabotinsky, *The Iron Wall: We and the Arabs* (out of print). Jabotinsky, one of the founders of the Revisionist Zionist movement, believed that peace with the Arabs and the resolution of the Palestinian question would only come about if based on an iron wall of Jewish military force. The wall would be a shield to guarantee Israel's coexistence with the Arab population within Palestine's colonial borders. Despite its defensive purpose, the wall could be viewed also as a sword to force the expansion of Israeli territory.

Avi Shlaim effectively builds what appears to be a unbiased case for an Israeli iron-wall policy. His meticulous research painstakingly rebuilds historical accounts of critical events in Israel's political development. He goes into depth on the Arab and Palestinian points of view as well as Israel's decisionmaking process.

Shlaim is careful not to deliver the typical pro-Israeli interpretation of events. He describes events through a more pragmatic perspective. However, in the last chapters his tone changes to open criticism of Israel's use of the iron wall as a tool of aggression to deny the Palestinian population self-determination. In his view, this is the single biggest reason for the failure of Middle East peace initiatives.

MAJ Carl Grebe, USA,
Jupiter, Florida

EAGLES ON THEIR BUTTONS: A Black Infantry Regiment in the Civil War, Versalle F. Washington, University of Missouri Press, Columbia, 1999, 113 pages, $24.95.

Eagles on Their Buttons is the culmination of detailed research on the 5th US Colored Troop (USCT), which was raised in 1863 and fought during the last year and a half of the Civil War. Versalle Washington cites excellent source material regarding the regiment and its fight to become a full-fledged combat unit of the Union Army. However, his outstanding research is sometimes overridden by his lack of objectivity.

The 5th USCT was, at first, a state volunteer regiment of Ohio blacks and some whites. I am not sure that Washington gives a completely unbiased assessment of the obstacles these men faced. His logic appears to
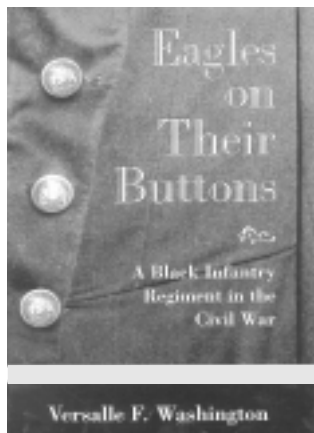
be seriously flawed when he stereotypes Southerners as racists then gives excellent, detailed descriptions of how racist Northerners were as well.

There were many black soldiers in northern regiments who might have made fine officers. However, Northerners allowed only whites to be commissioned officers—a policy that lasted for years after the war. And, even after black officers were commissioned, they were posted to segregated black units and were not allowed to lead white troops. This benevolent racism was a manifestation of a deeper racism and the hypocrisy of Northerners who were willing to let black men serve in the military but certainly not lead it.

What Washington does do in terms of the historical record is pro-

vide a microcosm of black combatant participation on the Federal side. The problems these men faced and their devotion to duty is an excellent study in the dynamics of soldiers who carry the burden to prove themselves as citizen soldiers.

This book is a good addition to the understanding of the Civil War's social aspects. I hope that a companion study of black Confederate soldiers might complement this book.

LTC Edwin Kennedy Jr, USA,
Retired, Leavenworth, Kansas

FROM CONFRONTATION TO COOPERATION: The Takeover of the National People's (East German) Army by the *Bundeswehr*, Frederick Zilian Jr., Praeger Publishers, Westport, CT, 1999, 256 pages, $57.95.

Unification or reunification of a people, particularly those separated by diametrically opposed ideologies and histories, is not an easy process. Reconstruction in the United States was an unhappy period. German unification in 1871 was fraught with uncertainty. The reunification of France following the fall of the Vichy government was rocky. The forced reunification of Vietnam in 1975 was draconian. None of these events was accomplished smoothly. Reuniting militaries is an even thornier proposition. Most reuniting societies do not even attempt it.

Germany's reunification process has been relatively smooth, even while incorporating personnel of the former communist state's army into its military ranks. Ten percent of current *Bundeswehr* officers were originally commissioned in the *Nationale Volksarmee*. Furthermore, this incorporation occurred during an overall reduction in force, a major change in force structure and while supporting Operations *Desert Shield* and *Desert Storm*. It was an impressive accomplishment by an impressive army.

That Germany's reunification went so well is a compliment to the professionalism, planning and military-political trust between the *Bundeswehr* and the German government. Frederick Zilian Jr. discusses key decisions, the reasonably equitable process developed to handle the incorporation, its snags and glitches and the successes encountered

while uniting the forces. The book is an excellent companion to Dale R. Herspring's superb *Requiem for an Army: The Demise of the East German Military* (New York: Rowman & Littlefield, 1998).

Lester W. Grau,
Foreign Military Studies Office,
Fort Leavenworth, Kansas,
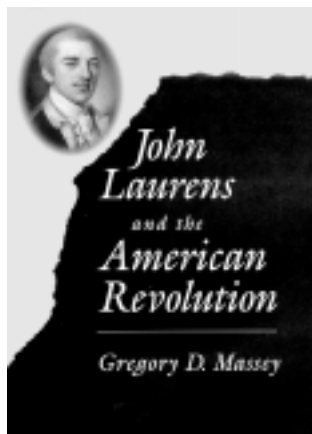
JOHN LAURENS AND THE AMERICAN REVOLUTION, Gregory D. Massey, University of South Carolina, Columbia, 2000, 327 pages, $34.95.

John Laurens was a native of South Carolina and son of Henry Laurens, president of the Continental Congress. *John Laurens and the American Revolution* poignantly details Laurens' life, which was filled with adversity as well as privilege.

Gregory D. Massey describes with great clarity, insight and brevity John Laurens' war service as General George Washington's aide-de-camp. Laurens was involved in almost all of the Revolutionary War battles and also participated in a diplomatic mission to France. The extent of his involvement is amazing, considering that he died at age 27.

Although the book is written for the general reader, its 72 pages of notes and bibliographical data are valuable for historians.

**LTC Glenn E. Gutting,** *USAR,*
Fayetteville, Arkansas

TALIBAN: Militant Islam, Oil and Fundamentalism in Central Asia, Ahmed Rashid, Yale University Press, New Haven, CT, 2000, 274 pages, $27.50.

Ahmed Rashid spent over two decades as a journalist in Pakistan and Afghanistan for Britain's *Daily Telegraph* and *Far Eastern Economic Review.* The subjects of his reports include the Soviet's intervention in and withdrawal from Afghanistan and Pakistan and the clashes between ethnic groups that followed Russia's fight for control of strategic routes in Afghanistan.

Rashid shows how religious radicalism entered Afghanistan during the Soviet war in that nation (1979-1989). Along with providing arms during the war, Saudi Arabia began a deliberate policy of exporting its brand of Islam known as *Wahabism.*

Pakistan also played a pivotal role as millions of Afghan refugees streamed across the border. Unemployment, desperation and a lack of opportunity for education provided fertile fields for thousands of *Madrassahs*, who preached radicalism.
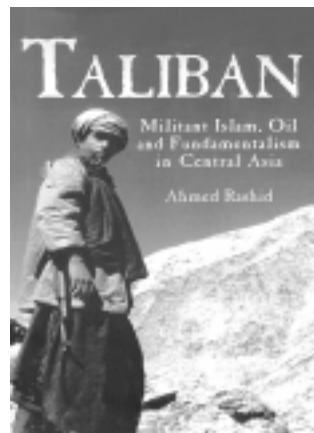
Their doctrine attracted Afghans and poor Pakistanis and Arabs and contributed to the collapse of Pakistan's educational system. The students, or *Talibs*, from which the word *Taliban* originates, represent the 50,000 students who formed the bulk of the organization's leadership and fighting force.

After the Soviets left Afghanistan, ethnic clans continued fighting one another and the communist Afghans. In a United Nations-brokered plan that guaranteed security for President Najibullah, the Pashtun Gilbuddin Hikmetyar claimed victory. Even so, the Afghans continued to fight, and lawlessness prevailed.

Dozens of *Talibs* began organizing a Robin Hood-type organization, righting wrongs committed by former warlords. Their brand of Islamic radicalism and the subsequent murder of Najibullah offended many Afghans. Women, who from the time of the prophet Muhammed had traded, rode horses and exercised many freedoms, were not allowed to leave their homes. UN Secretary General Kofi Annan observed that 50,000 armed thugs held millions of Afghan citizens hostage. In controlled areas, the Taliban declared the Shiite's beliefs heresy and conducted ethnic genocide.

Other subjects Rashid discusses in *Taliban* are the spread of religious fanaticism in Central Asia, the intrigue of big business vying for access to Central Asian gas and petroleum reserves, and the drug trade, whose lucrative operations involve truck convoys that transit Pakistan, Afghanistan and Central Asia.

The appendix includes extraordinary organizational charts and a quick chronology. Because of the continued unrest in the region, I highly recommend this book as an introduction to what future intervention forces might face.

LT Youssef Aboul-Enein, *MSC,*
USN, Fort Sheridan, Illinois

Editor's note: Aboul-Enein is the great-nephew of Sibghatullah El-Mujaddidi, who was interim president of Afghanistan after the defeat of Soviet forces and who was forced out by Islamic radicals. Seventy-nine members of the Mujaddidi family were killed by the communists.

TO HELL WITH HONOR: Custer and the Little Bighorn, Larry Sklenar, University of Oklahoma Press, Norman, 2000, 416 pages, $29.95.

Few events in US history have generated more interest or more controversy than the Battle of the Little Bighorn. Except for the Battle of Gettysburg during the Civil War, more books and articles have been written about the Little Bighorn than any other battle in US history.

Larry Sklenar makes no bones about where he stands on the Custer controversy: he believes Custer's battle plan was actually far different from any advanced by scholars thus far. He says, "Custer made decisions in accordance with army regulations and his best instincts as an experienced commander. . . . [H]is logistical tail (mule train) was a major

impediment, [and] certain subordinates could not surmount the limits of their personalities in a desperate situation and so contributed to the failure of the mission. . . . Custer made a totally unselfish commitment to save the bulk of his regiment by taking his wing into a diversionary posture in full expectation that the surviving elements of the Seventh would rally to his aid." Sklenar does not claim his argument is new. His is essentially the thesis Libby Bacon Custer propagated long after the disaster.

Some readers will find Sklenar's interpretations convincing; others will reject his argument completely; still others will quibble over the accuracy of some of his details. Therefore, I recommend *To Hell with Honor* only to Custer devotees who have a substantial knowledge of the 1876 campaign and Custer literature.

Jerold E. Brown, *Combat Studies Institute, Fort Leavenworth, Kansas*

WHAT THEY DIDN'T TEACH YOU ABOUT THE AMERICAN REVOLUTION, Mike Wright, Presidio Press, Novato, CA, 1999, 343 pages, $19.96.

There is an American History class going on now at Alma-Mater School in Anywhere, USA. The students will spend a week on the American Revolution. During that week they will learn that George Washington commanded the American Forces; Paul Revere knew how to ride and make a lot of noise; the Army spent a cold winter at Valley Forge; the Army spent one Christmas Eve attacking the British somewhere; Betsy Ross might have or might not have made the first flag; and the war ended at Yorktown.

These facts summarize what the kids will remember, but history must be more than names, dates and places. Revolution was caused by and happened to people. What did they do? How did they feel? Who else was involved? Why was that location chosen? What happened next? Why?

Along comes Mike Wright. His book is full of little-known facts that enhance the basics. His material's scope ranges from the soldiers' average height, to the password used at the Battle of Yorktown, to how German-born General Friedrick von

Steuben drilled soldiers when he could not speak English. Some might argue that this level of detail is too far down into the weeds. Not so! The facts and stories present realistic and human facets to a defining era of US history. They are also seeds planted in the imagination to produce the fruit of curiosity.

This interesting book is easy to read, at times amusing and always illuminating. My understanding of this period increased as Wright corrected misconceptions and added insight. I heartily recommend this book, and I look forward to reading Wright's other books.

MAJ William T Bohne, *USA, Retired, Leavenworth, Kansas*

THE MEN OF SECESSION AND CIVIL WAR, James L. Abrahamson, Scholarly Resources, Wilmington, DE, 2000, 177 pages, $17.95.

Retired Army officer James L. Abrahamson, in *Men of Secession and Civil War,* writes on the events, men and ideas leading to the secession crisis. He admirably lays out the ends and means of southern radicals or "fire-eaters." Yet, he generally fails to do the same for their northern counterparts—the radical Republicans. The only northern radical mentioned is John Brown, whose abortive attempt to begin a slave rebellion at Harper's Ferry, Virginia, in 1859 lent credence to southern radicals' propaganda that northern abolitionists wanted to help slaves wipe out white southerners.

Southern radicals are treated in more depth. The Dred Scott decision fed northern propaganda that the "Slave Power" faction sought to ensure that slavery would become the law of the land. Brown's raid and the Dred Scott decision made a moderate position on slavery less tenable.

Abrahamson thoroughly exposes the southern radicals' motives and methods, especially the 1860 Democratic Party Convention debacle. In an effort to destroy the party, the fire-eaters attempted to bring about secession by pushing the Democratic Party platform to extremes.

Overall the book is a case study in what can happen in domestic politics if extremists at either end of the political spectrum demonize their po-

litical opponents, question their motives and make moderation more difficult. If a reader desires a somewhat scholarly but partisan rendition of the secession crisis from a northern perspective, this book will suffice. Those looking for an equal, although partisan, pro-southern perspective, should read Charles Adams' *When in the Course of Human Events* (Rowman & Littlefield, Lanham, MD, 2000).

MAJ D. Jonathan White, *USA, Smithfield, Virginia*

COMPANY AYTCH: Or, A Side Show of the Big Show, Sam Watkins, M. Thomas Inge, ed., Plume Books, New York, 1999, 249 pages, $13.95.

It is not possible to study the American Civil War without hearing of Sam Watkins' book *Company Aytch*. Ken Burns' seminal 1990 television series "The Civil War" makes numerous references to the book, and the *Time-Life* series *The Civil War* quotes from Watkins more than a dozen times. What makes this work so special? Watkins was a common Southern foot soldier. He was not a great leader, and his name is not prominently listed in official histories. His book is the remembrances of a young man who saw all of the glory and horror the Civil War offered.

Watkins did not begin his book until 15 years after the war. How much is fact, and how much is fiction? Certainly some of the dates and places are confused and inaccurate, but it does not necessarily follow that the stories he reports are inaccurate. The reader might question the lengthy discourses presented as word-for-word discussions, but there is no doubt the stories were real for Watkins. He is often overcome by the memories of which he is writing: "I cannot tell the facts as I desire to. In fact my hand trembles so, and my feelings are so overcome, that it is hard for me to write at all. But we went to the place that we were ordered to go to, and when we arrived there we found the guard sure enough—each and every one was as cold and as hard frozen as the icicles that hung from their beards and faces and clothing—dead!"

The reader should not expect an accurate history of the Civil War, but rather an accurate account of

what the war meant to Watkins. The book's strength lies in its character and prose. The reader will learn about life and death during the deadliest conflict fought on American soil and will enjoy doing so, for the book reads as smoothly and easily as a novel. It is rare for a book to live up to its hype; Watkins' does.

LTC David G. Rathgeber, *USMC, Quantico, Virginia*
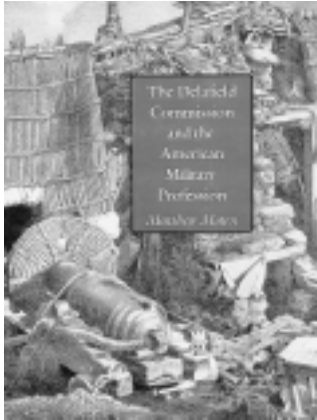
THE DELAFIELD COMMIS-SION AND THE AMERICAN MILITARY PROFESSION, Matthew Moten, Texas A&M University Press, College Station, 2000, 270 pages, $47.95.

In 1855, nearly a year after British and French forces invaded the Crimean Peninsula on the Black Sea to beat back a Russian offensive aimed at crushing the Ottoman Empire, US Secretary of War Jefferson Davis sent a commission to observe the fighting and report on developments in military strategy. He selected three of the US Army's finest officers, all West Pointers, who had graduated near the top of their respective classes and received commissions in the Corps of Engineers—plum assignments for graduates before the American Civil War. Major Richard Delafield, Class of 1818 and former academy superintendent, led the three-man delegation that included Albert Mordecai, Class of 1823, and one of the Army's most promising young leaders, Captain George McClellan, Class of 1846.

Delafield, Mordecai and McClellan were the first group of officers officially dispatched by the United States to observe a war in progress.

Their mission was highly publicized in military circles, and its outcome was awaited anxiously by Davis and hundreds of active-duty officers.

In *The Delafield Commission and the American Military Profession,* Matthew Moten tells the story of how well the Commission did its job and why it failed in ways crucial to the development of US military strategy. His thesis, far from being confined to an analysis of the Commission's work, is broader. Moten argues persuasively that the Commission represented "a milepost in the history of American military professionalism." He contends that "the performance of the Delafield Commission furnishes a useful indicator of the maturity of professional thought in the 1850s—the state of the American military art."

The Commission spent more than a year gathering information, a good bit of socializing and considerable letter writing, detailing for family and professional acquaintances their experiences in dealing with the major combatants. They visited England, France, Austria, Prussia and Russia before finally arriving in the Crimea—too late to witness major hostilities. However, what they did see allowed them to produce extensive reports that included discussions ranging far beyond battlefield operations.

The government published thousands of copies of the reports. They were distributed to civilians and the military and served as guides for learning how European powers were waging war. They provided blueprints for improving fortifications and armaments and sounded the warning to US politicians that England and France could, with little difficulty, turn their formidable military assets against the United States.

As a consequence of Moten's careful analysis and patient exploration of letters, official documents and scholarly sources, his book is more than simply another good historical study. Rather, it is the kind of book all professionals should read, and one that more professionals should write. Although Moten never says so himself—I suspect he is too modest to make this claim—his book shares

some of the best qualities that the reports of Delafield, Mordecai and McClelland exhibit.

LTC Laurence W. Mazzeno, *USA, Retired, Reading, Pennsylvania*

THE SOUL OF BATTLE: From Ancient Times to the Present Day, How Three Great Liberators Vanquished Tyranny, Victor Davis Hanson, The Free Press, NY, 1999, 412 pages, $30.00.

Whether discussing the armies and the leadership styles of Epaminondas of Thebes or US Generals William Tecumseh Sherman and George S. Patton, Victor Davis Hanson tells one heck of a good story. Sure, there are lots of great tales about these particular generals and their respective campaigns against slave-holding societies—Sparta, the Confederacy and Nazi Germany, but few historians have told these stories with Hanson's verve.

Hanson is an outspoken advocate of his protagonists' actions: "It is a hard thing for contemporary liberalism to envision war as not always evil but as sometimes very necessary—and very necessarily brutal if great evil is to disappear." However, Hanson is so busy making strong statements that he incurs a nearly fatal case of hyperbolic historiography. For example, he states that "Free men . . . can make war brutally and lethally beyond the wildest nightmares of the brutal military culture they seek to destroy." Does this mean that Patton's 3d Army was more violent than Germany's *Waffen SS* or one of Russian dictator Josef Stalin's operational maneuver groups? Does this mean that Sherman's invasion of the Deep South was more ferocious than William Quantrill's forays into Kansas or Nathan Bedford Forrest's raids behind Union lines in Tennessee? Apparently yes, according to Hanson. Obviously not, according to the historical record.

Frankly, I was a bit confused about this book's subject. Was it how democracies fight wars, or was it how certain rather eccentric generals commanded soldiers who happened to be from democratic societies? I eventually concluded it was both. Indeed, at times Hanson seems to say that unless democracies have oddball individualists in command they will

be militarily inept if not impotent.

When comparing the typical US World War II general to Patton, Hanson asks, "Were there any [other army commanders who] could take raw troops, teach them to kill and then lead them against the most highly trained and deadly infantry in the history of warfare?" Yes, there were. Patton might have defeated the Germans, but he got "by with a little help from his friends"—Stalin's dictatorial Red Army on the eastern front and the US 1st, 7th and 9th armies on Patton's flanks.

Hanson is a rousing storyteller, but he is not prudent. But, then, neither were Epaminondas, Sherman or Patton.

Michael Pearlman, *Combat Studies Institute, Fort Leavenworth, Kansas*

THE CANADIAN FORCES: Hard Choices, Soft Power, Joseph T. Jockel, The Canadian Institute of Strategic Studies, Ontario, 1999, 132 pages, price unavailable.

In *The Canadian Forces: Hard Choices, Soft Power,* Canadian defense analyst Joseph T. Jockel asks: "What is the role of the military, and how much is enough?" With the end of the Cold War, this is the question that faces democratic governments throughout the world. Canada's mission and funding dilemma provides a microcosmic view of issues that might have implications for all militaries.

Jockel's bottom line is the need for the Canadian government to revise current national military strategy. In Canada, as elsewhere, the end of the Cold War brought demands for a "peace dividend" that decreased military funding in favor of deficit paybacks and increased social spending. This was followed by massive force-structure cuts.

The strategic concept of "soft power" assumed that in the post-Cold War environment, the government would resolve conflicts through diplomatic persuasion rather than the use of military force. But, instead of a decreasing need for armed forces, operational tempos increased, and forces began to suffer the stresses of being too thin and operating under budget.

Jockel shows two factors that affect Canada's readiness—widespread equipment obsolescence and inadequate funding. These have almost destroyed the force's ability to execute the missions defined in a 1994 white paper:
- Protecting national sovereignty.
- Maintaining Canada-US defense cooperation.
- Contributing to international security.

Jockel argues effectively for maintaining these capabilities, both to meet Canada's moral obligation to cooperative North American defense and to maintain Canada's international stature and relevance. The key is deciding what enough is and providing adequate funding to make the strategy viable.

Although Jockel clearly shows his bias for increased defense spending to modernize the military, he also acknowledges that public and political support is lacking. The United States might also soon face this situation.

MAJ Bradley D. Bloom, *USA, Fayetteville, North Carolina*

Sub

Operation Joint Guardian

An M2 Bradley fighting Vehicle stands guard over the village of Stublina as KFOR soldiers search the houses below. KFOR soldiers carried out a carefully planned and orchestrated operation on Wednesday, 15 March 2000, to search and confiscate illegal weapons at five separate locations near the Serbian border. A total of 22 crates of ammunition, hand grenades, mines, rifles, other explosives, and chemical protective masks were found. KFOR is the NATO-led, international military force in Kosovo on the peacekeeping mission known as **Operation Joint Guardian**.